

NATIONAL ENERGY BOARD

IN THE MATTER OF

**the *National Energy Board Act*,
R.S.C. 1985, c. N-7, as amended, (“*NEB Act*”)
and the Regulations made thereunder;**

AND IN THE MATTER OF

**the *Canadian Environmental Assessment Act, 2012*,
S.C. 2012, c. 37, as amended,
and the Regulations made thereunder;**

AND IN THE MATTER OF

**an application by Trans Mountain Pipeline ULC
as General Partner of Trans Mountain Pipeline L.P.
(collectively “Trans Mountain”)
for a Certificate of Public Convenience and Necessity and
other related approvals pursuant to Part III of the *NEB Act***

**CONSULTATION UPDATE NO. 1 & ERRATA
FOR
THE TRANS MOUNTAIN EXPANSION PROJECT**

March 2014

**To: The Secretary
The National Energy Board
444 — 7th Avenue SW
Calgary, AB T2P 0X8**

TABLE OF CONTENTS

	<u>Page</u>
ABBREVIATIONS AND ACRONYMS.....	iv
PART 1 SUMMARY OF ERRATA IN THE DECEMBER 16, 2013 APPLICATION TO THE NATIONAL ENERGY BOARD	
1.0 INTRODUCTION.....	1-1
2.0 SUMMARY OF ERRATA	1-2

LIST OF APPENDICES

APPENDIX A	Volume 2, Figure 4.2.1
APPENDIX B	Volume 3A, Appendix A digital file errata
APPENDIX C	Volume 3A, Appendix D digital file errata
APPENDIX D	Volume 4A, Section 3.4, digital file errata
APPENDIX E	Volume 8C, TERMPOL 3.5/3.12 table of contents errata
APPENDIX F	Volume 8C, TERMPOL 3.11 signing page
APPENDIX G	Volume 2, Appendix 2 Trans Mountain Expansion Project: Understanding the Economic Benefits for Canada and its Region. Conference Board of Canada.
APPENDIX H	Volume 3B, Section 1.5, Correction to Aboriginal Community Profiles
APPENDIX I	Volume 3B, Appendix A, Correction to Aboriginal Engagement Logs

PART 2 PUBLIC CONSULTATION

1.0	PUBLIC CONSULTATION.....	2-1
1.1	Introduction	2-1
1.2	Phase 4 Engagement: Feedback to Stakeholders and Application Filing (August 1 to December 31, 2013)	2-1
1.3	Ongoing Engagement, Phases 5 and 6	2-1
1.4	Communication Activities	2-2
1.4.1	Website Updates and Refresh	2-2
1.4.2	Website Forum.....	2-6
1.4.3	Phone Line and Email.....	2-7
1.4.4	E-blasts	2-7
1.4.5	Social Media.....	2-8
1.4.6	Media Relations	2-12
1.4.7	Advertising/Notification	2-14
1.4.8	Project Update Newsletters	2-17
1.4.9	Emergency Response Program Summary	2-17
1.4.10	Events	2-18
1.4.11	Speaking Opportunities.....	2-20
1.4.12	Sponsorship Opportunities.....	2-20
1.5	Phase 4 Stakeholder Engagement Activities	2-21
1.5.1	Reactivation Engagement Program	2-21
1.5.2	Emergency Management Stakeholder Workshops	2-22
1.5.3	Tour of Lac du Bois Grasslands Protected Area, Kamloops, British Columbia	2-25

1.5.4	Economic Benefits Presentations	2-26
1.5.5	Economic Benefits Presentations - Alberta Region	2-27
1.5.6	Economic Benefits Presentations – British Columbia Interior Region	2-30
1.5.7	Economic Benefits Presentations - Lower Mainland/Fraser Valley Region	2-33
1.5.8	Government Relations	2-42
1.6	Summary of Outcomes	2-42
1.6.1	Key Topics of Interest or Concern - ALBERTA (Edmonton to Jasper).....	2-43
1.6.2	Key Topics of Interest or Concern – British Columbia Interior (Valemount to Hope)	2-48
1.6.3	Key Topics of Interest or Concern- Lower Mainland/Fraser Valley (Chilliwack to Burnaby)	2-52
1.6.4	Key Topics of Interest or Concern – Mainland Coastal	2-58
1.6.5	Key Topics of Interest or Concern – Island Coastal	2-60
1.6.6	Website Forum QandA	2-62
2.0	REFERENCES.....	2-70

LIST OF APPENDICES

APPENDIX A	Emergency Management Workshops Materials
APPENDIX B	Lac Du Bois Grasslands Tour Materials
APPENDIX C	Economic Benefits Presentation Materials
APPENDIX D	Other Communication Materials

PART 3 ABORIGINAL ENGAGEMENT

1.0	ABORIGINAL ENGAGEMENT	3-1
1.1	Introduction	3-1
1.1.1	Purpose of Consultation Update	3-1
1.2	Identification of Aboriginal Communities, Groups, Associations, Councils and Tribes	3-1
1.2.1	Identification of New Communities, Associations, Councils and Tribes	3-1
1.2.2	Aboriginal Communities, Groups, Associations, Councils and Tribes.....	3-2
1.3	Consultation Update: October 1, 2013 to December 31, 2013.....	3-6
1.3.1	Engagement Activity	3-6
1.3.2	Summary of Outcomes of Engagement.....	3-7
1.4	Aboriginal Engagement by Community, Group, Association, Council and Tribe	3-8
1.4.1	Agreements.....	3-8
1.4.2	Preliminary Aboriginal Interests	3-9
1.4.3	Traditional Land Use Studies, Traditional Marine Use Studies and Traditional Ecological Knowledge	3-10
1.4.4	Engagement Summaries: New Communities, Groups, Associations, Councils and Tribes	3-11
1.5	Future Aboriginal Engagement Activities	3-15

LIST OF APPENDICES

APPENDIX A	Engagement Logs
APPENDIX B	Project Engagement Letters

PART 4 LANDOWNER RELATIONS

1.1	Introduction	4-1
1.1.1	Purpose of Landowner Relations Update	4-1
1.1.2	Landowner Relations Program Scope (August 1 to December 31, 2013)	4-1
1.2	Components of the Program	4-1
1.2.1	Notification	4-1
1.2.2	Consultation and Survey Consent	4-2
1.2.3	Corridor Survey Limitations.....	4-3
1.3	Summary of Outcomes	4-4
1.3.1	Overview of Landowner Feedback August 1 to December 31, 2013	4-4

ABBREVIATIONS AND ACRONYMS

This table lists the abbreviations and acronyms used in this document.

Term	Meaning
AB	Alberta
ACEC	Association of Consulting Engineering Companies
APEG	Association of Professional Engineers and Geoscientists
ASERT	Alberta Environment Support and Emergency Response Team
ASCA	Abbotsford Soil Conservation Association
BC	British Columbia
BCIT	British Columbia Institute of Technology
bb/d	barrels per day
BCASME	British Columbia American Society of Mechanical Engineers
BROKE	Burnaby Residents Opposed to Kinder Morgan Expansion
BMO	Bank of Montreal
CAER	Community Awareness for Emergency Response
CAPP	Canadian Association of Petroleum Producers
CBC	Canadian Broadcasting Corporation
CEPA	Canadian Energy Pipeline Association
CILTNA	Chartered Institute of Logistics and Transport
CLAC	Christian Labour Association of Canada
C.N.	Canadian National Railway
C.P. Rail	Canadian Pacific Railway
CSA	Canadian Standards Association
cSt	Centistokes
CVTS	Co-operative Vessel Traffic System
DNV	Det Norske Veritas
EMBC	Emergency Management British Columbia
EPC	Emergency Program Committee
ERP	Emergency Response Plan
ESA	Environmental and Socio-Economic Assessment
FVRD	Fraser Valley Regional District
HDD	horizontal direction drill
HHRA	Human Health Risk Assessment
HORU	Human Occupancy and Resource Use
ICS	Incident Command System
IMO	International Maritime Organization
IPREM	Integrated Partnership for Emergency Management
ISBC	Invasive Species Council of British Columbia
JCG	Joint Coordinating Group of the CVTS
Km	Kilometre
kPa	Kilopascals
KMC	Kinder Morgan Canada Inc.
LMD	Lower Mainland District
LOU	Letters of Understanding
M	Metre
m ³	cubic metre
MBA	Mutual Benefit Agreements
Mm	Millimetre

Term	Meaning
MLA	Member of the Legislative Assembly
MOU	Memorandum of Understanding
NEB	National Energy Board
NIIMS	National Interagency Incident Management System
NVIT	Nicola Valley Institute of Technology
PCC	Pipeline control centre
PEIA	Pacific Energy Innovation Association
PMV	Port Metro Vancouver
PPA	Pacific Pilotage Authority
QandA	Question and Answer
RAP	restricted activity period
REPC	Regional Emergency Planning Committee
RISA	Resource Industry Suppliers Association
RCMP	Royal Canadian Mounted Police
RCMP, ORR	RCMP Operational Readiness and Response
RTO/TRU	Resource Training Organization / Thompson Rives University
SFU	Simon Fraser University
STARS	Shock Trauma Air Rescue Service
TAG	Tomlinson Alliance Group Financial
TEK	Traditional Ecological Knowledge
TERA	TERA Environmental Consultants
TERMPOL	Technical Review Process of Marine Terminal Systems and Transshipment Sites
TLU	Traditional Land Use
TMEP	Trans Mountain Expansion Project
TMPL	Trans Mountain Pipeline
TMRU	Traditional Marine Resource Use
TMU	Traditional Marine Use
Trans Mountain	Trans Mountain Pipeline ULC
TRU	Thompson Rivers University
TNRD	Thompson Nicola Regional District
UBC	University of British Columbia
VARDA	Valemount and Area Recreation Development Association
WCMRC	Western Canada Marine Response Corporation
WCSS	Western Canadian Spill Services

VIA ELECTRONIC SUBMISSION

March 20, 2014

National Energy Board
444 Seventh Avenue S.W.
Calgary, Alberta T2P 0X8

To: Ms. Sheri Young, Secretary National Energy Board

Dear Ms. Young:

**Re: Trans Mountain Pipeline ULC
Trans Mountain Expansion Project Application
Board File OF-Fac-Oil-T260-2013-03 02
Consultation Update No. 1 & Errata**

On 16 December 2013, Trans Mountain Pipeline ULC (Trans Mountain) submitted an application (the Application) to the National Energy Board (NEB) for the Trans Mountain Pipeline Project (the Project). Trans Mountain is hereby submitting various errata and an update related to consultation activities with Aboriginal groups and communities, landowners, and stakeholders.

Prior to the submission of its Application to the NEB, Trans Mountain embarked on an extensive program to engage Aboriginal communities and to consult with landowners, government agencies (e.g., regulators and municipalities), stakeholders, and the general public. A summary of these consultation activities up to 31 July 2013¹ was included in the Application, Volumes 3A, 3B, and 3C.

As Trans Mountain stated in the Application, consultation activities continued throughout the preparation of the Application and after the Application was submitted to the NEB. Trans Mountain intends to update Volume 3A, 3B and 3C, as consultation continues throughout the proceeding. To this end, Trans Mountain respectfully submits the enclosed Consultation Update No. 1 & Errata (the Update), which is a summary of public and landowner consultation activities from 1 August to 31 December 2013, and a summary of Aboriginal engagement activities from 1 October to 31 December 2013. As well, the Update provides a summary of errata to the electronic files uploaded to the NEB's Regulatory Documents Repository and to the hard copy of the Application.

¹ The results of Aboriginal engagement activities up to 1 October 2013 were included in the Application.

Errata Related to Volume 3B (Aboriginal Engagement):

During the review of its Application after submitting it to the NEB, and as a result of continued engagement activities with Aboriginal communities, Trans Mountain identified various errata in Volume 3B and in Appendix A of the same volume. These errata include:

- 1) Adding in certain records of engagement with Aboriginal communities were inadvertently left out of Volume 3B, Appendix A.
- 2) Removing certain records of engagement with Aboriginal communities from Appendix A that were inadvertently included and at the request of the Aboriginal communities.

Trans Mountain respectfully requests that the NEB remove the relevant digital files pertaining to Volume 3B section 1.5 and Appendix A of the same volume from the NEB's Regulatory Documents Repository and replace them with the corrected files, which are submitted to the NEB with this Update. The specific files are identified in Part 1 of this Update.

Other Errata:

In addition to errata related to Volume 3B (Aboriginal Engagement), Trans Mountain is submitting errata related to:

- 1) The formatting of various digital files uploaded to the NEB's website on 16 December 2013 for Volume 2, 3A and 4A. The hardcopy version of these files is correct.
- 2) In Volume 2, Appendix B both the digital and hardcopy version of the document had an error in the tables where data related to benefits to the Provinces of Alberta and British Columbia were transposed. The document has since been updated and the corrected version is filed with this Update.
- 3) In Volume 8C, the signing page for TERMPOL 3.11 was incorrect and the table of contents in TERMPOL 3.5/3.12 (one report) had a formatting error.

The results of the consultation and engagement activities conducted from August to December 2013 were reviewed by the environmental and socio-economic technical experts on the TMEP team. All issues and concerns associated with this Update were previously addressed in the Application Volumes 5A (ESA – Biophysical), 5B (ESA – Socio-economic), 6B (Pipeline EPP) and 8A (Marine Transportation) submitted to the NEB in December 2013. After consideration by technical experts, it was determined that no new mitigation is required beyond that provided in the Application. The significance conclusions presented in Volumes 5A, 5B and 8A of the application do not change as a result of the consultation and engagement activities from 1 August to 31 December 2013. The technical experts on the TMEP team continue to assess the results of engagement activities in the context of the ESA in light of ongoing Traditional Land and



Trans Mountain Expansion Project

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Resource Use (TLRU) and Traditional Marine Resource Use (TMRU) studies with several Aboriginal communities. If there are any changes to the conclusions reached in the Application related to TLRU, TMRU or any other elements, Trans Mountain commits to filing additional information with the NEB at that time.

Trans Mountain looks forward to providing updates on its continued consultation activities to the NEB throughout the regulatory process.

Yours truly,

A handwritten signature in blue ink, appearing to read 'Scott Stoness'.

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**PART 1 – SUMMARY OF ERRATA IN THE DECEMBER 16, 2013 APPLICATION TO THE
NATIONAL ENERGY BOARD**

TABLE OF CONTENTS

	<u>Page</u>
PART 1 SUMMARY OF ERRATA IN THE DECEMBER 16, 2013 APPLICATION TO THE NATIONAL ENERGY BOARD	
1.0 INTRODUCTION.....	1-1
2.0 SUMMARY OF ERRATA.....	1-2

LIST OF TABLES

Table 1 Summary of Digital Errata.....	1-2
Table 2 Summary of Digital And Hardcopy Errata.....	1-4
Table 3 Errata for Aboriginal Engagement, Volume 3B, Appendix A.....	1-5

1.0 INTRODUCTION

Part 1 of the Trans Mountain Expansion Project (TMEP) Consultation Update No. 1 & Errata (the Update) provides a summary of the errata to the digital files uploaded to the National Energy Board's (NEB) website and to the hardcopy of the TMEP Application submitted to the NEB on December 16, 2013.

Specifically:

- Table 1 summarizes errata to the digital files uploaded to the NEB's Regulatory Documents Repository. Corrected versions of these electronic files are included in Appendices A-F of Part 1.
- Table 2 summarizes the errata to one digital file and the hardcopy version of Volume 2, Appendix B of the TMEP Application filed with the NEB on December 16, 2013. A corrected version of this report is provided in Appendix G.
- Table 3 summarizes the errata to the digital and hardcopy version of certain Aboriginal engagement logs filed as part of Volume 3B, Appendix A of the TMEP Application filed with the NEB on December 16, 2013.

2.0 SUMMARY OF ERRATA

TABLE 1

SUMMARY OF DIGITAL ERRATA

File Name of Original Digital File on NEB's Regulatory Documents Repository	Scope of Errata	Correction to Digital File
V2_3of4_PROJ_OVERVIEW_-_A3S0R0.pdf	A reduced-size version of Figure 4.2.1 was included in the digital file (Application page 2-48, page 19 of 43 in the PDF). The content of the figure has not been changed.	A higher resolution version of Figure 4.2.1 (TMEP Application, Volume 2, Page 2-48) has been uploaded to the NEB's Regulatory Documents Repository as noted in Appendix A.
V3A_APPA_01_OF_07_PH_2_COMM_MAT_-_A3S0R6.pdf V3A_APPA_02_OF_07_PH_2_COMM_MAT_-_A3S0R7.pdf V3A_APPA_03_OF_07_PH_2_COMM_MAT_-_A3S0R8.pdf V3A_APPA_04_OF_07_PH_2_COMM_MAT_-_A3S0R9.pdf V3A_APPA_05_OF_07_PH_2_COMM_MAT_-_A3S0S0.pdf V3A_APPA_06_OF_07_PH_2_COMM_MAT_-_A3S0S1.pdf V3A_APPA_07_OF_07_PH_2_COMM_MAT_-_A3S0S2.pdf	<p><u>Part 1 – Pages included in the wrong place</u> Part 1 Pages 5-35 - Discussion Guide should be in Part 5</p> <p>Part 1 Pages 36-43 - Brochure should be in Part 5</p> <p><u>Part 2 - Pages included in the wrong place</u> Part 2 Pages 1-4 - Newsletter should be in Part 7</p> <p>Part 2 Pages 5-8 - Newsletter should be in Part 7</p> <p>Part 2 Pages 9-12 - Newsletter should be in Part 7</p> <p><u>Part 5 - Missing Pages:</u> Should be at the end of Part 5 – was included in Part 1</p> <p>Should be at the end of Part 5 – was included in Part 1</p> <p><u>Part 7 - Missing Pages:</u> TMEP June 2012 Project Update Newsletter should be at the end of Part 7 – was included in Part 2</p> <p>TMEP June 2012 Field Studies Newsletter should be at the end of Part 7 – was included in Part 2</p> <p>TMEP September 2012 Project Update Newsletter should be at the end of Part 7 – was included in Part 2</p>	<p>Appendix B of Part 1 of this Update contains a list of the following files, uploaded to the NEB's Regulatory Documents Repository, which are the corrected version of the previously filed documents noted in the first column of this table:</p> <ul style="list-style-type: none"> • V3A_APPA_01_OF_05_PH_2_COMM_MAT.PDF • V3A_APPA_02_OF_05_PH_2_COMM_MAT.PDF • V3A_APPA_03_OF_05_PH_2_COMM_MAT.PDF • V3A_APPA_04_OF_05_PH_2_COMM_MAT.PDF • V3A_APPA_05_OF_05_PH_2_COMM_MAT.PDF <p>Due to the corrections in the electronic filings, the number of files was reduced from 7 to 5.</p>

TABLE 1 Cont'd

File Name of Original Digital File on NEB's Regulatory Documents Repository	Scope of Errata	Correction to Digital File
<p>V3A_APPD_01_OF_09_PH_3_OPEN_HOUSE_-_A3S0T5.pdf</p> <p>V3A_APPD_09_OF_09_PH_3_OPEN_HOUSE_-_A3S0T5.pdf</p>	<p>Pages out of order: Appendix D pages "Employment and Procurement" and "Employment and Procurement Phases" should be last 2 pages of Appendix D. These pages were erroneously included in Part 9 (file "V3A_APPD_09_OF_09_PH_3_OPEN_HOUSE_-_A3S0T5.pdf"), pages 7 and 8.</p>	<p>Appendix C of Part 1 contains a list of the corrected versions of V3A_APPD_01_OF_09_PH_3_OPEN_HOUSE.pdf and</p> <p>V3A_APPD_09_OF_09_PH_3_OPEN_HOUSE.pdf</p> <p>These files have been uploaded to the NEB's Regulatory Documents Repository.</p>
<p>V4A_3.4.4.2.3_F3.4.12_TO_3.4.4.1.3_PROJ_DESIG_ENGIN_A3S0Z1.pdf</p>	<p>File contents did not match the name of the file. Only the name of the file was incorrect. All contents were included.</p>	<p>Appendix D of Part 1 contains a list of the corrected version of the digital file that has been uploaded to the NEB's Regulatory Documents Repository. V4A_3.4.4.1.1_F3.4.12_TO_3.4.4.1.3_PROJ_DESIG_ENGIN.pdf</p>
<p>V4A_3.4.4.1.3_F3.4.17_TO_4.0_PROJ_DESIG_ENGIN_A3S0Y9.pdf</p>	<p>File contents do not match the name of the file. Only the name of the file was incorrect. All contents were included.</p>	<p>Appendix D of Part 1 contains a list of the corrected version of the digital file that has been uploaded to the NEB's Regulatory Documents Repository. V4A_3.4.4.2.3_F3.4.17_TO_4.0_PROJ_DESIG_ENGIN.pdf</p>
<p>V8C_TR_8C_10_TERMPOL_3.5_3.12_1_to_13_ROUTE_ANCHORAGE - 3S4T7.pdf</p>	<p>Volume 8C-TERMPOL 3.5 and 3.12 contains a bookmarking error in the Table of Contents. This formatting error did not affect the content of the report.</p>	<p>Appendix E of Part 1 includes TERMPOL 3.5 and 3.12 (one report) with a corrected table of contents, which has been uploaded to the NEB's Regulatory Documents Repository. File name:</p> <p>V8C_TR_8C_10_TERMPOL_3.5_3.12_1_to_13_ROUTE_ANCHORAGE.pdf</p>
<p>V8C_TR_8C_09_TERMPOL_3.11_CARGO_-_A3S4T6.pdf</p>	<p>Volume 8C-TERMPOL 3.11 contained an incorrect signature page. The incorrect signature page did not affect the content of the report.</p>	<p>Appendix F of Part 1 includes TERMPOL 3.11 with the corrected signature page, which has been uploaded to the NEB's Regulatory Documents Repository. File name:</p> <p>V8C_TR_8C_09_TERMPOL_3.11_CARGO.pdf</p>

TABLE 2

SUMMARY OF DIGITAL AND HARDCOPY ERRATA

File Name of Original Digital File on NEB's Regulatory Documents Repository	Scope of Errata	Correction to Digital & Hardcopy Files
V2_4_OF_4_PROJ_OVERVIEW-A3S0R1	<p>Volume 2, Appendix B, Trans Mountain Expansion Project: Understanding the Economic Benefits for Canada and its Regions. Conference Board of Canada.</p> <p>In several tables in Volume 2, Appendix B, the provincial fiscal effects associated with TMEP operations for Alberta and British Columbia were transposed. This does not affect the total national figures or the figures for other provinces. The following tables are affected:</p> <p>Table 1. Summary of the Economic and Fiscal Impacts of the TMEP (page 7) Table 4. Summary of Fiscal Effects from TMEP Operations (page 39) Table 5. Summary of the Regional Impacts of TMEP Operations (page 41) Table 6. Summary of the Regional Impacts of TMEP Development and Operations (page 42) Table 8. Summary of the Economic and Fiscal Impacts of the TMEP (page 53)</p>	<p>Appendix G of Part 1 contains the updated version of Volume 2, Appendix B, Trans Mountain Expansion Project: Understanding the Economic Benefits for Canada and its Regions. Conference Board of Canada. File name:</p> <p>V2_APPB_CBOC.pdf</p>

TABLE 3

ERRATA FOR ABORIGINAL ENGAGEMENT, VOLUME 3B, APPENDIX A

Due to errors in preparing the community profiles and Aboriginal engagement logs for Volume 3B of the TMEP Application to the NEB, Trans Mountain respectfully requests that the NEB remove the community profile and engagement log information described in Table 3 of this Update from the NEB Regulatory Documents Repository and replace these files with the corrected information contained in Appendices H and I of this Update. This request is made by Trans Mountain after consulting with the affected Aboriginal communities.

File Name of Original Digital File on NEB's Regulatory Documents Repository	Scope of Errata	Correction to Digital & Hardcopy Files
V3B_1.0_TO_3.0_ABOR_ENGAG-A3S0U5	Remove Matsqui First Nation community summary: "1.5.2.4.9 Matsqui First Nation".	Replace the Matsqui First Nation community summary with the updated community summary contained in Appendix H of Part 1 of this Update.
V3B_APPA_TO_APPB-A3S0U6	<p>Remove the Upper Nicola Indian Band engagement log; this log has not been replaced as it is confidential.</p> <p>Remove the Matsqui First Nation engagement log.</p> <p>Remove the Ts'elxweyeqw Tribes Management Limited engagement log.</p> <p>Add missing engagement logs for communities of Neskonalith Indian Band, Sunchild First Nation, Scowlitz First Nation, Seabird Island Band, Cowichan Tribes, Hwlitsum First Nation, Sechelt Indian Band, Songees Nation, T'souke First Nation, and Tsartlip First Nation.</p>	<p>Replace the removed logs for the Matsqui First Nation and Ts'elxweyeqw Tribes Management Limited with corrected engagement logs provided in Appendix I of Part 1 of the Update.</p> <p>Remove the Upper Nicola Indian Band engagement log from the NEB Regulatory Documents Repository and from the hardcopy.</p> <p>Add engagement logs for communities of Neskonalith Indian Band, Sunchild First Nation, Scowlitz First Nation, Seabird Island Band, Cowichan Tribes, Hwlitsum First Nation, Sechelt Indian Band, Songees Nation, T'souke First Nation, and Tsartlip First Nation provided in Appendix I of Part 1 of this Update.</p>

APPENDIX A

VOLUME 2, FIGURE 4.2.1

FIGURE 4.2.1

**PROJECT OVERVIEW
ALBERTA AND BRITISH COLUMBIA**

**TRANS MOUNTAIN
EXPANSION PROJECT**

- Kilometre Post (KP)
- Reference Kilometre Post (RK)
- Trans Mountain Pipeline (TMPL)
- Trans Mountain Expansion Project Proposed Pipeline Corridor
- Terminal
- Pump Station (Pump Additions, Station Modifications and/or Scraper Facilities)
- New Pump Station (Proposed)
- Pump Station (Reactivated)
- Existing Pump Station
- Highway
- Railway
- City / Town / District Municipality
- Indian Reserve / Métis Settlement
- National Park
- Provincial Park
- Protected Area / Natural Area / Provincial Recreation Area / Wilderness Provincial Park / Conservancy Area
- Provincial Boundary
- International Boundary

Projection: LCC Modified. Routing: Baseline TMPL & Facilities: provided by KMC, 2012; Proposed Pipeline Corridor V6: provided by UPI, Aug. 23, 2013; Transportation: IHS Inc., 2013; BC Forests, Lands and Natural Resource Operations, 2012 & Natural Resources Canada, 2012; Geopolitical Boundaries: Natural Resources Canada, 2003; Atlas, 2013; IHS Inc., 2011; BC FLNRO, 2007 & ESRI, 2005; First Nation Lands: Government of Canada, 2013; Atlas, 2010 & IHS Inc., 2011; Hydrology: Natural Resources Canada, 2007 & BC Crown Registry and Geographic Base Branch, 2008; Parks and Protected Areas: Natural Resources Canada, 2012; Atlas, 2012 & BC FLNRO, 2008; ATS Grid: Atlas, 2009; Edmonton: TUC Alberta Infrastructure, 2011; Canadian Hillshade: TERA Environmental Consultants, 2008; US Hillshade: Copyright: © 2009 ESRI

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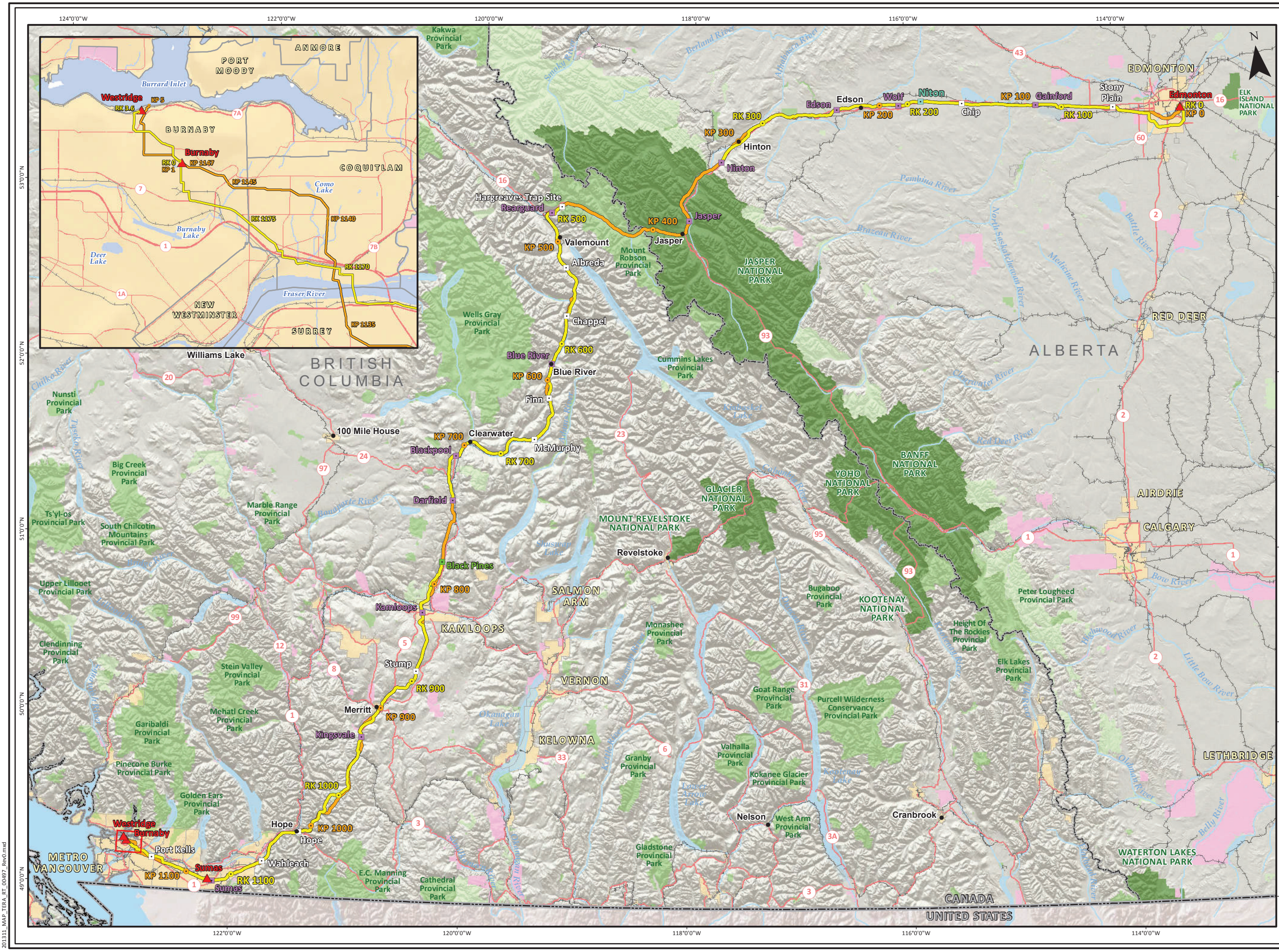


Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present.



MAP NUMBER 201311_MAP_TERA_RT_00497_REV0	PAGE SHEET 1 OF 1
DATE December 2013	TERA REF. 7894
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APPENDIX B

VOLUME 3A, APPENDIX A DIGITAL FILE ERRATA

3.0 APPENDICES

Appendix A Phase 2 Materials

Display Boards:

- . Welcome
- . History of Trans Mountain
- . Proposed Trans Mountain Pipeline Expansion Map
- . Project Overview
- . Proposed Facilities
- . Pipeline Specifications
- . Pipeline Route and Route Options
- . Identifying Route Options
- . The Timeline
- . Engagement
- . Aboriginal Engagement
- . Project Benefits
- . Economic Impacts
- . Local Benefits
- . Environmental Commitment and Assessment
- . Natural Environment
- . Human Environment
- . Industry and Product in the Pipeline
- . Building a Pipeline
- . Pipeline Safety
- . Pipeline Monitoring and Emergency Response
- . Westridge Marine Terminal
- . Our Spill History
- . Emergency Marine Response
- . Regulatory Overview
- . National Energy Board Applications
- . National Energy Board Process
- . Regulatory Oversight of Crude Oil Transport Operations
- . Shipping Routes
- . Marine Traffic 1
- . Marine Traffic 2
- . Liability – Marine Spill
- . Marine Supplement Boards
- . Strathcona County
- . Edmonton
- . Parkland County
- . Spruce Grove
- . Stony Plain
- . Yellowhead Count
- . Edson
- . Hinton
- . Jasper
- . Fraser-Fort George map
- . Valemount map

- Albreda map
- Thompson Nicola map
- Blue River map
- Avola map
- Vavenby map
- Clearwater map
- Darfield-Barriere map
- Kamloops map
- Merritt map
- Hope map
- Fraser Valley map
- Chilliwack map
- Metro Vancouver map
- Abbotsford map
- Langley map
- Surrey map
- Coquitlam map
- Burnaby
- Burrard Inlet map

Handouts:

- Discussion Guide
- Kinder Morgan in Canada Brochure
- ESA Pipeline and Facilities Sheet – Accidents and Malfunctions
- ESA Pipeline and Facilities Sheet – Acoustic Environment
- ESA Pipeline and Facilities Sheet – Air Emissions
- ESA Pipeline and Facilities Sheet – Economy and Employment
- ESA Pipeline and Facilities Sheet – Fish and Fish Habitat
- ESA Pipeline and Facilities Sheet – Greenhouse Gas (GHG) Emissions
- ESA Pipeline and Facilities Sheet – Heritage Resources
- ESA Pipeline and Facilities Sheet – Human Health Risk Assessment (HHRA)
- ESA Pipeline and Facilities Sheet – Human Health Community
- ESA Pipeline and Facilities Sheet – Human Occupancy and Resource Use
- ESA Pipeline and Facilities Sheet – Infrastructure and Services
- ESA Pipeline and Facilities Sheet – Physical and Meteorological Environment
- ESA Pipeline and Facilities Sheet – Social and Cultural Well-Being
- ESA Pipeline and Facilities Sheet – Soil and Soil Productivity
- ESA Pipeline and Facilities Sheet – Vegetation
- ESA Pipeline and Facilities Sheet – Water and Water Quality
- ESA Pipeline and Facilities Sheet – Wetlands
- ESA Sheet – Wildlife and Wildlife Habitat
- ESA Pipeline and Facilities (Pipeline Spills) Sheet – Ecological Risk Assessment (ESA)
- ESA Pipeline and Facilities, Marine Transport Sheet – Cumulative Effects
- ESA Pipeline and Facilities Sheet – Traditional Land and Resource Use
- ESA Pipeline and Facilities, Westridge Marine Terminal (Operations) Sheet – Marine Ecological Risk Assessment
- ESA Marine Transportation Sheet – Marine Air and Greenhouse Gas (GHG) Emissions

- ESA Marine Transportation Sheet – Marine Birds
- ESA Marine Transportation Sheet – Marine Noise
- ESA Marine Transportation Sheet – Marine Noise
- ESA Marine Transportation Sheet – Marine Species at Risk
- ESA Marine Transportation, Marine Spills Sheet – Marine Ecological Risk Assessment
- CEPA Sheet - Diluted Bitumen
- CEPA Sheet - Corrosion
- CEPA Sheet - Emergency Response
- CEPA Sheet - Pipeline Safety
- TMEP June 2012 Project Update Newsletter
- TMEP June 2012 Field Studies Newsletter
- TMEP September 2012 Project Update Newsletter

We Want to Hear From You

- The purpose of this public information session is to provide you with information and facts about the proposed expansion of the Trans Mountain Pipeline system
- We are seeking your input on areas of the proposed project that are of interest or concern to you and your community
- We encourage you to review the materials and to speak with the project representatives at this session
- Please also fill out the feedback form or share your thoughts with us online at www.transmountain.com



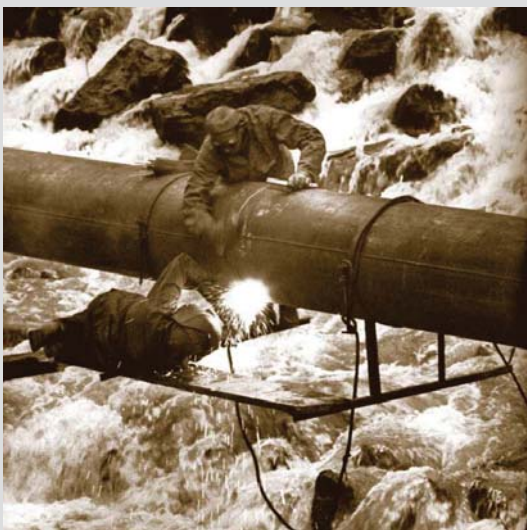


TRANSMOUNTAIN

HISTORY OF TRANS MOUNTAIN

Operating Since 1953

- For almost 60 years, the Trans Mountain Pipeline system has been safely and efficiently providing the only existing West Coast pipeline access to Canadian oil products
- The Trans Mountain Oil Pipeline Company was established in 1951 to construct and operate the Trans Mountain Pipeline between Strathcona County, Alberta and Burnaby, BC
- In operation since October 1953, the Trans Mountain Pipeline was established to create a reliable energy supply for Canada and the United States
- The initial capacity was 150,000 barrels per day with 4 pump stations along the line and a marine loading dock
- Since 1953, the capacity of the pipeline system has been increased a number of times by twinning parts of the line and adding associated facilities
- The most recent expansion of the Trans Mountain pipeline was the award-winning Anchor Loop Project, completed in 2008, through Jasper National Park and Mount Robson Provincial Park



PROPOSED TRANS MOUNTAIN PIPELINE EXPANSION MAP



Proposed Expansion

- Approximately 900 kilometres of new pipeline along the existing Trans Mountain Pipeline system between Strathcona County, Alberta (near Edmonton) and Burnaby, BC
- Increased nominal capacity from 300,000 barrels per day up to 750,000 barrels per day
- Customers have signed 20-year contracts with Trans Mountain for much of the extra capacity



Project Details

- Proposed dual-line operation
 - The existing line: refined products, synthetic crude oils, light crude oils
 - The proposed new line: heavier oils
- New 30-inch pipeline proposed in the following areas:
 - Strathcona County, Alberta to Edson, Alberta
 - From Rearguard, BC to Darfield, BC
 - From Blackpines, BC to Burnaby, BC
- New 36-inch pipeline proposed for Hargreaves, BC to Rearguard, BC
- Two new 30-inch delivery lines planned from the Burnaby Terminal to the Westridge Marine Terminal
- Existing pipelines to be reactivated:
 - Edson, Alberta to Hargreaves, BC
 - Darfield, BC to Blackpines, BC
- Project cost: approximately \$4.3 billion



Pump Stations



- 9 new pump stations at existing locations
- 4 new pump stations located at 2 new sites

Storage Tanks



- 18 new storage tanks at 3 existing storage terminals in:
 - Strathcona County, Alberta
 - Burnaby, BC
 - Sumas, BC
- All new storage tanks are expected to be built within existing facility boundaries

Westridge Marine Terminal



- 3 loading berths: total of 3 berth faces
- 1 utility berth with spill response equipment and utility tugs

PIPELINE SPECIFICATIONS



- Oil pipelines are made from steel with a diameter typically ranging from 4 to 48 inches
- Trans Mountain will use 30-inch pipe for most of the proposed expanded pipeline
- Trans Mountain will use pipe manufactured from high-grade steel to stringent Canadian Standards Association (CSA) and American Petroleum Institute (API) specifications in the proposed pipeline expansion
- CSA tightly regulates requirements for steel chemistry, material properties, manufacturing tolerances and quality control
- With a strong focus on inspection and maintenance, pipelines have an indefinite lifespan

PIPELINE ROUTE AND ROUTE OPTIONS

Objectives in Determining Route Options

- Build the proposed new pipeline safely, while minimizing impacts to landowners and neighbours
- Follow the existing Trans Mountain Pipeline right-of-way, where practical

Significant changes in land use and urban growth since the original pipeline was built will require identifying new routing options in some locations

Routing Considerations

- Follow established transportation and utility corridors
- Minimize impact on landowners
- Minimize impact on environment
- Minimize constraints on municipal infrastructure
- Minimize impact on public
- Minimize impact on Aboriginal communities




IDENTIFYING ROUTE OPTIONS

Routing Studies



- The route will be determined through studies and consultation with Aboriginal peoples, landowners and communities
- In locations where routing options are required, studies will be conducted within a 150m assessment corridor to identify an 18m operational right-of-way
- Routing studies will consider
 - Human Environment:
 - Land use: residences, commercial, recreation, parks
 - Natural Environment:
 - Sensitive areas
 - Water crossings
 - Wetlands and wildlife
 - Engineering:
 - Technical constraints/possible construction techniques
 - Geotechnical conditions
 - Pipeline length
 - Number and difficulty of crossings (highways, roads and other line crossings)
- Final, detailed routing will be determined during the design and construction planning stage, after late 2013



In April 2012, Kinder Morgan Canada announced it will proceed with its proposed plans to expand the capacity of the existing Trans Mountain system after receiving strong commitments from its customers. Here is a look at the key activities and estimated timeline that will unfold over the next five years.



LATE SPRING/EARLY SUMMER 2012:

Meetings and discussions began with regulators to define the process and determine federal and provincial regulatory requirements needed for the expansion Facilities Application. Initial meetings with Aboriginal peoples, landowners, communities and stakeholders.



SUMMER 2012:

Engagement with Aboriginal peoples, landowners, communities and stakeholders took place in summer 2012 and is continuing. On June 29, 2012, Trans Mountain filed a Toll Application with the National Energy Board. The Toll Application is Trans Mountain's proposed tolling structure for its customers on the proposed expanded pipeline system. This application does not seek approval for the proposed expansion facilities and does not involve technical or environmental aspects of the proposed expansion project. The focus of the Toll Application is to seek approval from the National Energy Board regarding how Kinder Morgan Canada will charge its customers for moving product through the proposed expanded pipeline.



JUNE 2012 TO SPRING 2013:

*** WE ARE HERE IN THE PROCESS.** Continue open and transparent engagement. Undertake comprehensive pipeline routing studies, traditional knowledge studies, environmental and socio-economic assessments.



LATE 2013:

The goal is to file a comprehensive Facilities Application with the National Energy Board in late 2013 to start a regulatory project review. The timing will be determined by meeting the established regulatory requirements that govern the application process and consultation efforts. Continue open and transparent engagement.



2014 TO 2015:

Regulatory review. Continue open and transparent engagement.



2016 TO 2017:

If the project is approved, construction of the proposed expansion could begin. Continue open and transparent engagement.



2017:

If the project is approved, proposed expanded Trans Mountain Pipeline to start operating.



Community Feedback

Trans Mountain is committed to open and transparent community engagement

- We have begun conversations with:
 - Aboriginal peoples
 - Landowners
 - Community and business leaders
 - Elected officials
 - Environmental groups
 - More than 20 municipal governments
 - Public
- Community input will be part of Trans Mountain's Facilities Application to the National Energy Board

Stay Informed and Provide Feedback

We look forward to receiving your ideas and comments

- **Attend** community meetings and sessions in 2012 and 2013
- **Complete** the feedback form available at www.transmountain.com and at the public information sessions
- **Participate** in online forums, discussions and surveys on the project website at www.transmountain.com
- **Learn** more about the project at www.transmountain.com
- **Follow** the project on Twitter: @TransMtn
- **Sign up** to receive project updates at www.transmountain.com/contact-us
- **Contact us** with your feedback at info@transmountain.com or 1-866-514-6700



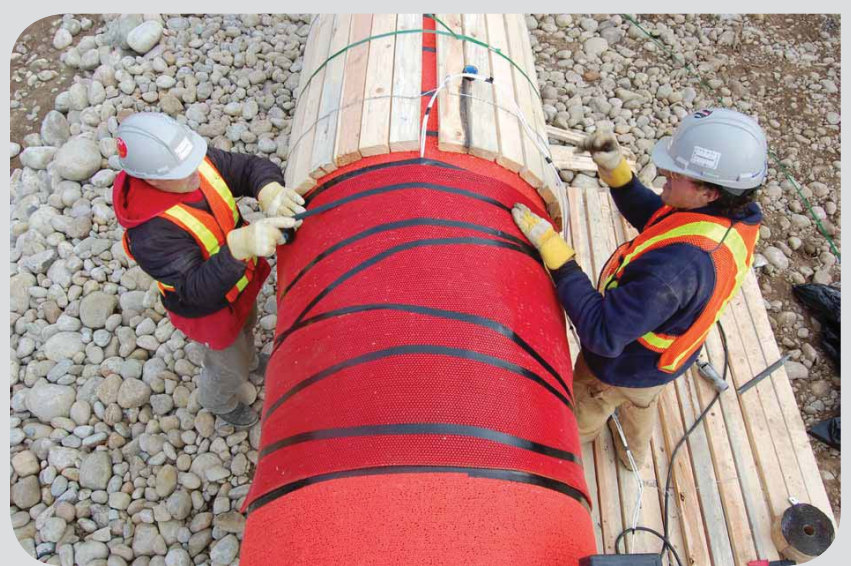
Committed to Working Together



- The Trans Mountain Pipeline crosses many Aboriginal territories
- Trans Mountain values its relationships with Aboriginal peoples in whose territories we operate
- We recognize and appreciate that Aboriginal groups' interests and responsibilities are unique
- We are committed to working with Aboriginal communities in a spirit of co-operation to build and sustain lasting relationships
- We are committed to working with Aboriginal communities and companies in the planning and construction of the proposed project
- We are engaging with Aboriginal people in traditional territories, where traditional knowledge of the land and its people can help us build a better proposal
- We actively encourage Aboriginal contractors to bid on our contracting opportunities, including joint venture partnerships with other local service providers, in order to expand the resource pool available in BC and Alberta

Opportunities for Communities

- The project will provide benefits to Canadians by creating jobs, contributing to government revenues and contributing to Canadian businesses and to the overall economy
- Most economic benefits will occur in BC and Alberta, and will include opportunities for communities along the route
- The project will provide an important boost to the BC and Alberta construction industries
- The proposed Trans Mountain Expansion Project will allow Canada to promote its resources on the world market where oil commands world pricing
- Access to Tidewater markets is anticipated to boost the oil price for Canadian producers by a total of \$28 billion in the first 10 years



Trans Mountain has conducted preliminary analyses of the potential economic impact of the project (all numbers are approximate)

- **Estimated Direct Expenditures:**

- o \$4.3 billion during design and construction (2012 – 2018)
 - \$2.6 billion in BC and \$1.5 billion in Alberta
- o \$3.6 billion during operations (2019 – 2048)
 - \$2.5 billion in BC and \$1.1 billion in Alberta



- **Estimated Employment:**

- o 47,200 person-years of employment generated (full-time equivalents) during construction and operations (2012 – 2048)
 - 27,200 person-years in BC
 - 11,500 person-years in Alberta
 - Plus indirect/induced employment in other provinces and territories
- o Expanded operations: approximately 35 new permanent full-time jobs in BC and 29 in Alberta

- **Estimated Tax Revenues:**

- o \$811 million for Government of Canada over life of project
- o \$557 million for provincial governments over life of project (\$320 million for BC, \$145 million for Alberta and \$93 million for rest of Canada)
- o \$600 million increased municipal property taxes during operation
 - \$535 million in BC (\$19.9 million annually)
 - \$64 million in Alberta (\$2.4 million annually)

- Trans Mountain is assessing expected local economic benefits to communities along the pipeline route – when complete, information will be shared



These estimates may change as project details are refined

Jobs, Training and Technology

- Substantial expenditures, jobs and economic spinoffs in BC and Alberta communities in project development and during construction
- Training and skills development that will build capacity for Aboriginal workers
- Contracting, employment and vendor opportunities for local and regional businesses
- Investments and advancements in areas such as pipeline development and spill response
 - Example: \$250,000 contribution to the British Columbia Institute of Technology (BCIT) Marine Simulation Centre
- Trans Mountain is looking for feedback and ideas on how your community could participate in and benefit from the expansion project

BCIT Marine Simulation Centre

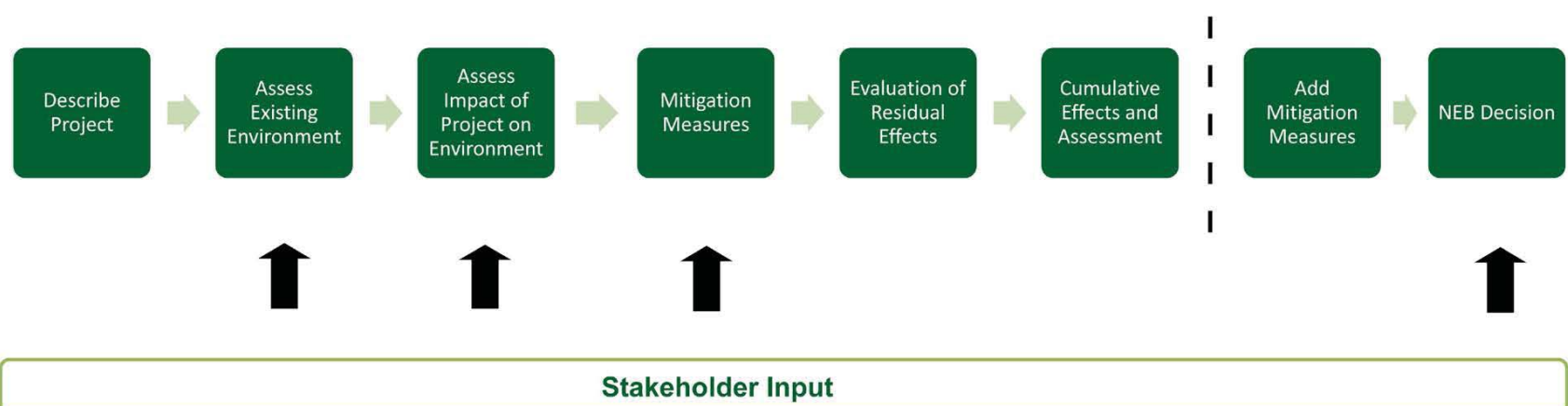


ENVIRONMENTAL COMMITMENT AND ASSESSMENT

Environmental Protection

- Trans Mountain is committed to environmental stewardship
- Trans Mountain will undertake a comprehensive Environmental and Socio-Economic Assessment (ESA) of the pipeline, related facilities and increases in vessel traffic resulting from the proposed project
- Detailed Environmental Protection Plans (EPPs) will be developed for the project
- The ESA will examine both natural and human elements associated with the land and marine environments
- Numerous topic-specific field studies will take place along the proposed pipeline route and in/around facilities
- The ESA, EPPs and topic-specific field reports will be part of the Facilities Application to be submitted to the National Energy Board in fall 2013

ESA OVERVIEW





- Field studies will examine the effects and develop mitigation measures related to:
 - Wildlife, including birds
 - Wetlands
 - Air and noise emissions
 - Soils
 - Surface water quality and quantity
 - Groundwater quality and quantity
 - Fish and fish habitat
 - Vegetation
 - Ecological risks





- Field studies will examine the effects and develop mitigation measures related to:
 - Traditional Land and Resource Use
 - Archaeology and Heritage Resources
 - Human Occupancy and Resource Use
 - Employment and Economy
 - Infrastructure and Services
 - Human Health
 - Viewsheds and Aesthetics
 - Social and Cultural Well-Being



Transporting Energy Sources

- Pipelines transport oil (light and heavy crude) and natural gas over long distances, from producing regions of Canada to refineries and processing plants, where these energy sources are converted into useful fuels such as gasoline, diesel and commercial-grade natural gas
- Petroleum products include:
 - Fuels we use every day, such as gasoline, aviation fuel, diesel and heating oil
 - Solvents and lubricants
 - Raw materials for manufacturing other petrochemicals
 - Products used every day such as plastics, synthetic fabrics and electronics
- For more information on Canada's petroleum industry, visit the Canadian Association of Petroleum Producers (CAPP) website at: www.capp.ca
- The Trans Mountain Pipeline is part of Canada's 100,000-km underground pipeline network that transports almost all of Canada's daily crude oil and natural gas production
- For more information on Canada's pipeline industry and infrastructure, visit the Canadian Energy Pipeline Association (CEPA) website at: www.cepa.com



Step by Step

Surveying and Staking: After finalizing a route, crews survey and stake the right-of-way and any temporary workspace needed for construction.

Clearing: Trees and vegetation are removed from the right-of-way.

Grading: Area is cleared and graded. The topsoil is removed and stockpiled for replacement and future reclamation.

Trenching: Excavators dig the trench to the required depth. Pipelines are buried in trenches that are generally a minimum of 0.9 metres deep, depending on sub-surface conditions.

Stringing: Individual lengths of pipe ranging from 12 to 24 metres long are laid out end-to-end along the right-of-way.

Bending: Individual joints of pipe are bent using a hydraulic bending machine for directional changes to fit the terrain.

Joining: Welders join the pipes together with either manual or automated welding processes. All welds are tested using high-tech methods such as X-ray or ultrasound.

Coating: The pipeline coating protects against corrosion. The pipeline is delivered to the right-of-way pre-coated. Field application coating is applied to welded joints.

Lowering: The welded pipeline is lowered into the trench with heavy lifting machines called side booms.

Valves and Fittings: Valves and other fittings are installed at intermediate locations as required by the Canadian Standards Association pipeline code. The valves are used once the line is operational to isolate the pipeline for maintenance or in the event of an emergency.

Backfilling: Soils are replaced in the order in which they were removed.

Pressure Testing: Pipelines are hydrostatically tested to 125 per cent of the anticipated operating pressure.

Cleanup: The pipeline right-of-way is reclaimed. Temporary facilities are removed. The land is re-contoured and re-seeded as part of restoration.



Our Commitment

- We will take every possible action to prevent a spill and have developed a number of programs to protect and inspect the Trans Mountain Pipeline
- No spill is acceptable, but we have plans to respond, clean up, remediate and learn from every incident should one occur
- In the event of a spill, we will examine all aspects of our operations and make modifications wherever possible to prevent a recurrence

Pipeline Safety

- Pipelines remain the safest and most efficient method for transporting petroleum products
- As long as pipelines are properly maintained, their lifespan is indefinite

Pipeline Protection

- Our pipeline integrity management includes regular inspection, maintenance and repair programs managed by a dedicated Technical Services group

- The pipeline has protective coatings and a cathodic protection system to prevent rust and corrosion
- Technology is used to detect changes in pipeline condition and wall thickness

Damage Prevention

- The pipeline is marked and signage along the line is maintained
- We conduct regular aerial and ground patrols of the pipeline to look for any irregularities or unauthorized activities along the pipeline corridor
- Permits are issued for any ground disturbance activities near the pipeline
- “One Call” program ensures the public or an employee can immediately and easily call for a response to a safety concern
- Education workshops and information mailouts help keep the public aware of the potential risk of activities near the pipeline corridor

PIPELINE MONITORING AND EMERGENCY RESPONSE

Monitoring

- Control Centre Operations staff operate and monitor the pipeline 24/7 year round from a Control Centre in Edmonton, Alberta
- The Supervisory Control and Data Acquisition (SCADA) system monitors the pressures and operating conditions of the pipeline
- Information is transferred from SCADA to a Leak Detection system in real time
- If pipeline flow or pressure changes, an alarm will alert the operator
- If necessary, Trans Mountain can shut the system down remotely using automated valves to stop the flow of product and isolate sections of the pipeline for investigation

Emergency Response

- Trans Mountain staff, combined with trained responders and contractors, provide 24/7 response management
- Trans Mountain is responsible for cleanup and remediation of incidents related to its operations along the pipeline corridor
- Trans Mountain carries liability insurance to provide coverage for all aspects of spill management, including compensation and remediation
- The Incident Command System (ICS) outlines clear emergency response roles and responsibilities, including use of local emergency responders and qualified clean-up contractors, so Trans Mountain can act quickly to protect its employees, the public and the environment
- Emergency response equipment is located at strategic locations along the pipeline



Loading the Tankers

- Tanker operations are regulated by Transport Canada, Canadian Coast Guard, Pacific Pilotage Authority and Port Metro Vancouver
- Trans Mountain also pre-screens and inspects vessels before they are allowed to load at the Westridge Marine Terminal
- The largest vessels calling at the Trans Mountain Westridge Marine Terminal are Aframax tankers – due to harbour restrictions, they are loaded only to 90 per cent of their 650,000-barrel capacity
- Aframax tankers are considered mid-size range of tankers that operate globally
- We have loaded marine vessels since 1956 without a single spill from vessel operations
- Loading an average tanker takes 24 hours, after safety and operating procedures have been established



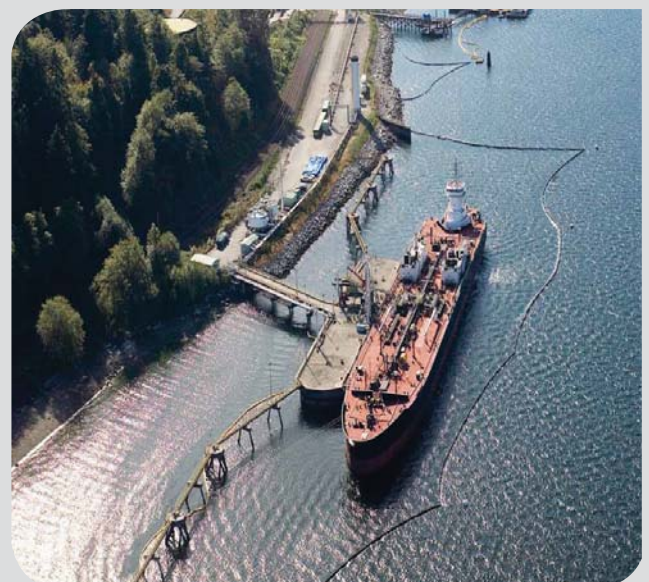
History

We recognize the potential for pipeline spills. Our safety programs aim to minimize the effects of spills. We have a strong focus on management systems and preventative maintenance programs, including protection of stream and river crossings. These systems programs are fully documented and subject to audit by the National Energy Board (NEB).

- We are responsible for reporting spills greater than 1.5 cubic metres (approximately 9.5 barrels) to the NEB, the regulator of our system since 1961
- We have loaded marine vessels since 1956 without a single spill from vessel operations
- Since 1961, Trans Mountain has reported 78 spills on its pipeline system to the NEB, some of which are below the reportable threshold
- More than 70 per cent of all spills have occurred at Trans Mountain pump stations or terminals
- Trans Mountain pump stations and terminals have monitoring and spill containment systems that are rigorously maintained and meet NEB standards

What We Have Learned

- Following each spill we have conducted a thorough incident investigation, with recommendations and a Corrective Action Plan
- Our pipeline spill history shows how we have learned from these recommendations and improved our technology and management programs



EMERGENCY MARINE RESPONSE

Working as a Team



- Western Canada Marine Response Corporation (WCMRC) is Canada's West Coast-certified response organization responsible for emergency response preparedness
- With a team of well-trained professionals, WCMRC is on call 24/7 to manage oil spill response on the BC coast
- Under the 1995 Canada Shipping Act, both oil-handling facilities (shipping or receiving) and vessels 150 gross tonnes and greater carrying oil for delivery, and/or ships 400 gross tonnes and greater calling on a Canadian port must, by law, have an arrangement with a certified response organization
- The Regional Environmental Emergencies Team (REET) provides environmental expertise drawn from experts within response agencies and all levels of government including First Nations
- We work closely with Transport Canada, the Canadian Coast Guard, the provincial government and Environment Canada in preparedness and prevention strategies

National Energy Board

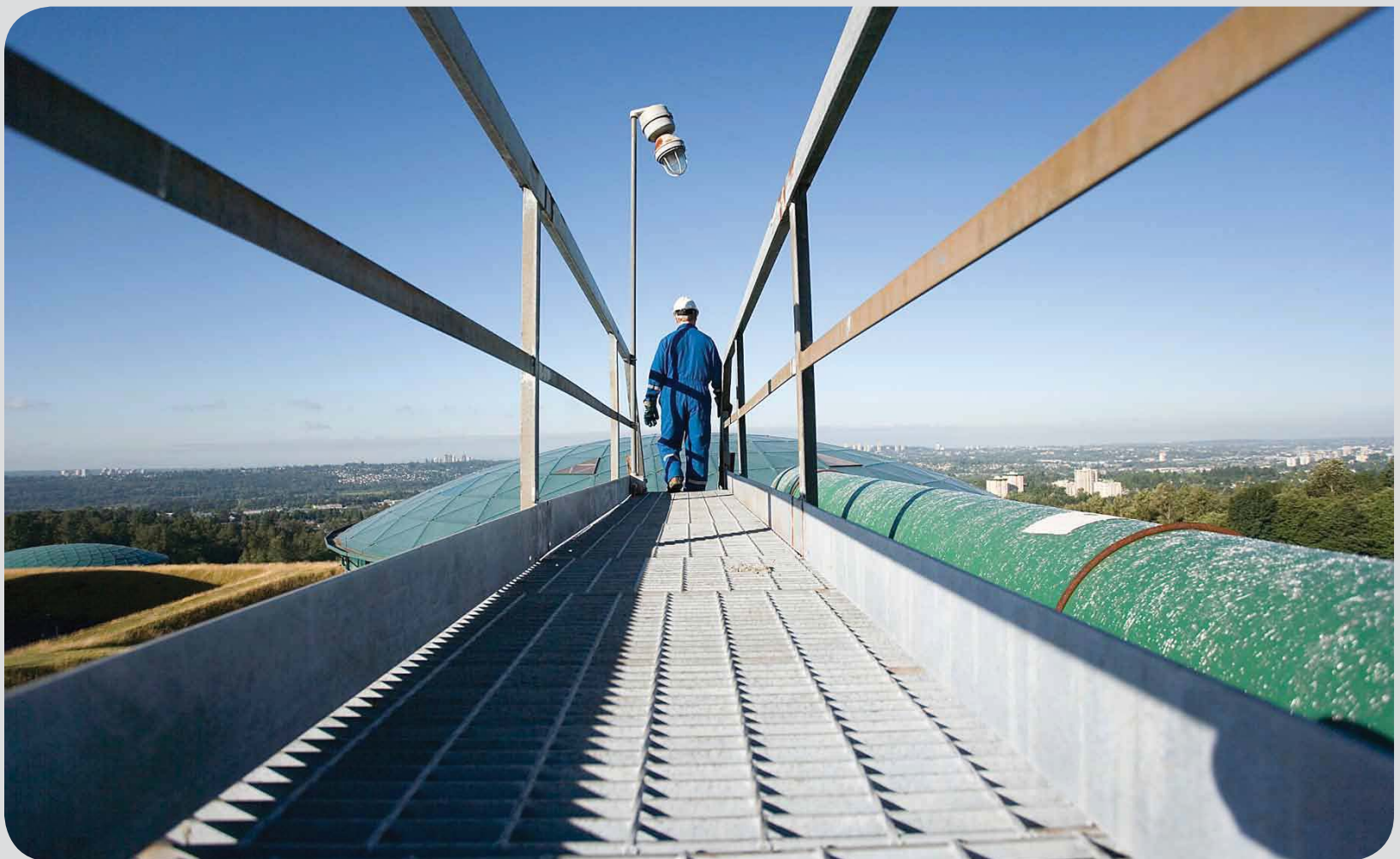
- The Trans Mountain Pipeline is regulated by the National Energy Board (NEB), a fully independent agency of the Government of Canada established in 1959 to regulate international and interprovincial aspects of the oil, gas and electric utility industries
- The NEB's mandate is to promote safety, security, environmental protection and enhance economic efficiency for the regulation of

pipelines, energy development and trade in the Canadian public interest.

- As an NEB-regulated entity, Trans Mountain requires approval from the NEB prior to being able to construct the proposed Trans Mountain Expansion Project

Other Regulatory Agencies

- Trans Mountain will also need to seek approval from a number of other regulatory agencies



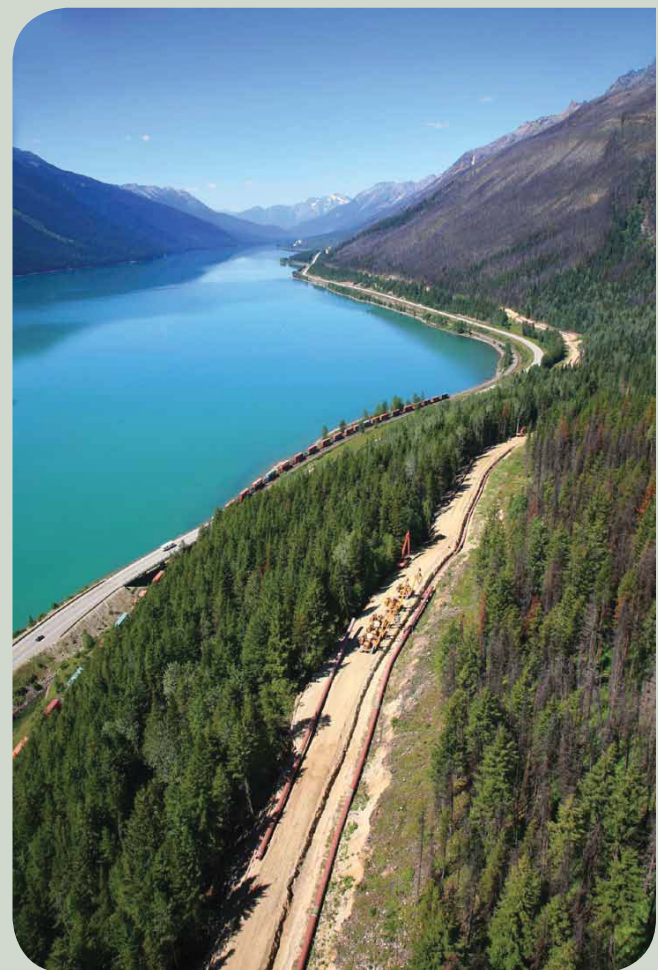
NATIONAL ENERGY BOARD APPLICATIONS

Facilities Application (to be filed late 2013)

- Trans Mountain will file a Facilities Application to the National Energy Board (NEB) in late 2013 to begin regulatory review of the proposed expansion project
- The Facilities Application will ask the NEB for authorization to build and operate the necessary facilities for the proposed Trans Mountain Expansion Project
- The Facilities Application will include the Environmental and Socio-Economic Assessment (ESA), as well as documentation of the Aboriginal engagement, landowner and public consultation, and engineering components of the proposed expansion project
- The NEB will consider whether the proposed project will meet current and future public needs
- The NEB review considers public input, impact of the project and proposed measures to be taken to minimize any impacts
- At the end of its review, the NEB will provide a recommendation to the Governor in Council as to whether the proposed project should proceed

Toll Application (filed June 2012)

- The NEB has jurisdiction over how tolls or fees are charged on pipelines
- On June 29, 2012 Trans Mountain filed a Toll Application for NEB approval of the toll or fee structure for the proposed project
- The Toll Application addresses commercial matters related to the tolls that would be charged to the shippers
- The Toll Application does not impact whether the NEB would approve the proposed Trans Mountain Expansion Project



Public Input

- The National Energy Board (NEB) encourages interested members of the public to participate in proponent-led engagement processes prior to the filing of the Facilities Application
 - The NEB will consider comments made by members of the public during the proponent-led engagement program in making its decision
 - The NEB is required to hold a public hearing for all pipelines longer than 40 kilometres in length
 - The purpose of a public hearing is to gather and review relevant information, including information from the public
- **make an oral statement must notify the NEB in advance**
 - **Applying for intervenor status:**
An individual or group granted intervenor status by the NEB may file written evidence, receive all filings submitted by the company, comment on evidence filed and make a final argument
- For more information on the National Energy Board regulatory process and opportunities for public input, visit www.neb.gc.ca

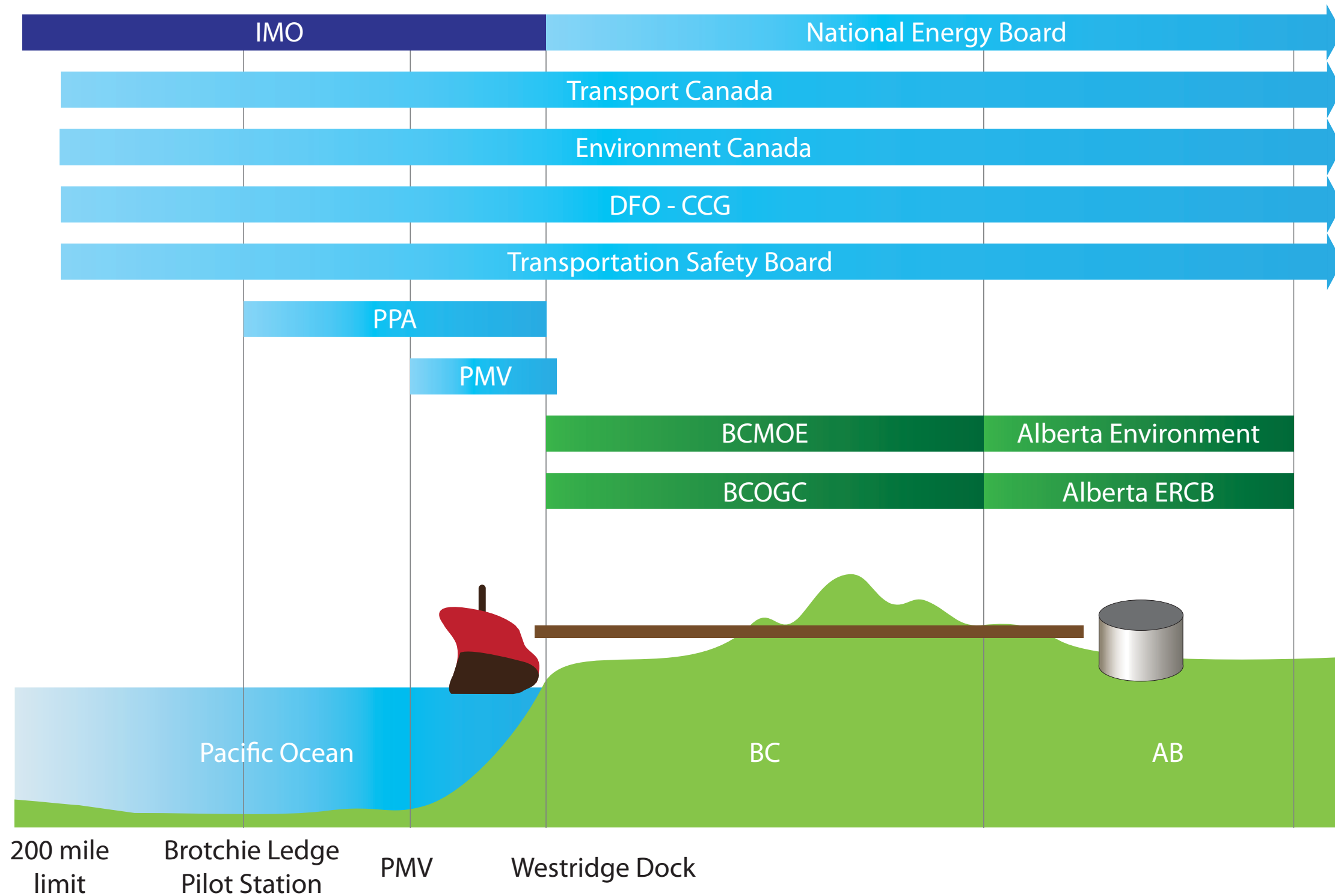
Public Participation in a National Energy Board Hearing

- There are three ways individuals or groups can participate in a hearing:
 - **Filing a letter of comment:** a written statement about the writer's views
 - **Asking to make an oral statement:** presenting views in-person at a public hearing – anyone wishing to





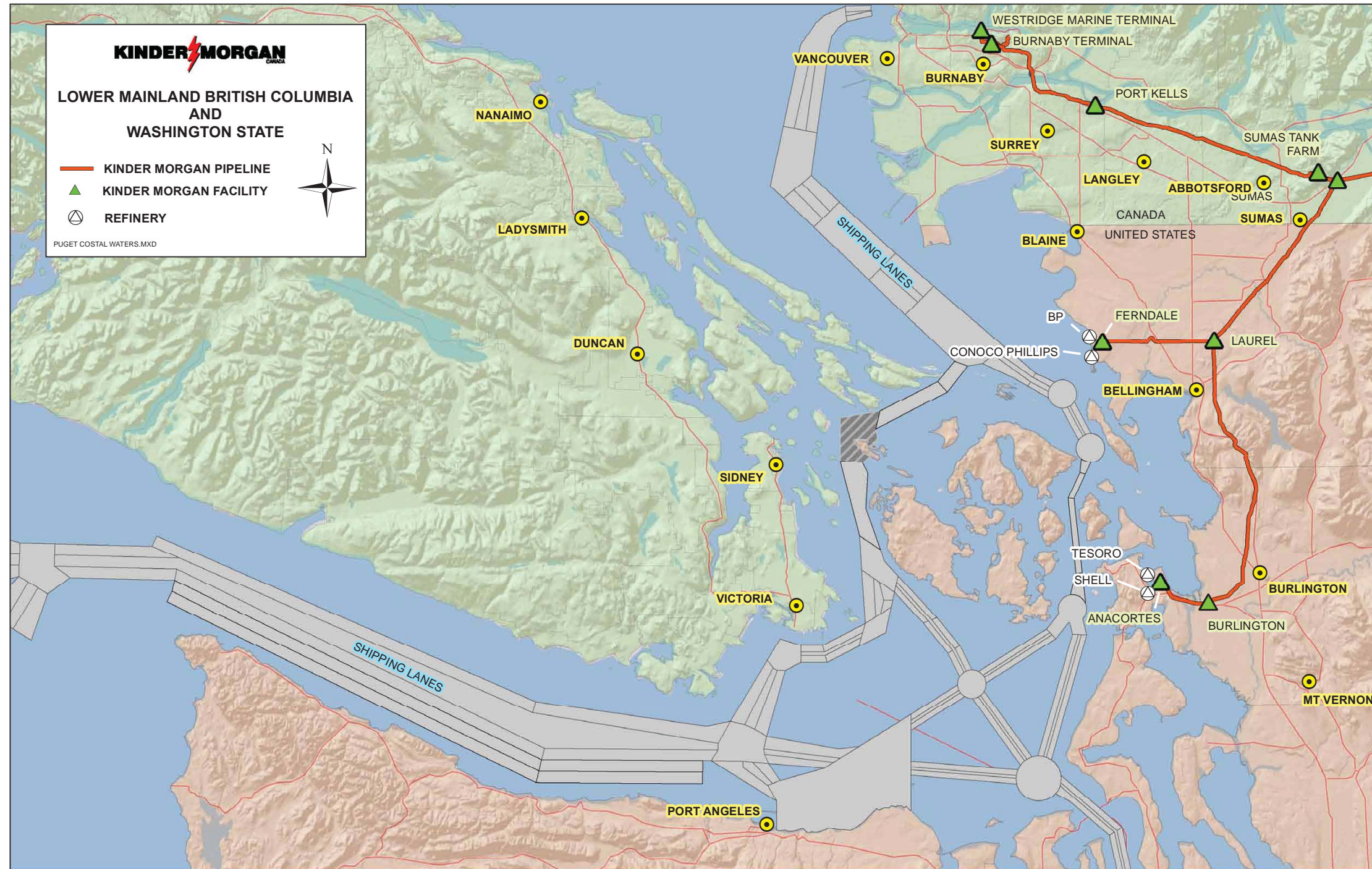
Regulatory Oversight of Crude Oil Transport Operations





TRANSMOUNTAIN

SHIPPING ROUTES





MARINE TRAFFIC

Current traffic in Port Metro Vancouver related to Westridge Marine Terminal Operations	
Current	Estimated with Proposed Trans Mountain Expansion Project
<p>8 vessels per month</p> <ul style="list-style-type: none"> ● Jet fuel barges: 1 ● Tankers: 5 ● Crude oil barges: 2 ● Currently, less than 3% of current marine traffic in Port Metro Vancouver 	<p>28 vessels per month</p> <ul style="list-style-type: none"> ● Jet fuel barges: 1 ● Tankers: 25 ● Crude oil barges: 2 ● Projected increase in traffic will be less than 10% of current marine traffic in Port Metro Vancouver

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- The Trans Mountain Expansion Project is based on Aframax tankers
- Due to harbour restrictions in Burrard Inlet, the tankers are loaded only to 90 per cent of their 650,000-barrel capacity

- In Canada, liability and compensation for ship source oil spill pollution is governed by the Canada Shipping Act and Marine Liability Act that reflects Canada's commitment to international conventions administered by the International Maritime Organization (IMO)
- Conventions limit the liability of the Responsible Party (ship owner) and establish sources of funding for clean up and compensation for damages. Up to \$1.312 billion is available:

Level 1 – Responsible Party's Protection & Indemnity Insurance

- o Responsible Party's liability is limited based on ship tonnage to a maximum of about \$138 million and would normally be paid by insurance

Level 2 – International Oil Pollution Compensation Fund (IOPC), 1992

- o Becomes available once the Responsible Party's liability limit is reached and provides an additional \$174 million (cumulative total of about \$312 million)

Level 3 – International Oil Pollution Compensation Supplementary Fund

- o Becomes available once 1992 fund is exhausted and provides \$840 million (cumulative total of \$1.152 billion)

Level 4 – Canada's Ship Source Oil Pollution Fund

- o Becomes available when IOPC funds are exhausted and provides \$160 million (cumulative total of \$1.312 billion)
- o Initial claims be made to this fund and the administrator will take over the task of recovering costs from the Responsible Party and IOPC funds

MARINE TRAFFIC

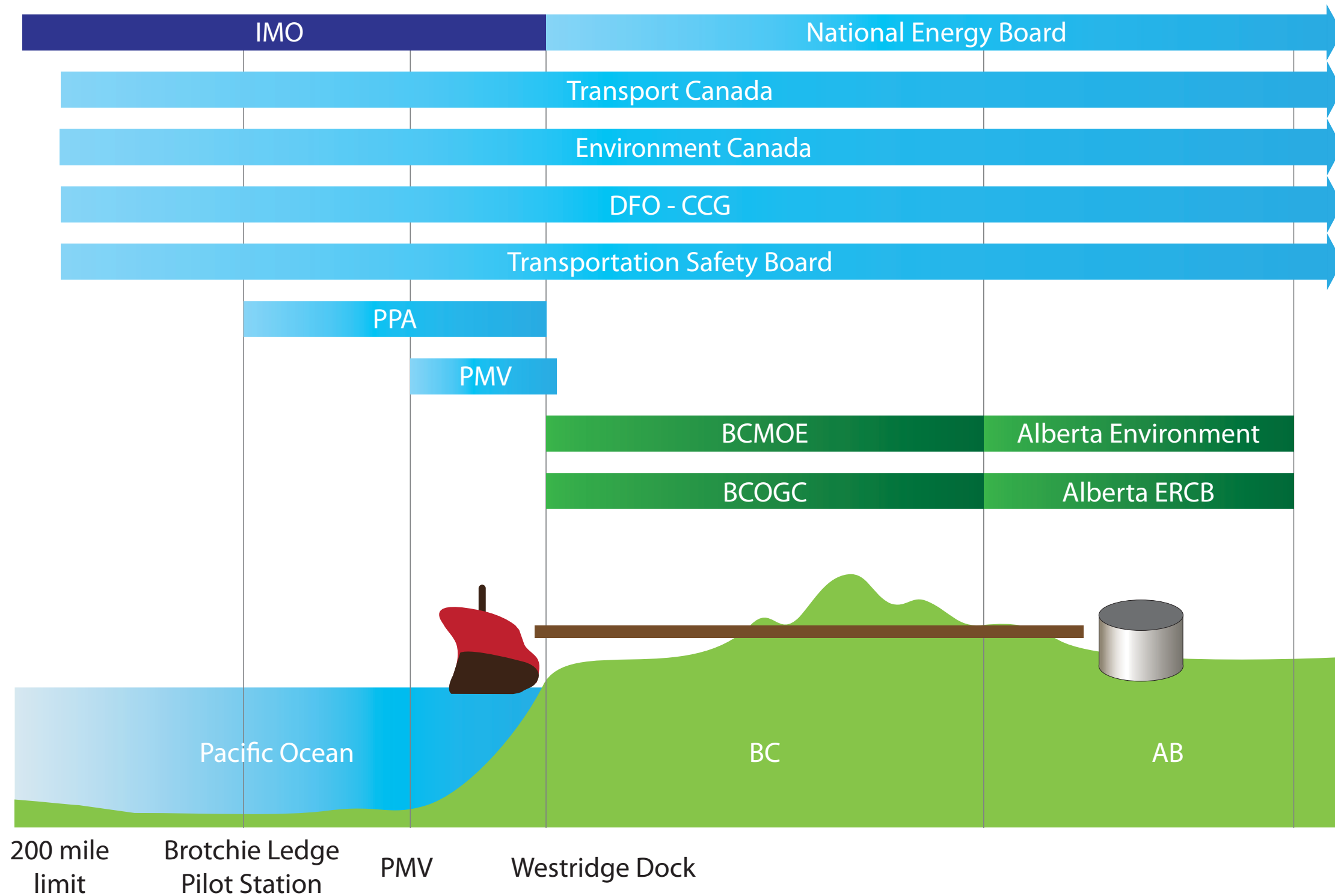
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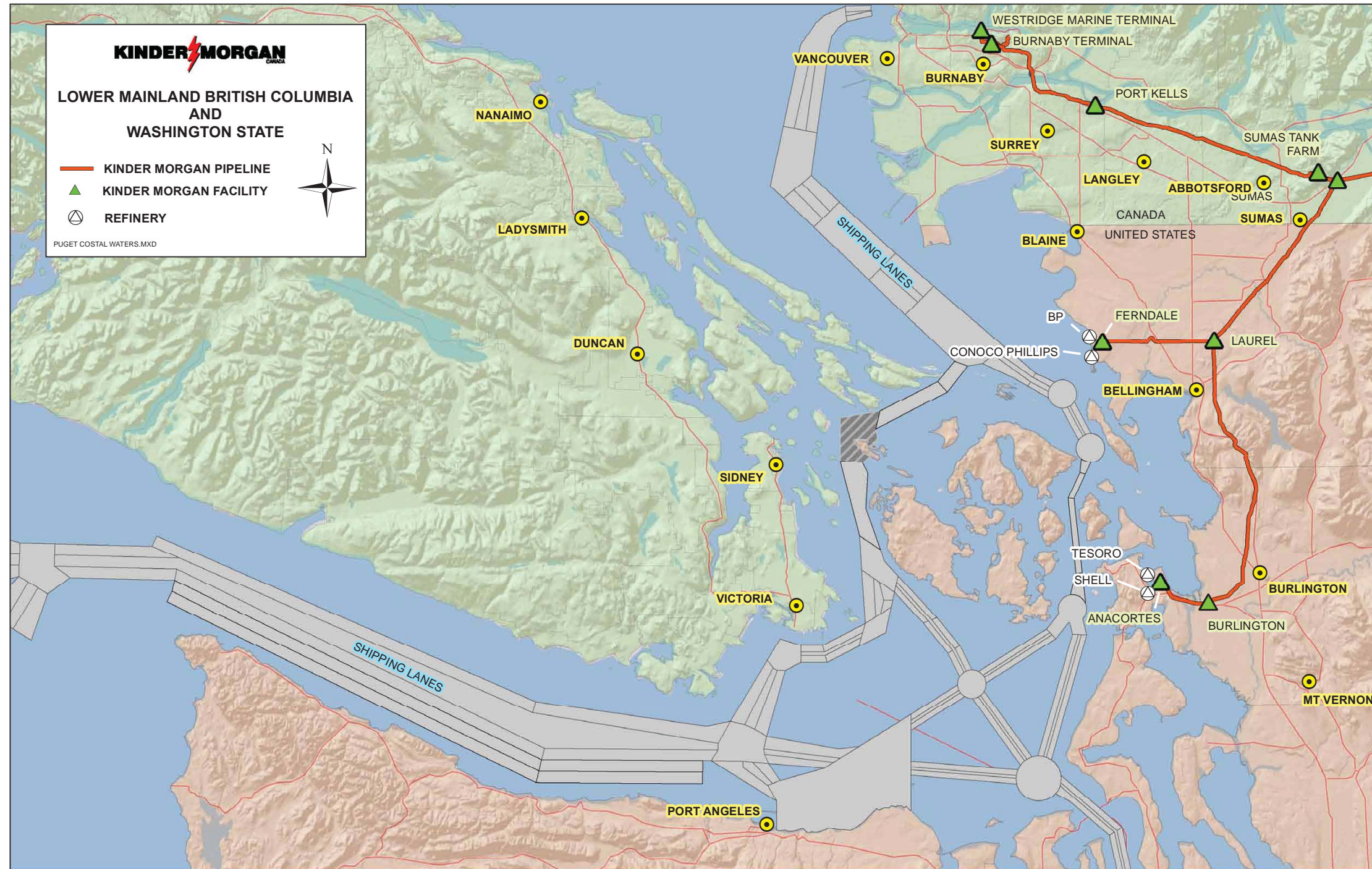
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- o Responsible Party's liability is limited based on ship tonnage to a maximum of about \$138 million and would normally be paid by insurance

Level 2 – International Oil Pollution Compensation Fund (IOPC), 1992

- o Becomes available once the Responsible Party's liability limit is reached and provides an additional \$174 million (cumulative total of about \$312 million)

Level 3 – International Oil Pollution Compensation Supplementary Fund

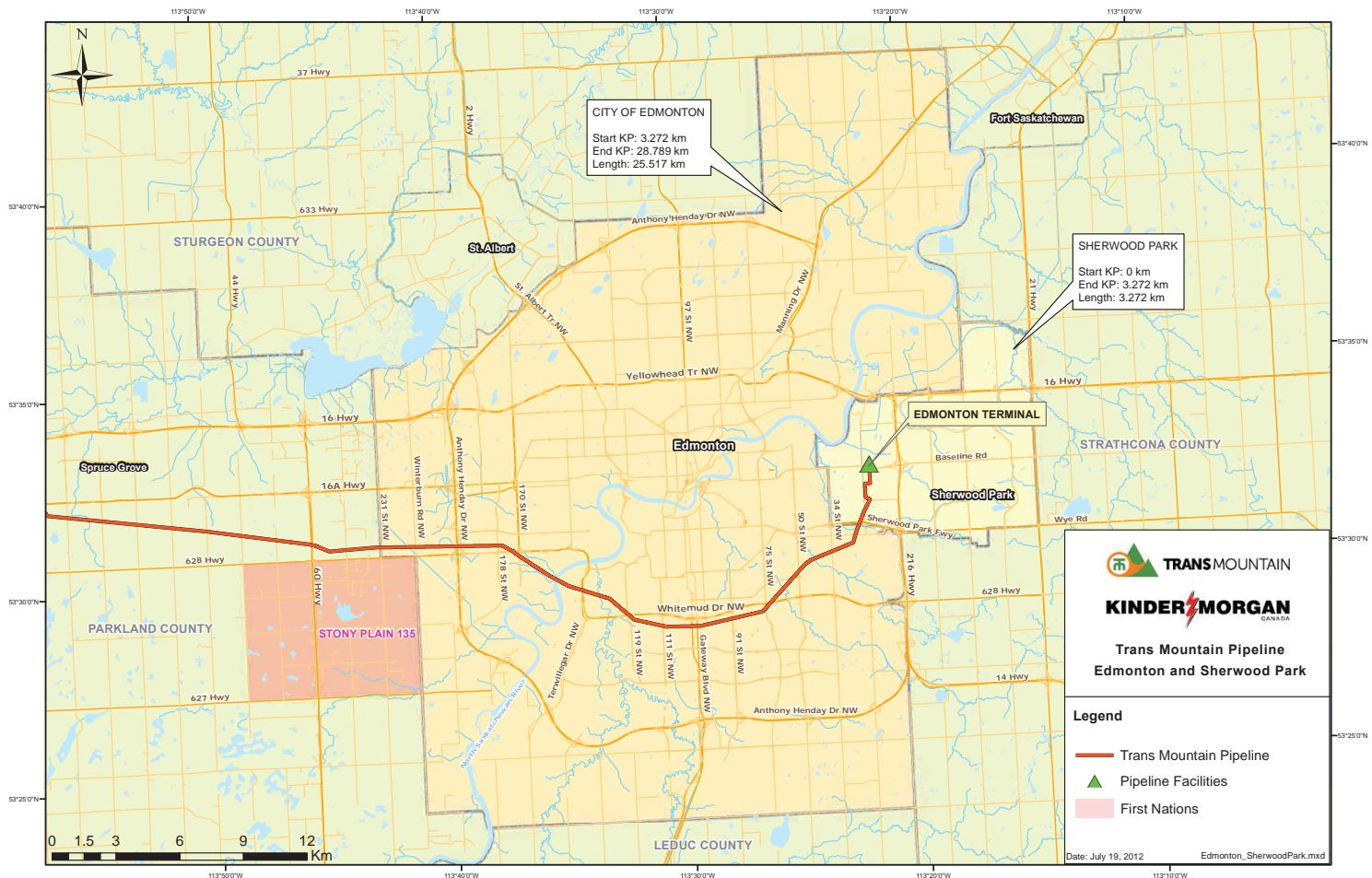
- o Becomes available once 1992 fund is exhausted and provides \$840 million (cumulative total of \$1.152 billion)

Level 4 – Canada's Ship Source Oil Pollution Fund

- o Becomes available when IOPC funds are exhausted and provides \$160 million (cumulative total of \$1.312 billion)
- o Initial claims be made to this fund and the administrator will take over the task of recovering costs from the Responsible Party and IOPC funds

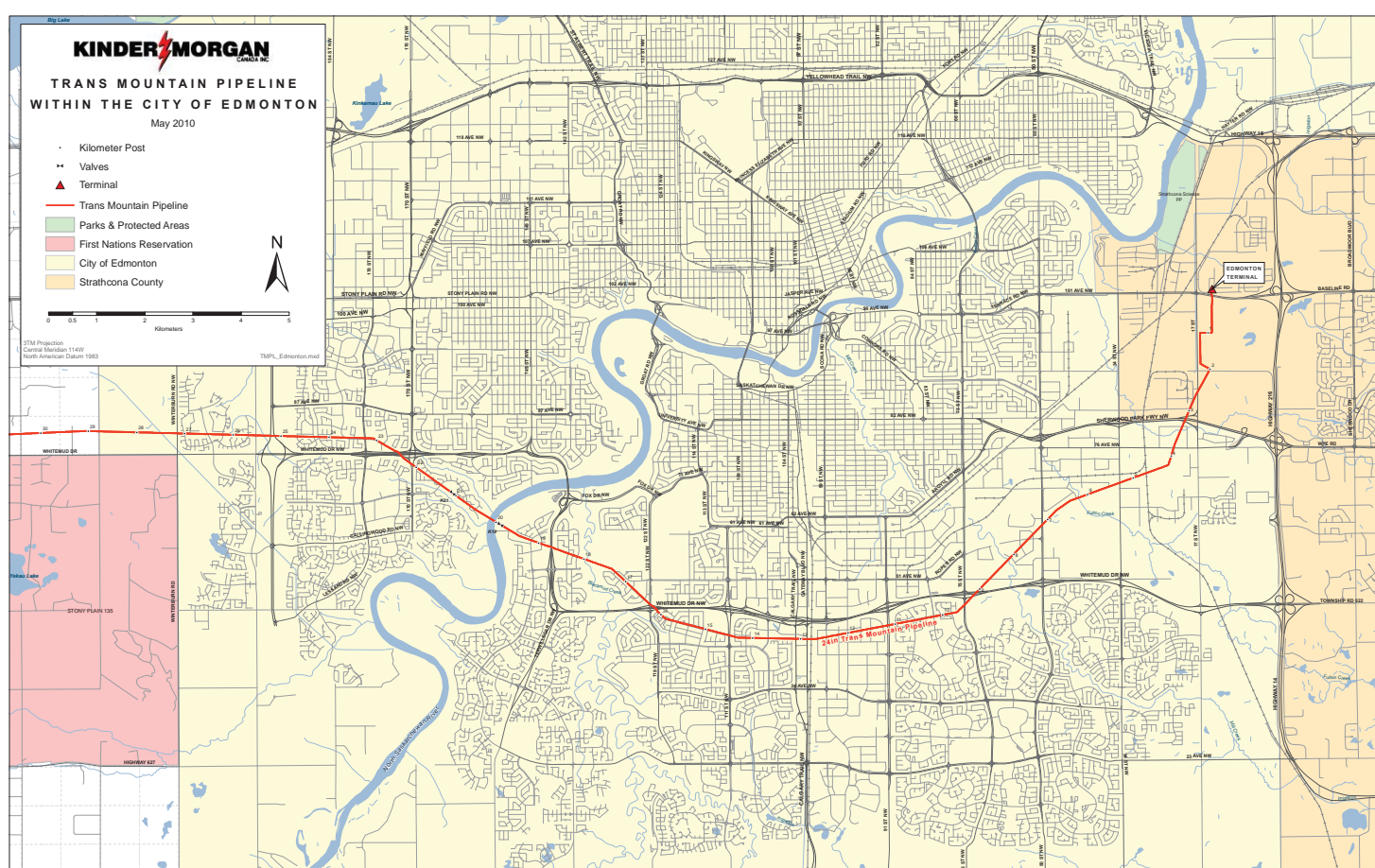
Trans Mountain Information

Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
3.3 km	Edmonton (Sherwood Park) Terminal	121	\$664,000	\$1,131,000



Trans Mountain Information

Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
25.5 km	None	0	\$146,000	\$408,000

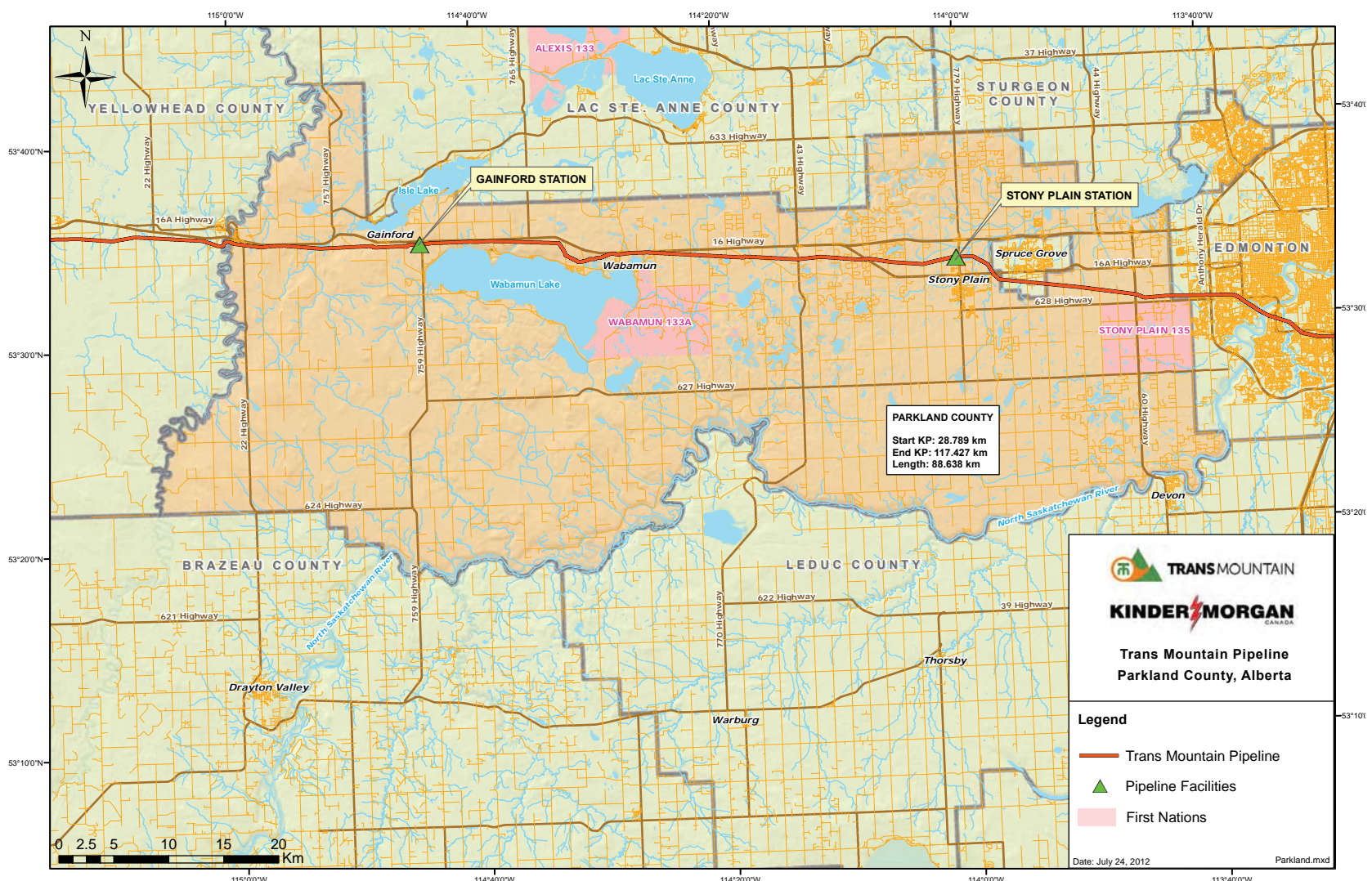


Trans Mountain Information

Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
88.64 km	Gainford Pump Station	0	\$324,000	\$720,000

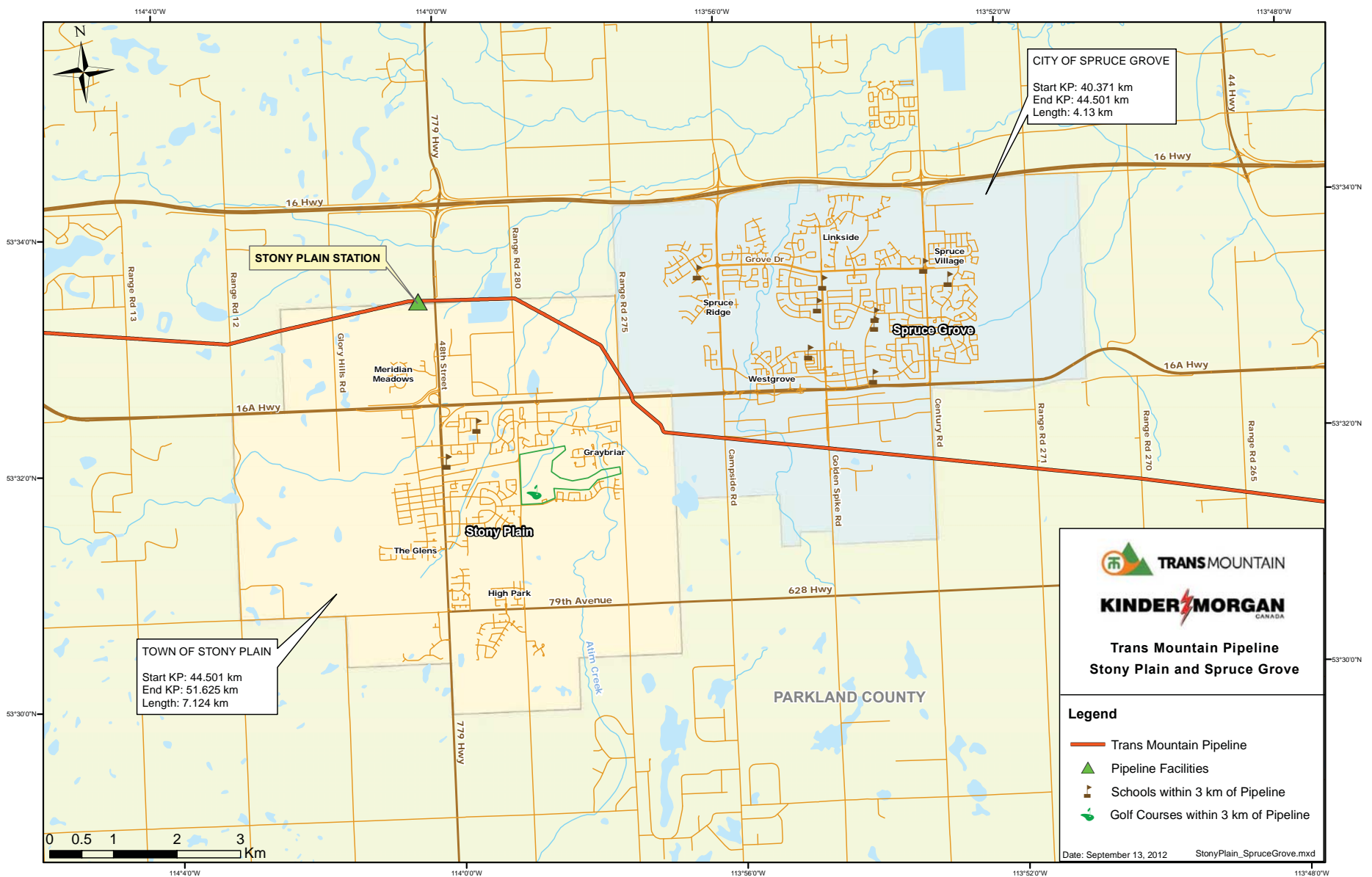
Wabumun

Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
2.1 km	None	0	\$14,000	\$34,000



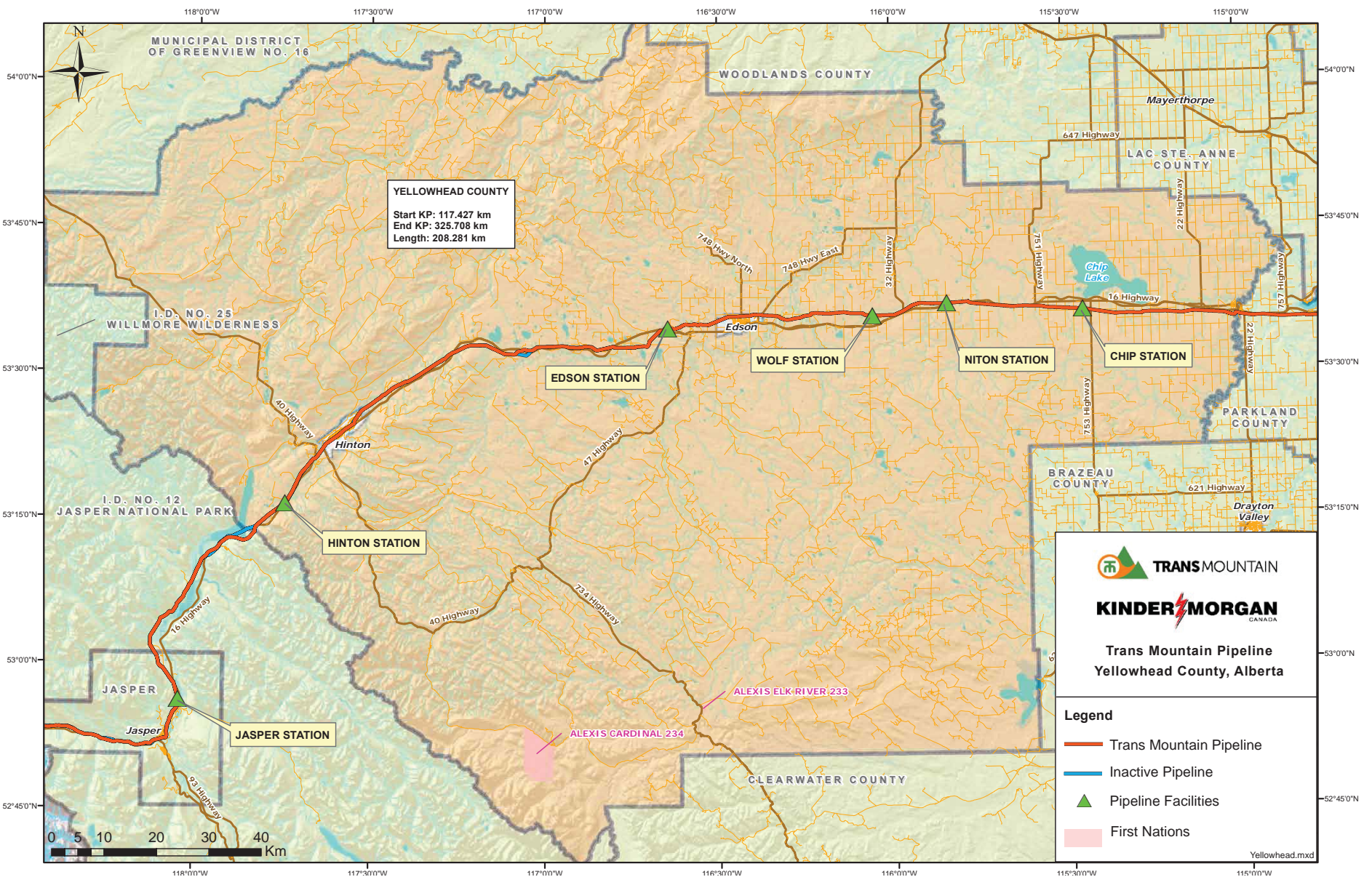
Trans Mountain Information

Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
4.13 km	None	0	\$18,000	\$43,000



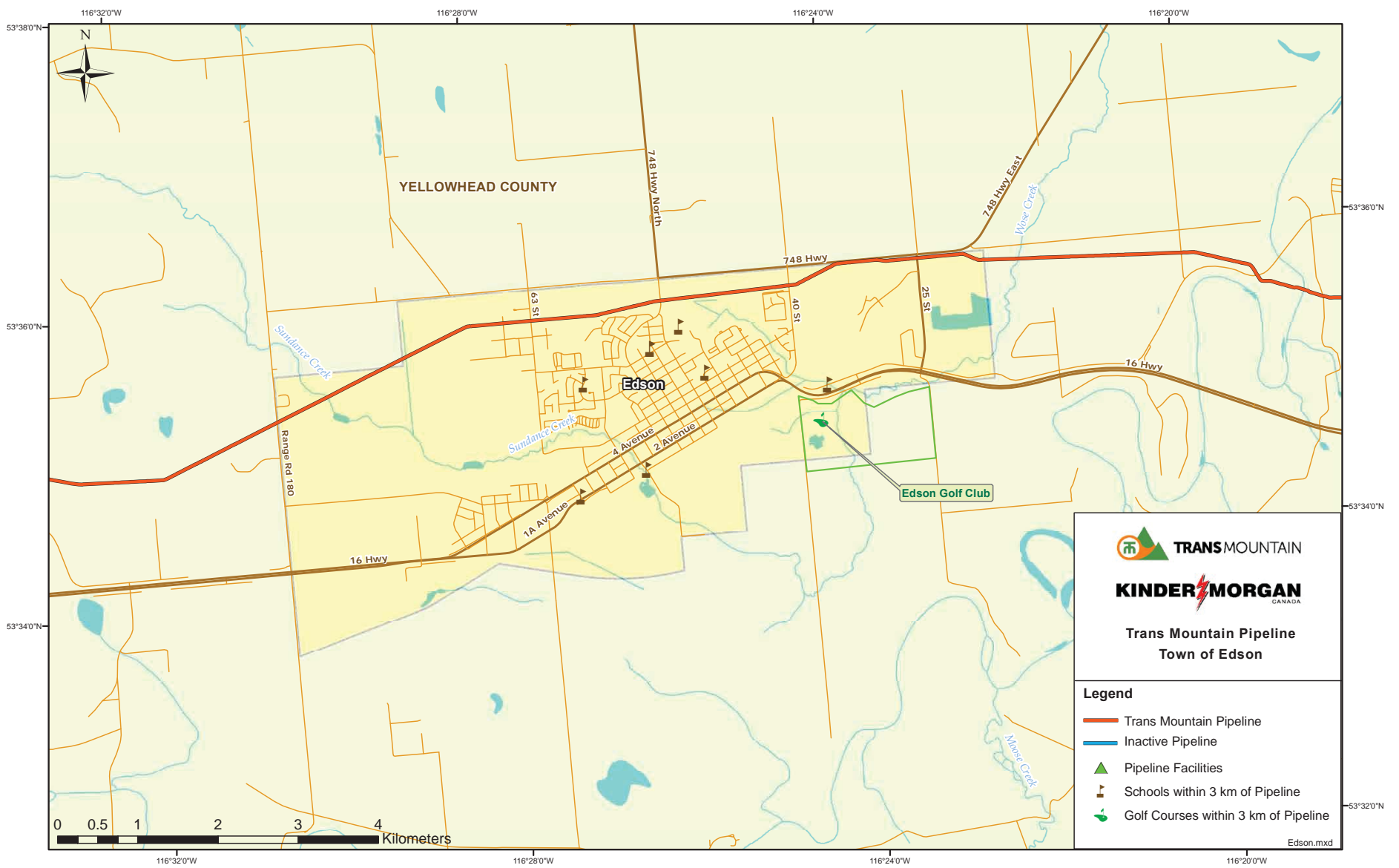
Trans Mountain Information

Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
208.3 km	Chip Pump Station Niton Pump Station Wolf Pump Station	0	\$965,000	\$1,886,000



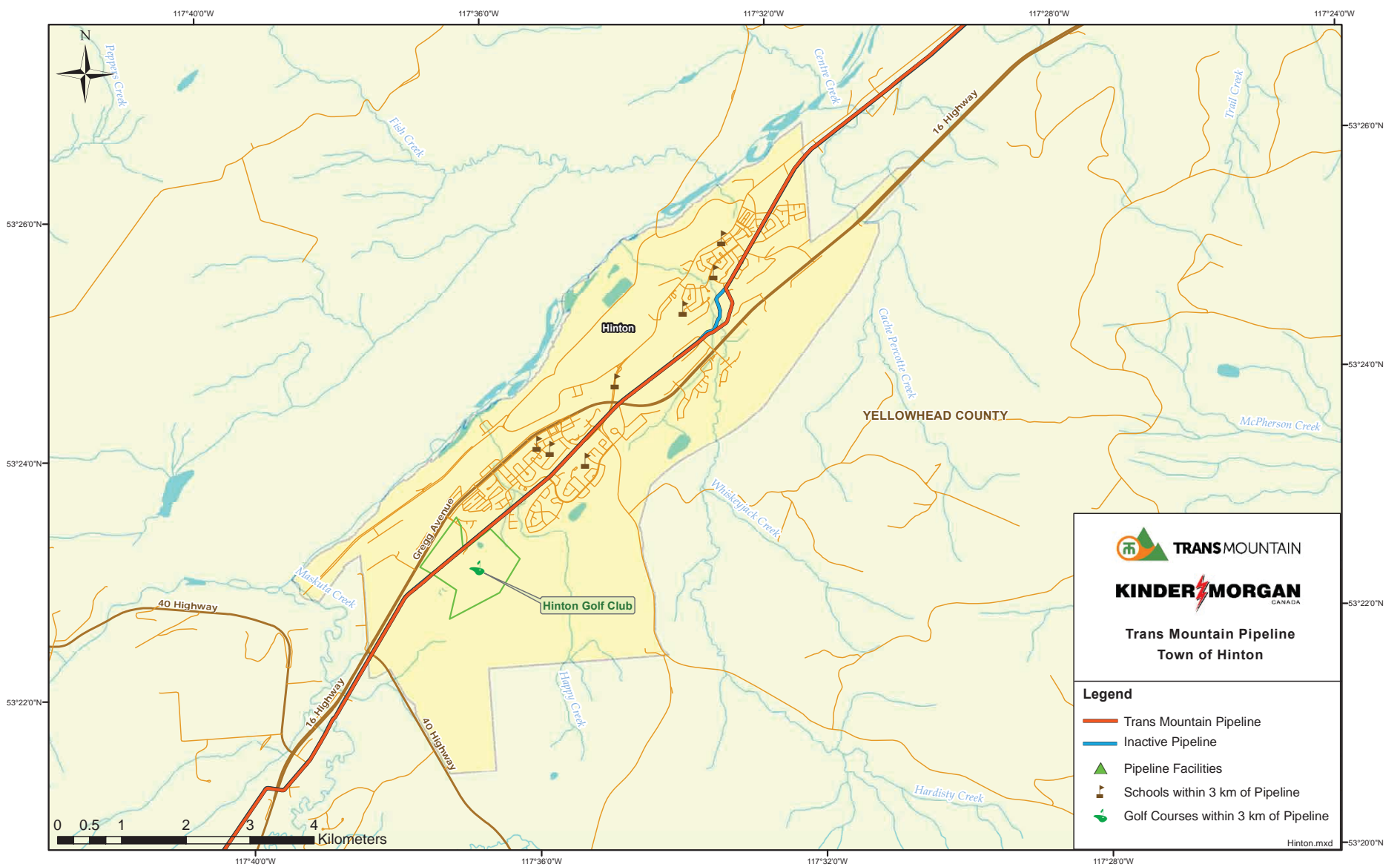
Trans Mountain Information

Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
9.2 km	Edson Pump Station	2	\$58,000	\$138,000



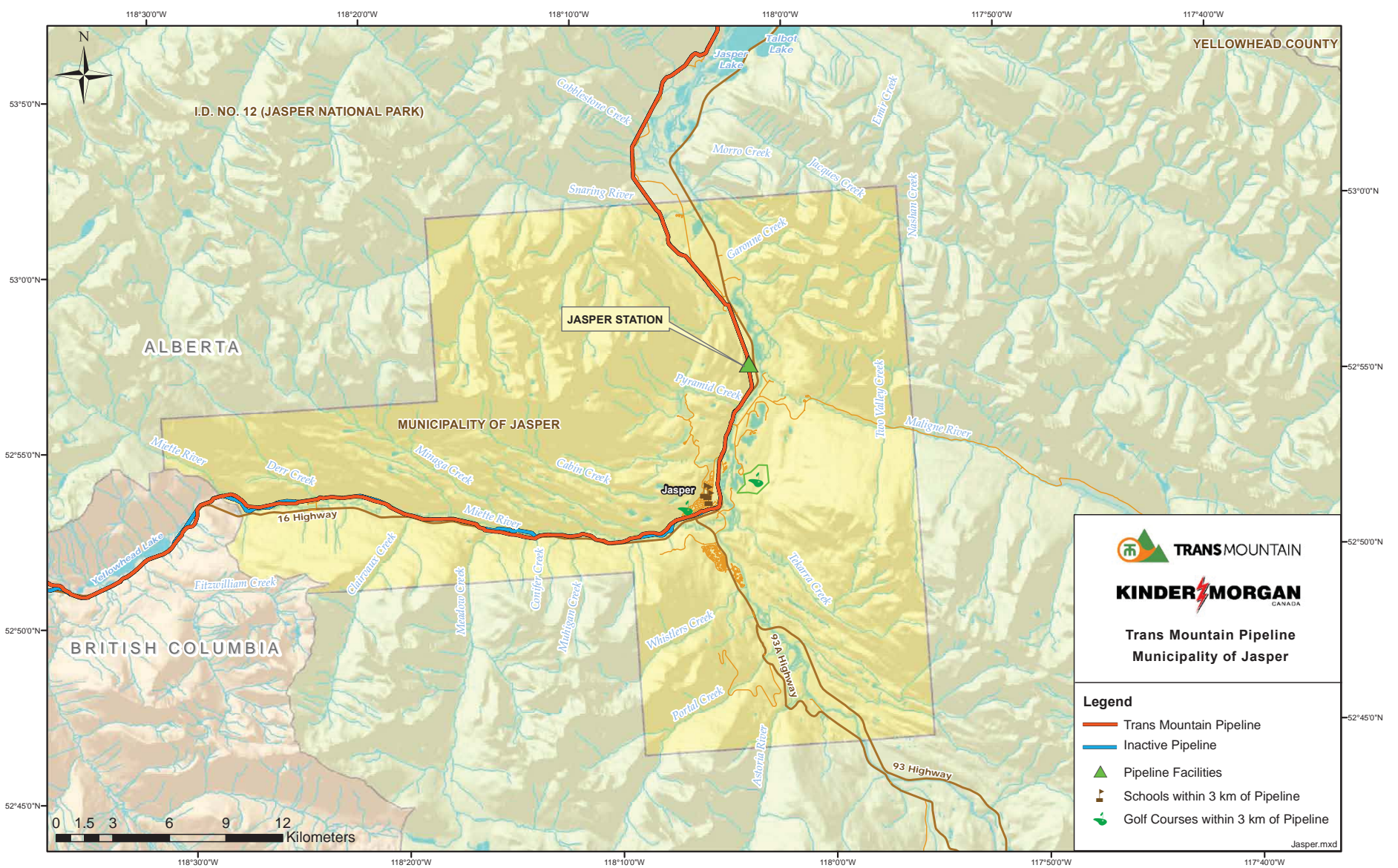
Trans Mountain Information

Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
10.7 km	Hinton Pump Station	0	\$62,000	\$99,000



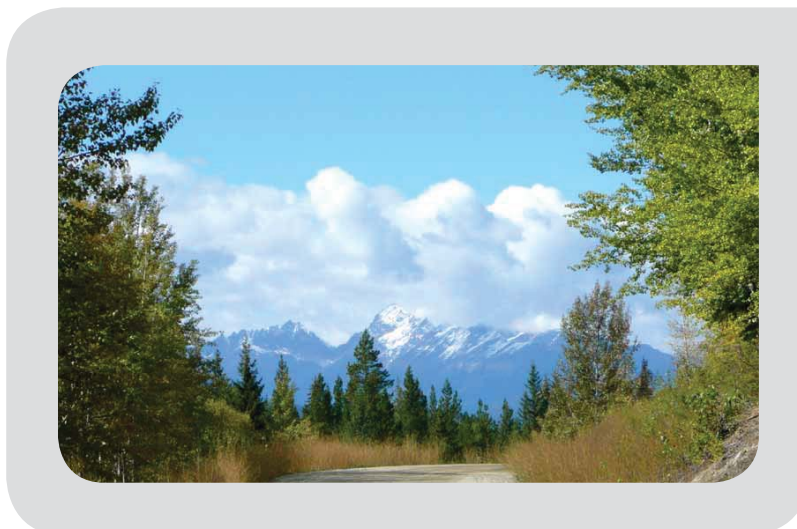
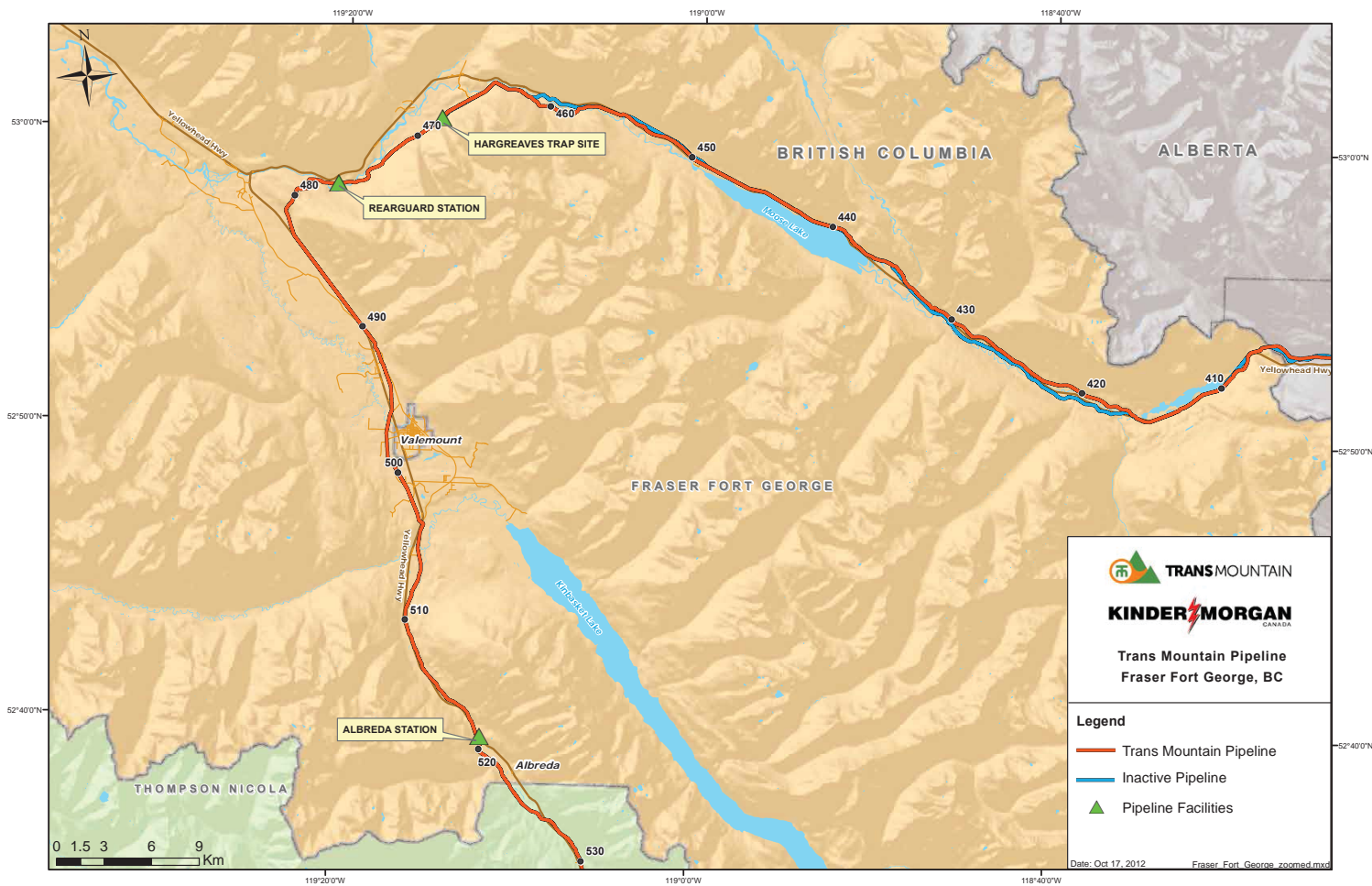
Trans Mountain Information

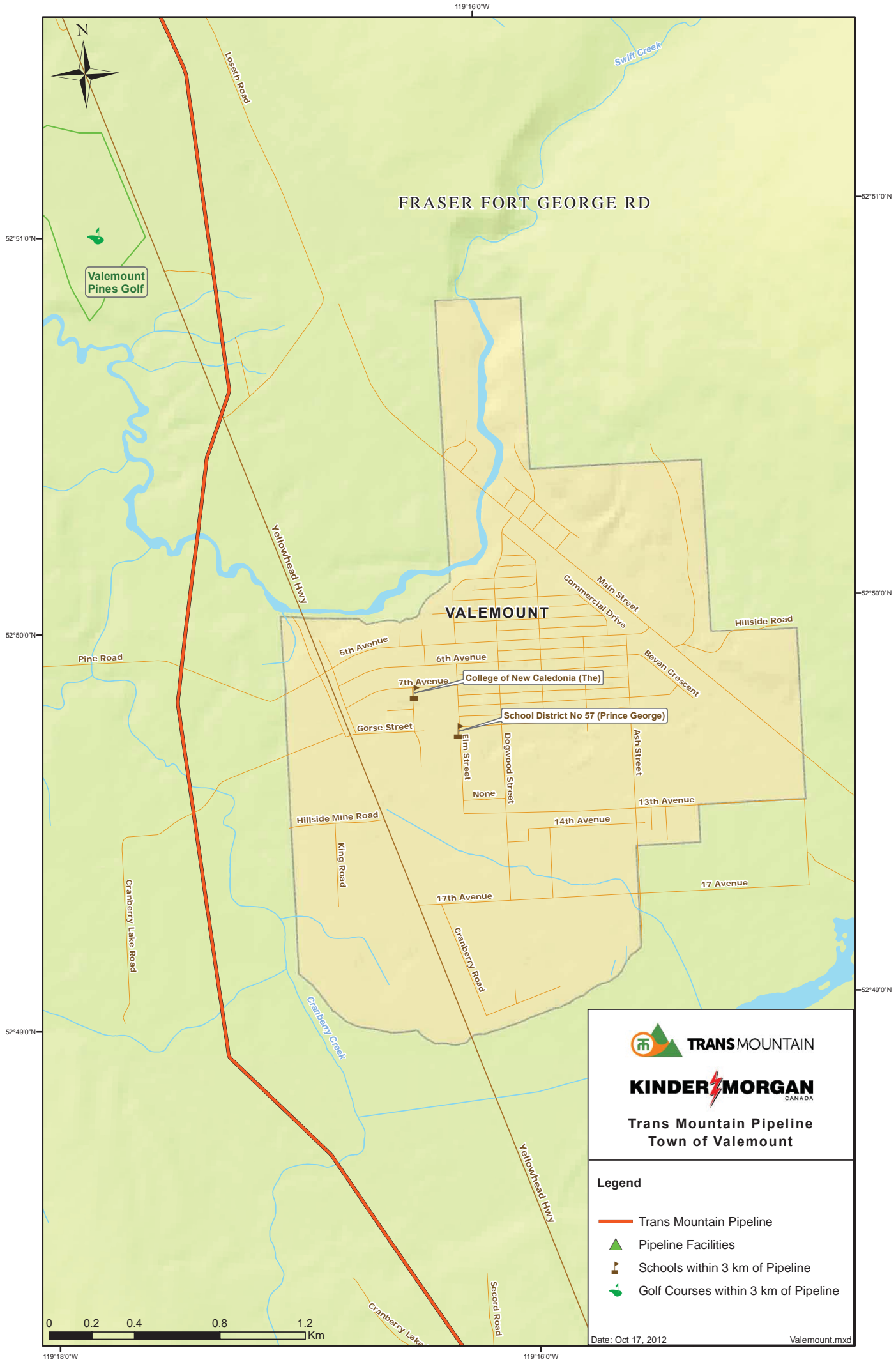
Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
46.6 km	Jasper Pump Station	11	\$324,000	\$443,000



Trans Mountain Information

Pipeline Length	Pipeline Facilities
117.1 km	Rearguard Pump Station Hargreaves Pump Station Albreda Pump Station

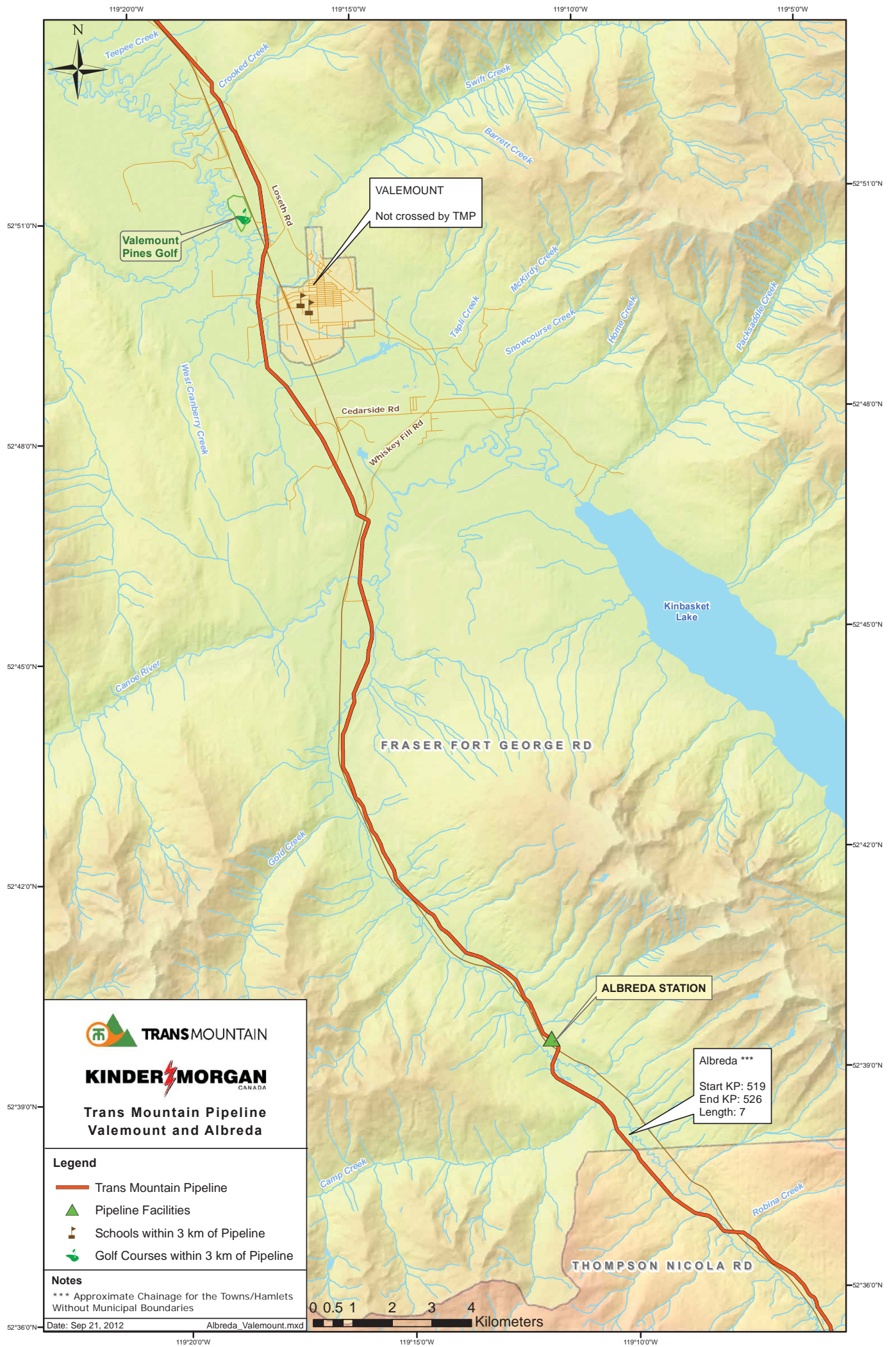




Trans Mountain Information

Pipeline Length

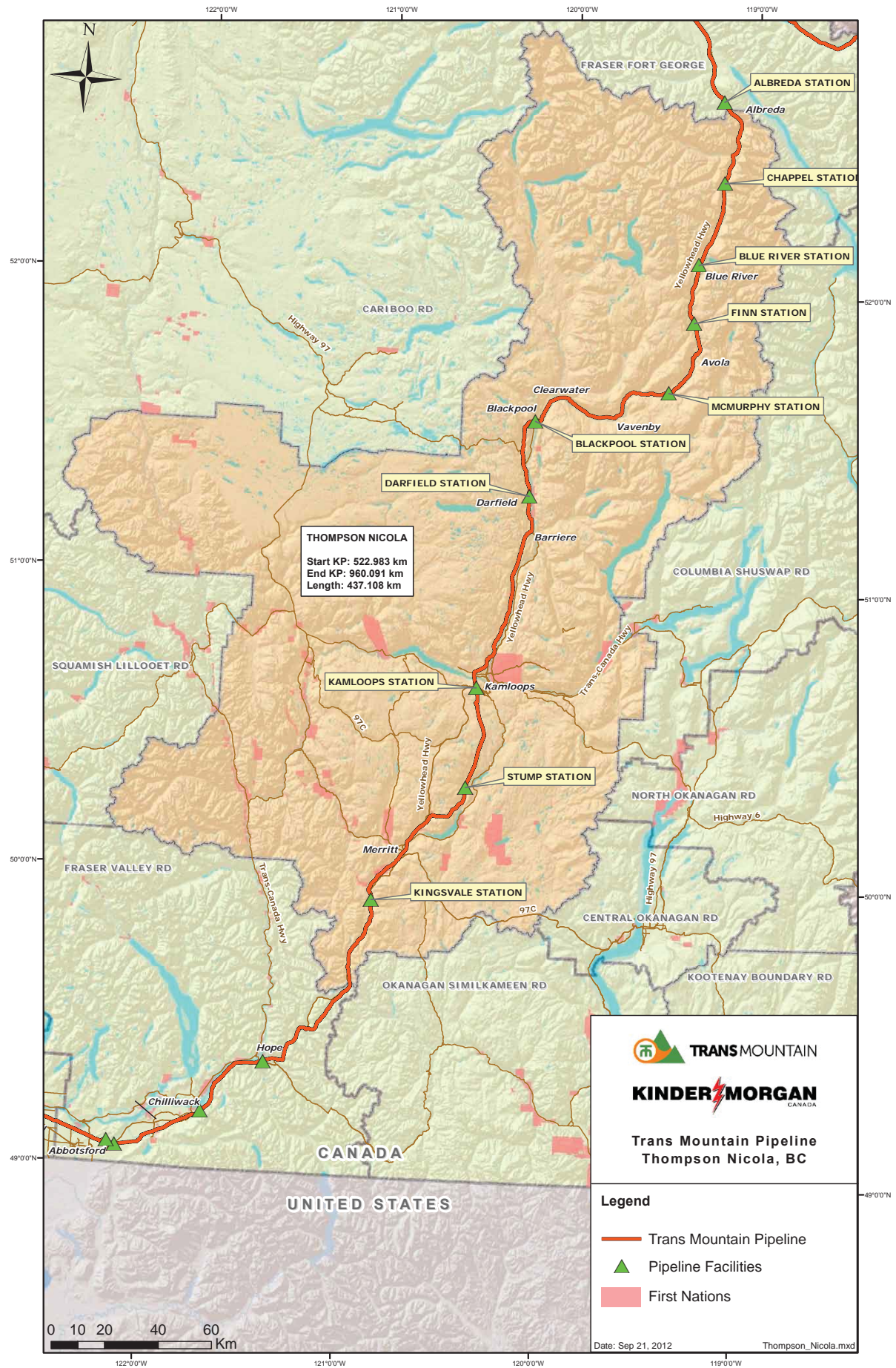
7 km



THOMPSON-NICOLA REGIONAL DISTRICT

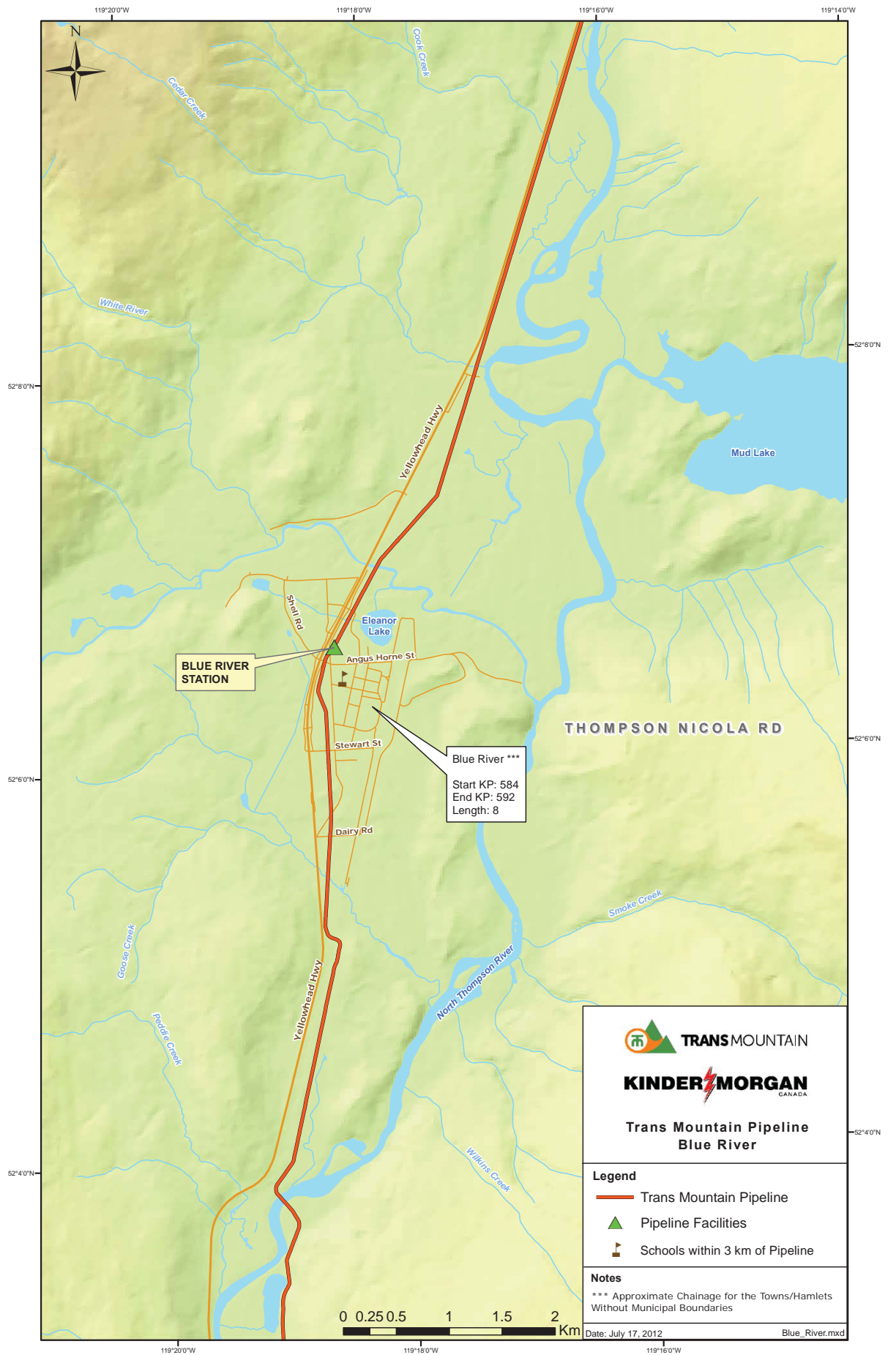
Trans Mountain Information

Pipeline Length	Pipeline Facilities
437.1 km	<p>Chappel Pump Station</p> <p>Finn Pump Station</p> <p>McMurphy Pump Station</p> <p>Blackpool Pump Station</p> <p>Darfield Pump Station</p> <p>Stump Pump Station</p> <p>Kingsvale Pump Station</p>



Trans Mountain Information

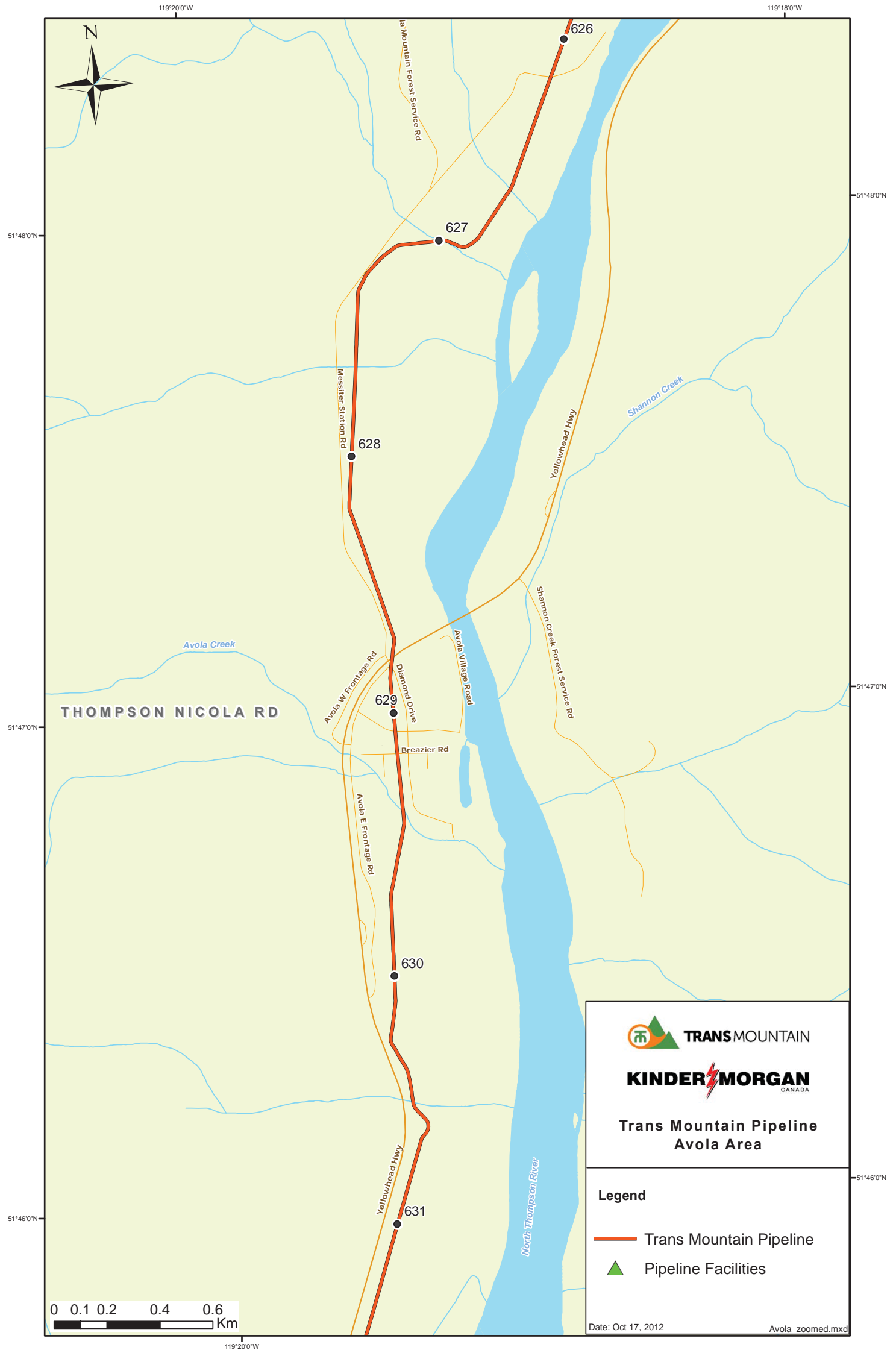
Pipeline Length	Pipeline Facilities
8 km	Blue River Pump Station



Trans Mountain Information

Pipeline Length

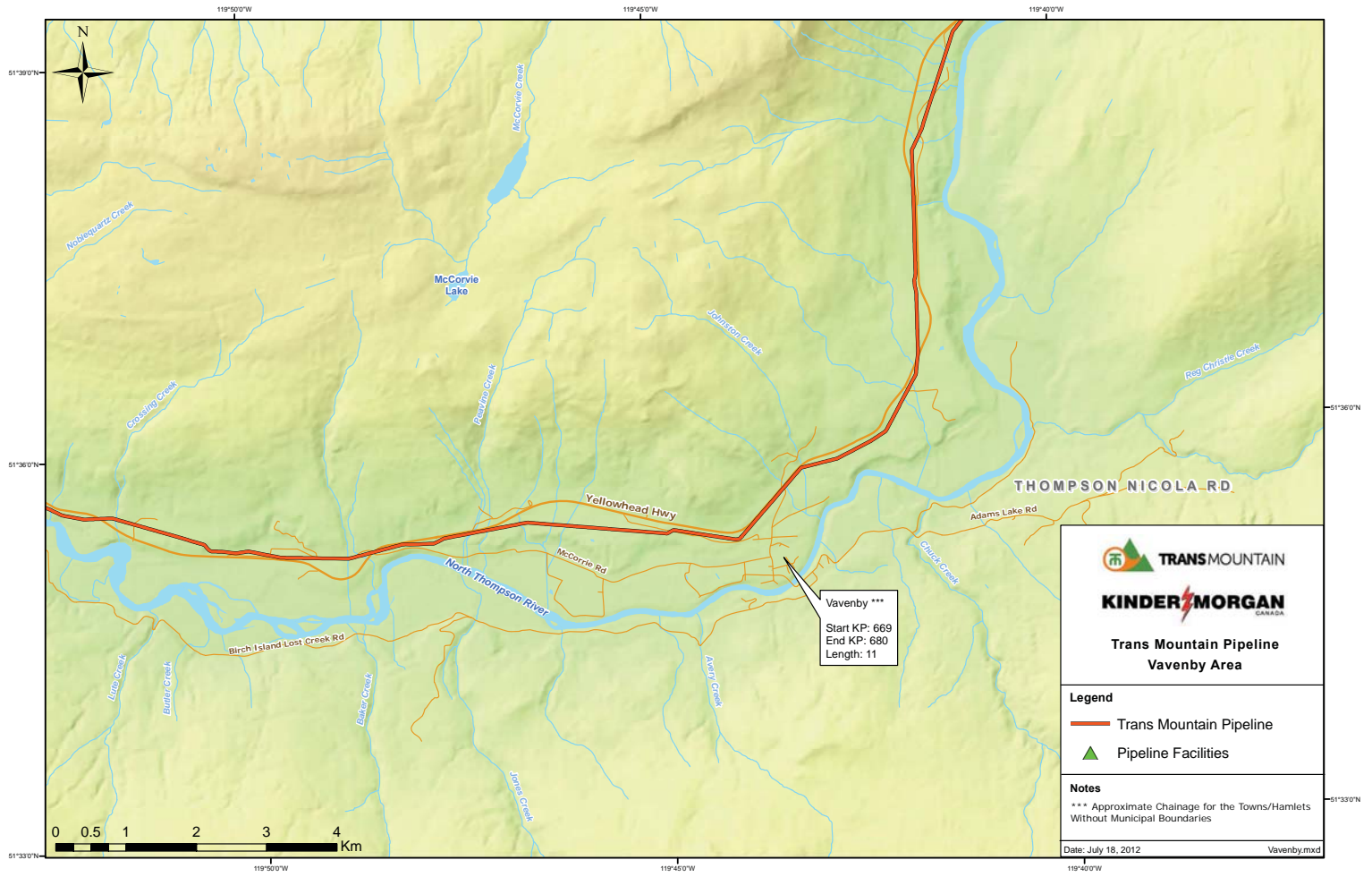
5 km



Trans Mountain Information

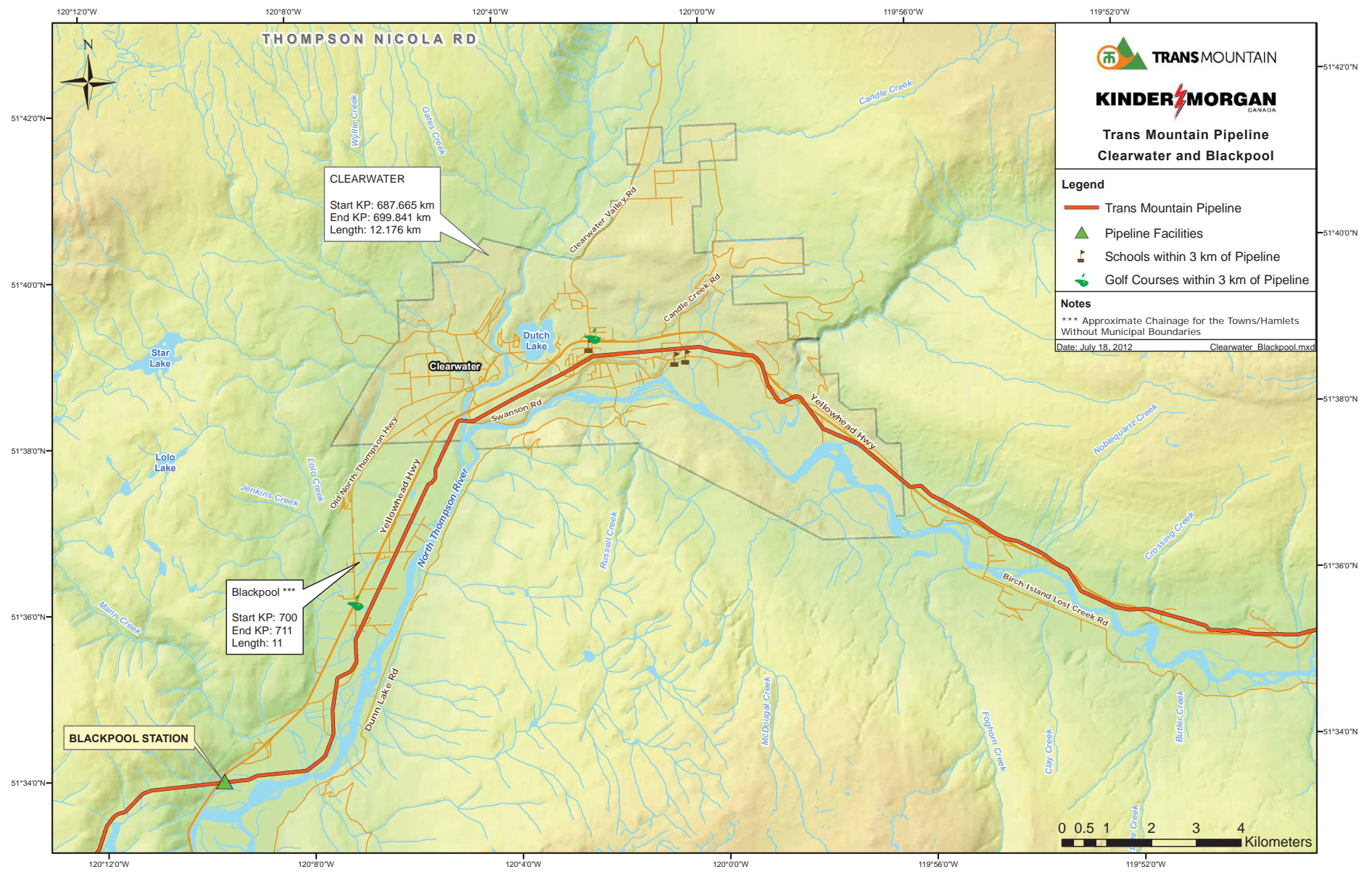
Pipeline Length

11 km



Trans Mountain Information

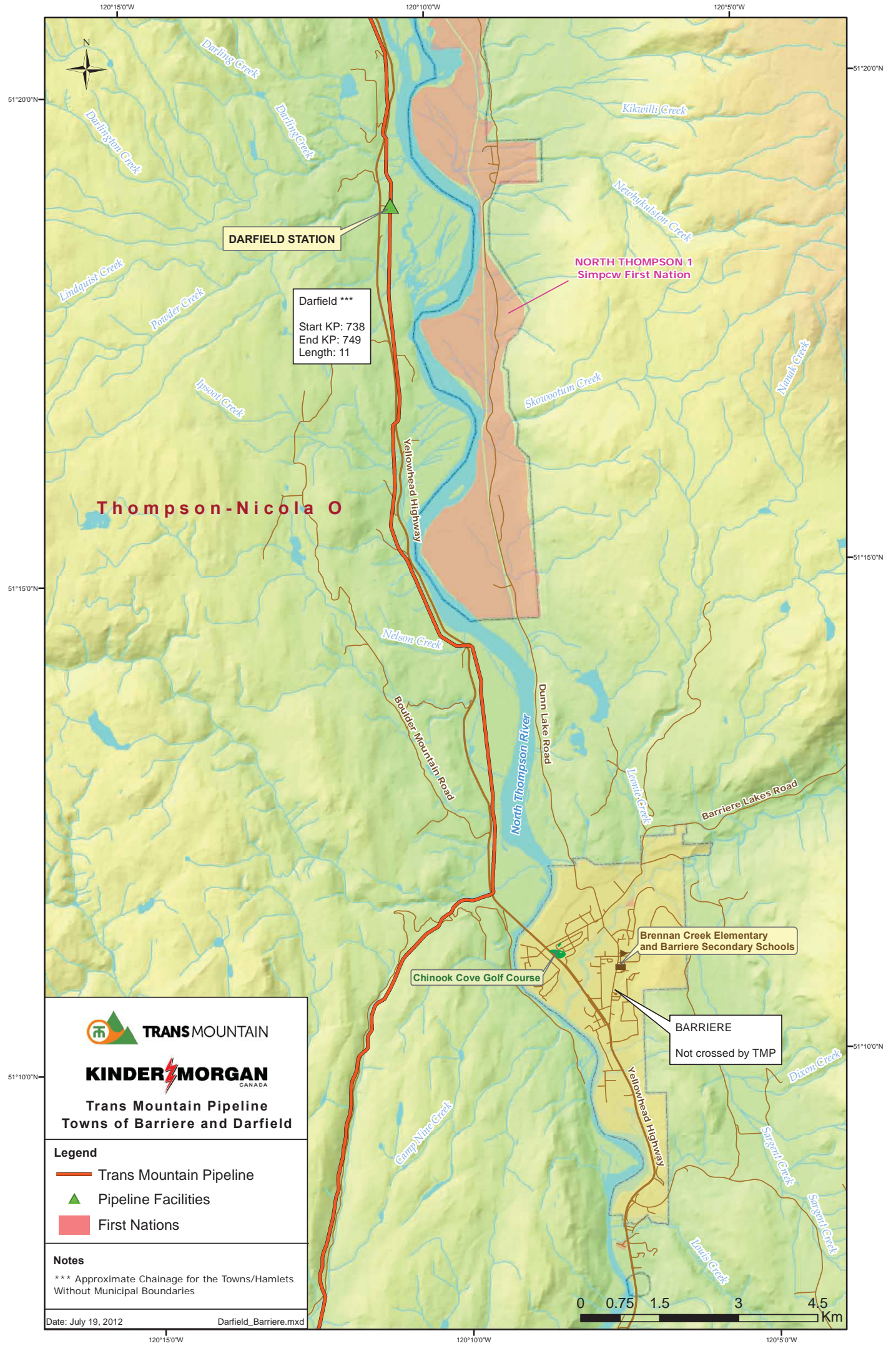
Pipeline Length	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
12.2 km	7	254,000	576,000



Trans Mountain Information

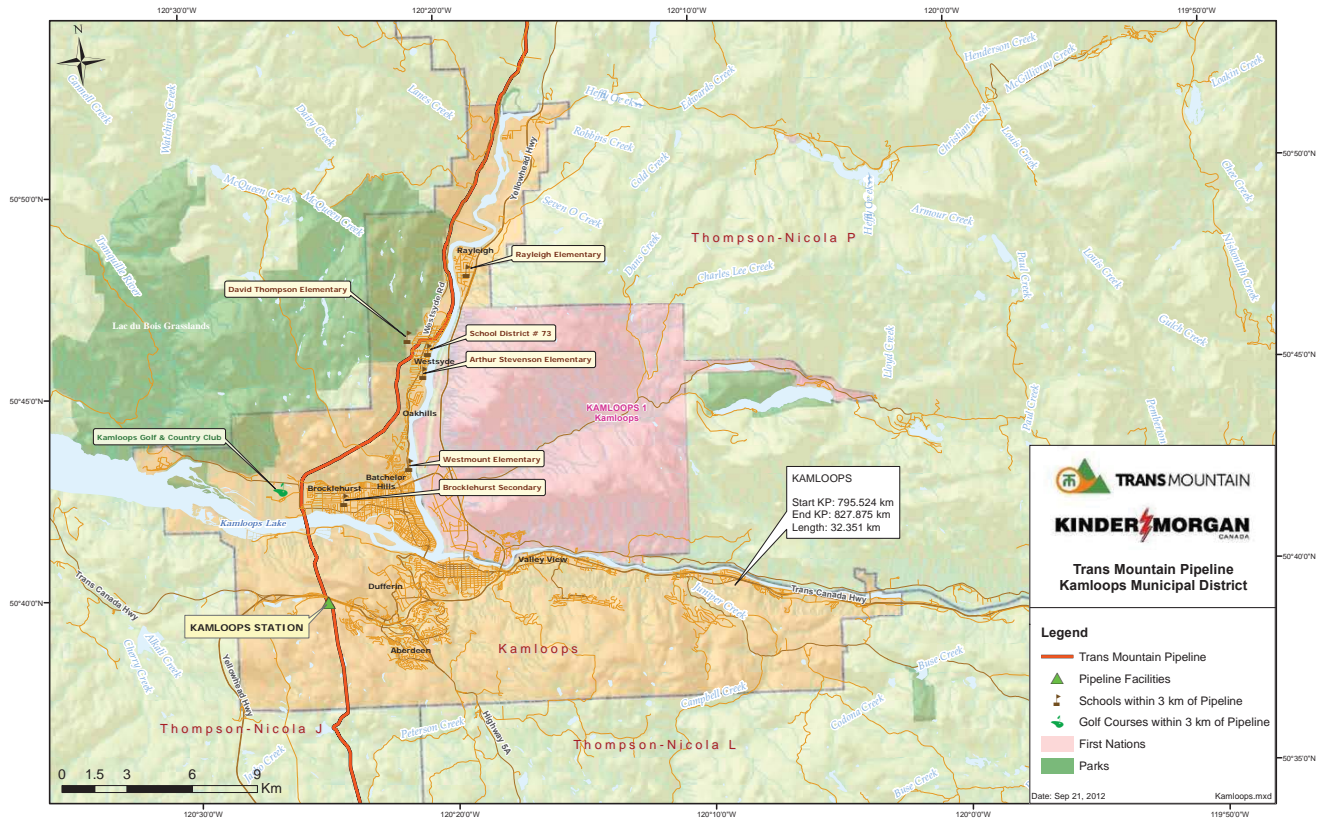
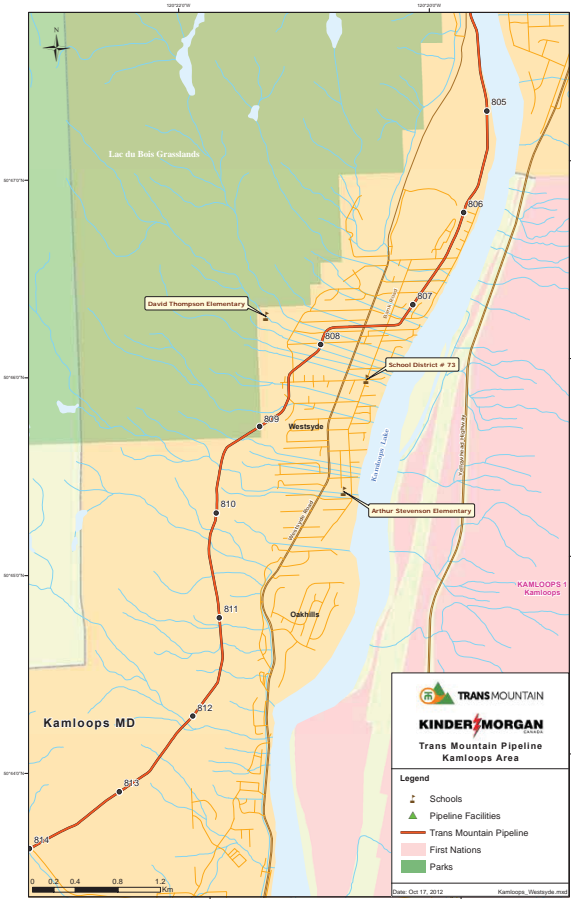
Pipeline Length

11 km



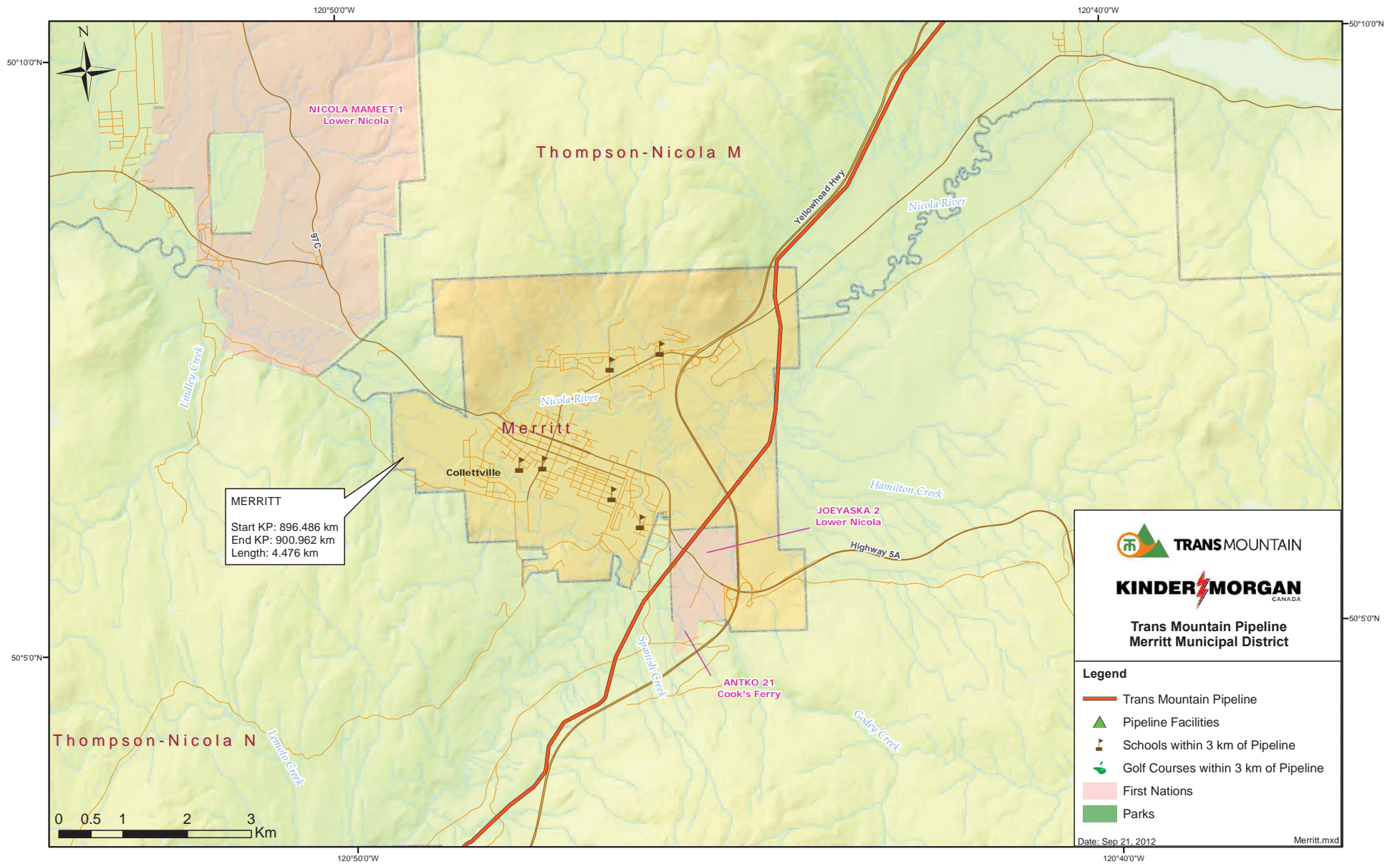
Trans Mountain Information

Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
32.4 km	Kamloops Pump Station	17	\$1,401,000	\$2,537,000



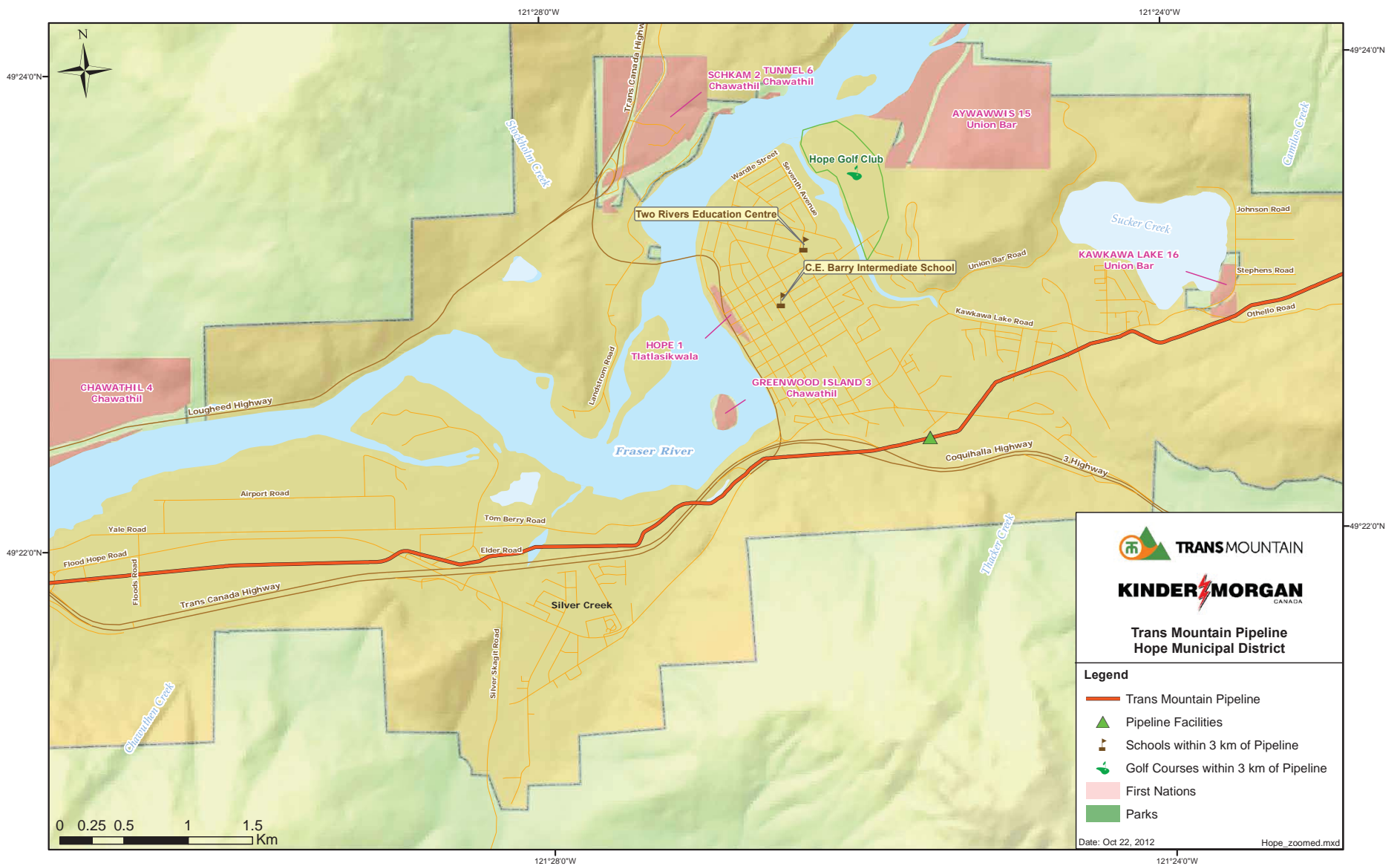
Trans Mountain Information

Pipeline Length	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
4.5 km	\$93,000	\$207,000



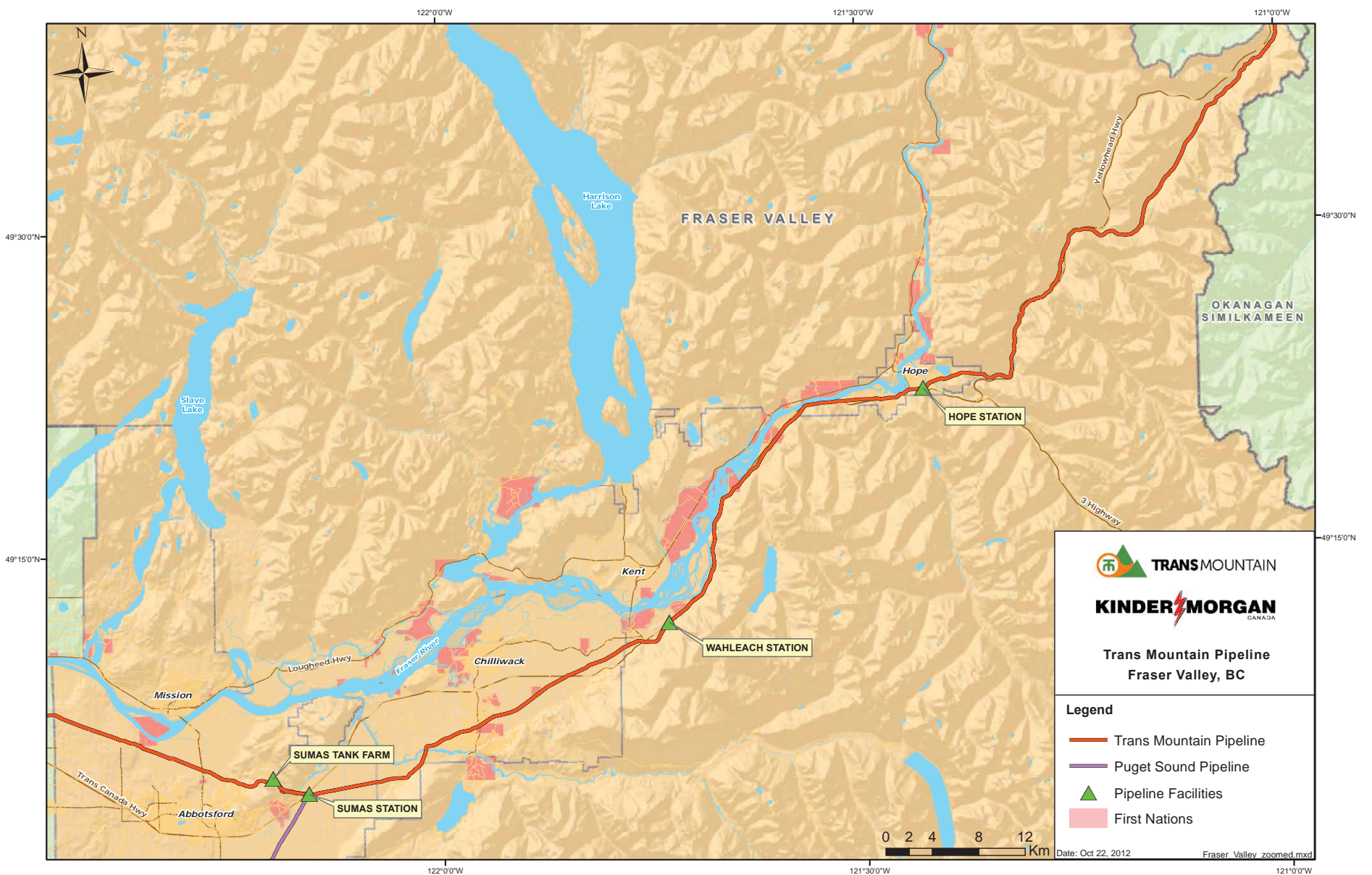
Trans Mountain Information

Pipeline Length	Existing Pipeline Facilities	Facilities after Proposed Expansion	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
17 km	<p>4 Permanent and 1 Temporary Employee</p> <p>Pump Station and Relief Tanks</p>	<p>Pump Station De-activated</p> <p>Relief Tanks Remain</p>	\$660,000	\$1, 238,000



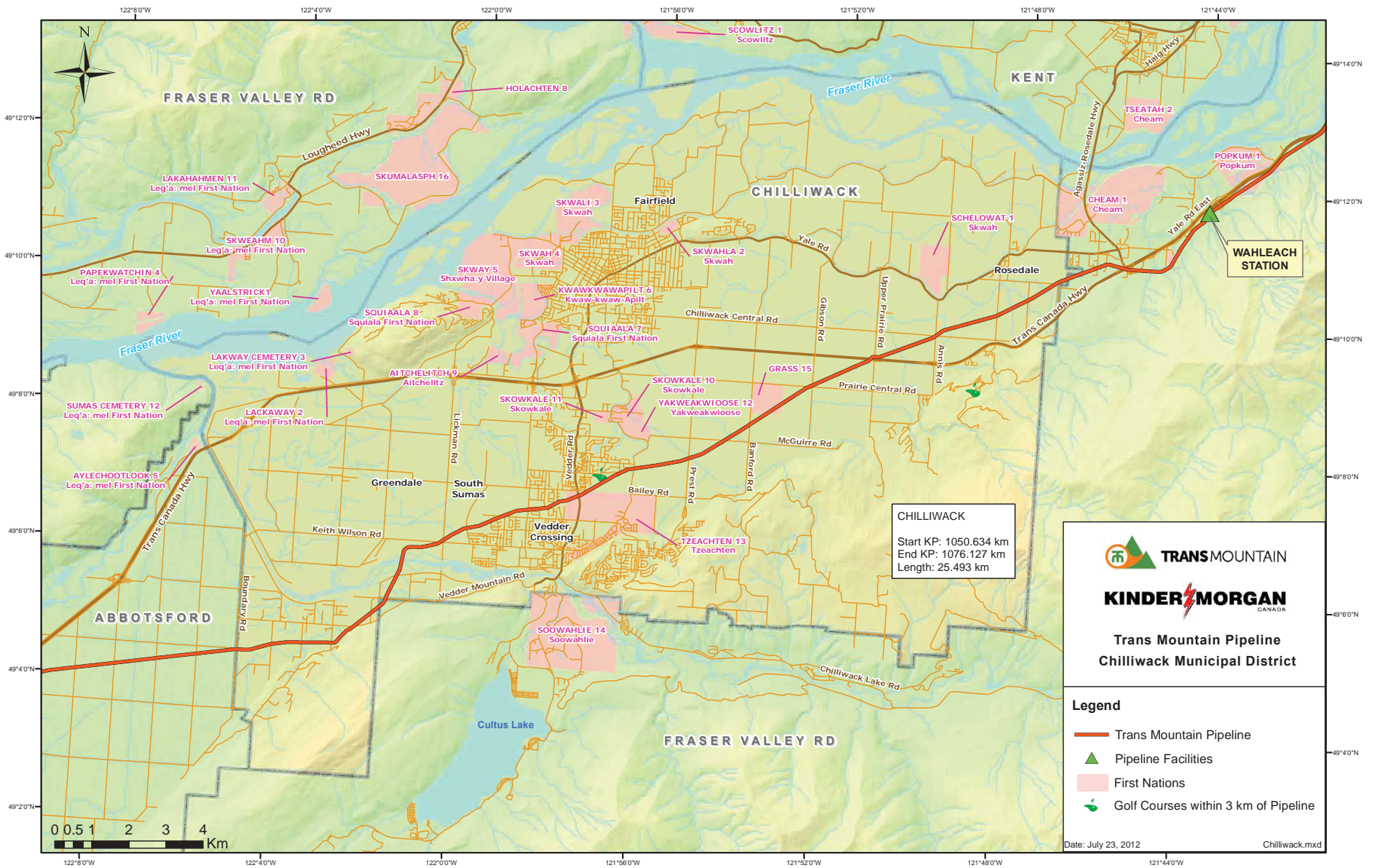
Trans Mountain Information

Pipeline Length	Pipeline Facilities
145.7 km	Wahleach Pump Station (de-activated)



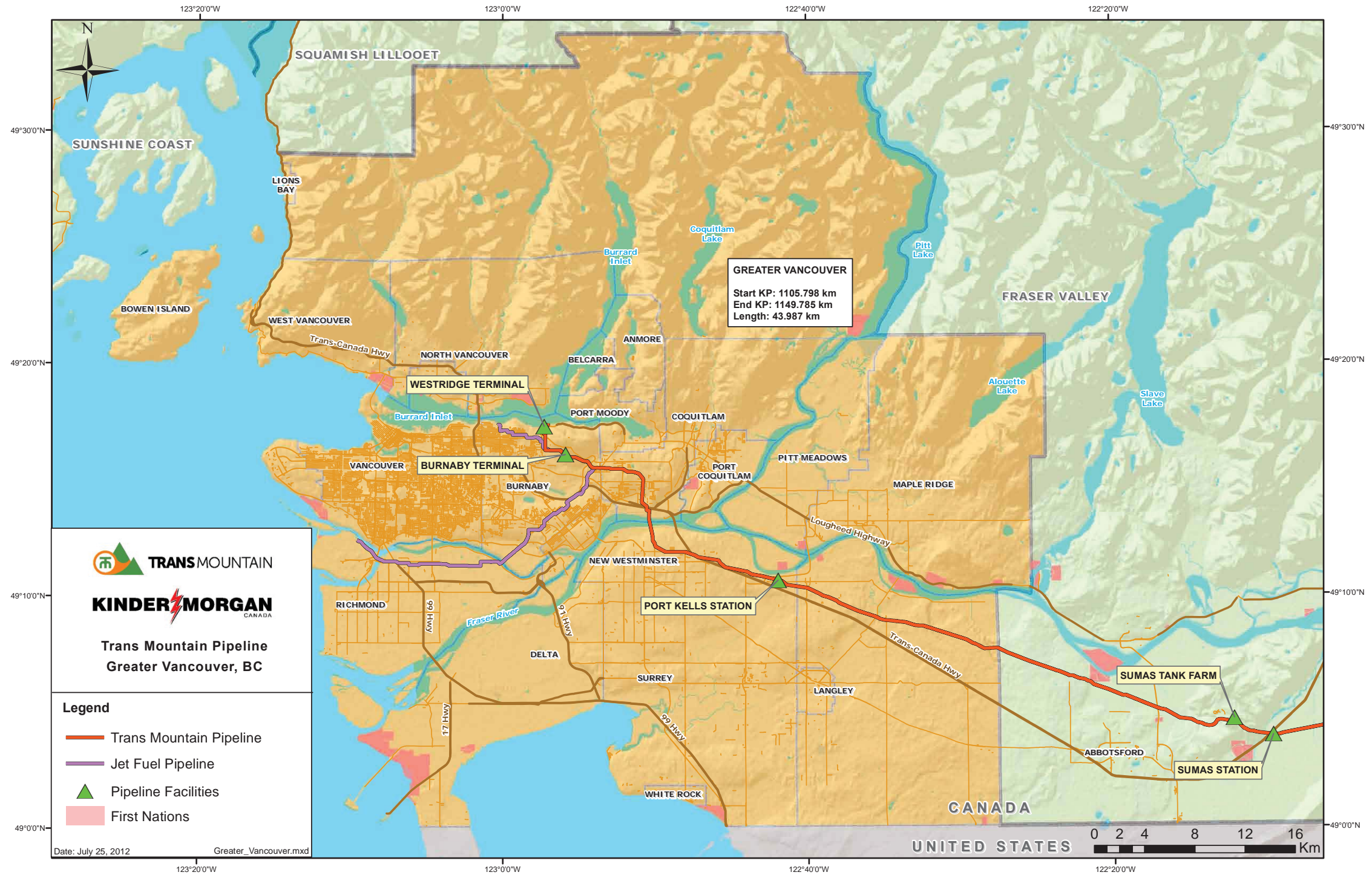
Trans Mountain Information

Pipeline Length	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
25.5 km	\$613,000	\$1,431,000



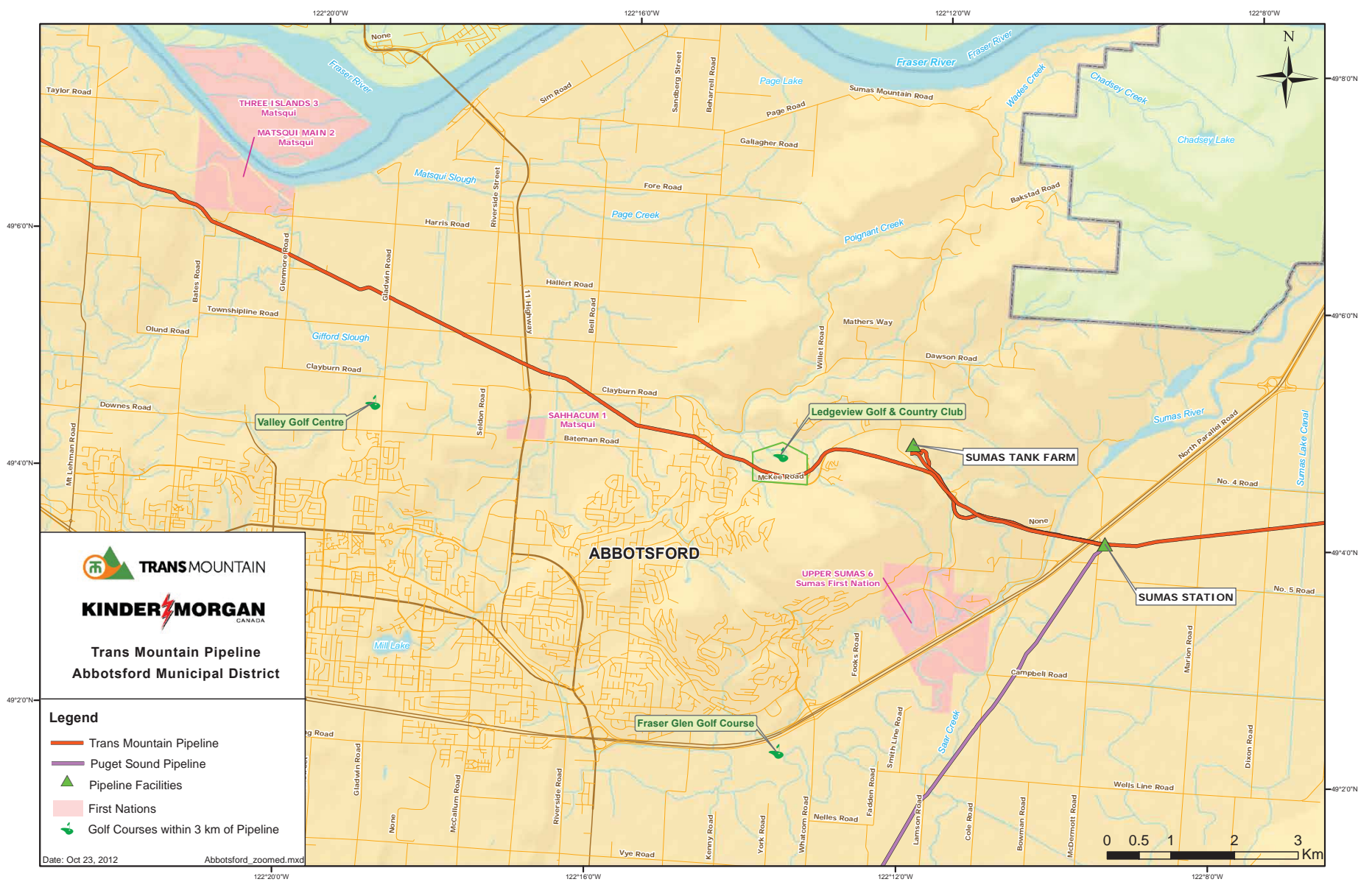


METRO VANCOUVER



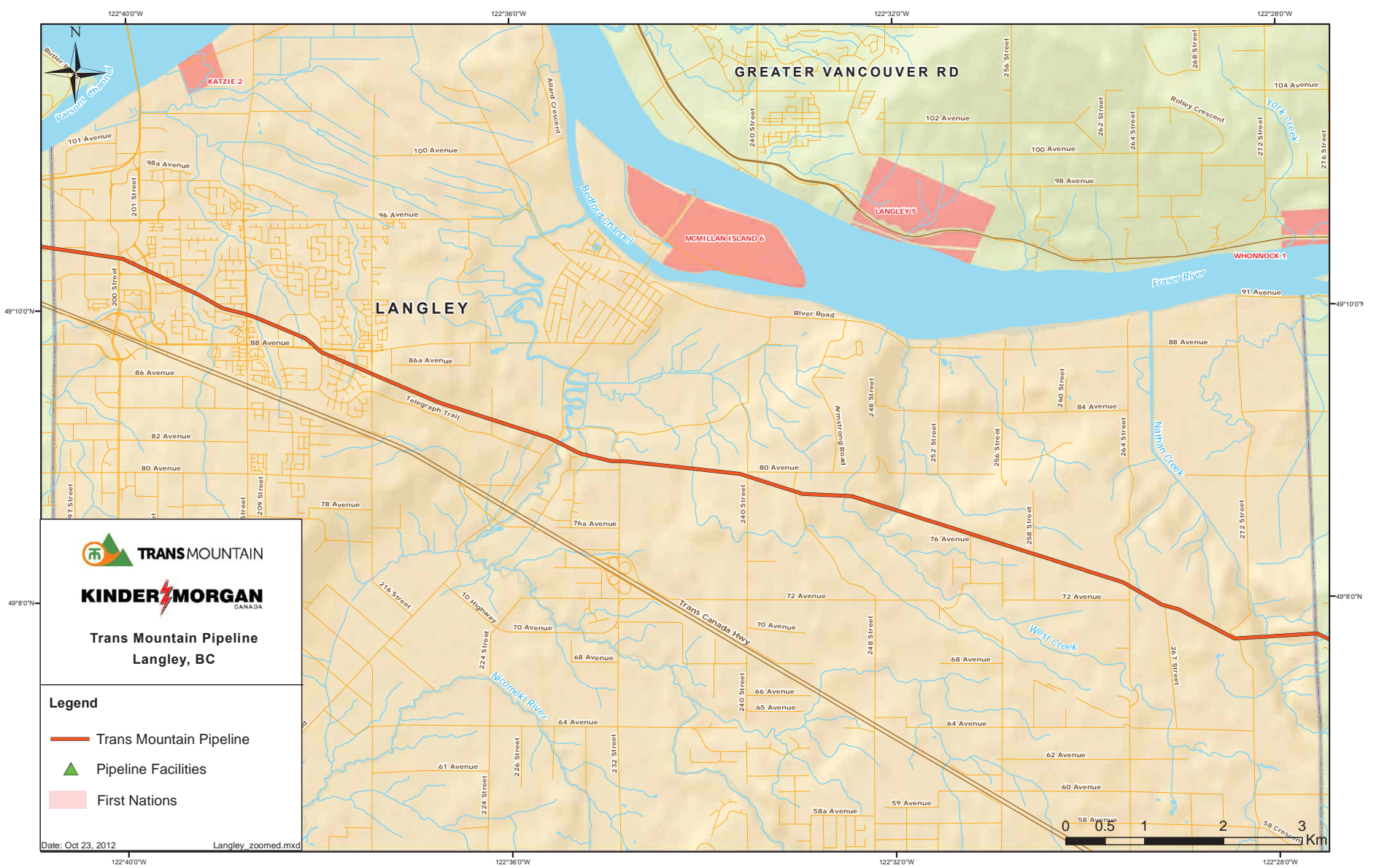
Trans Mountain Information

Pipeline Length	Pipeline Facilities	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
29.7 km	Sumas Pump Station	\$2,014,000	\$3,189,000



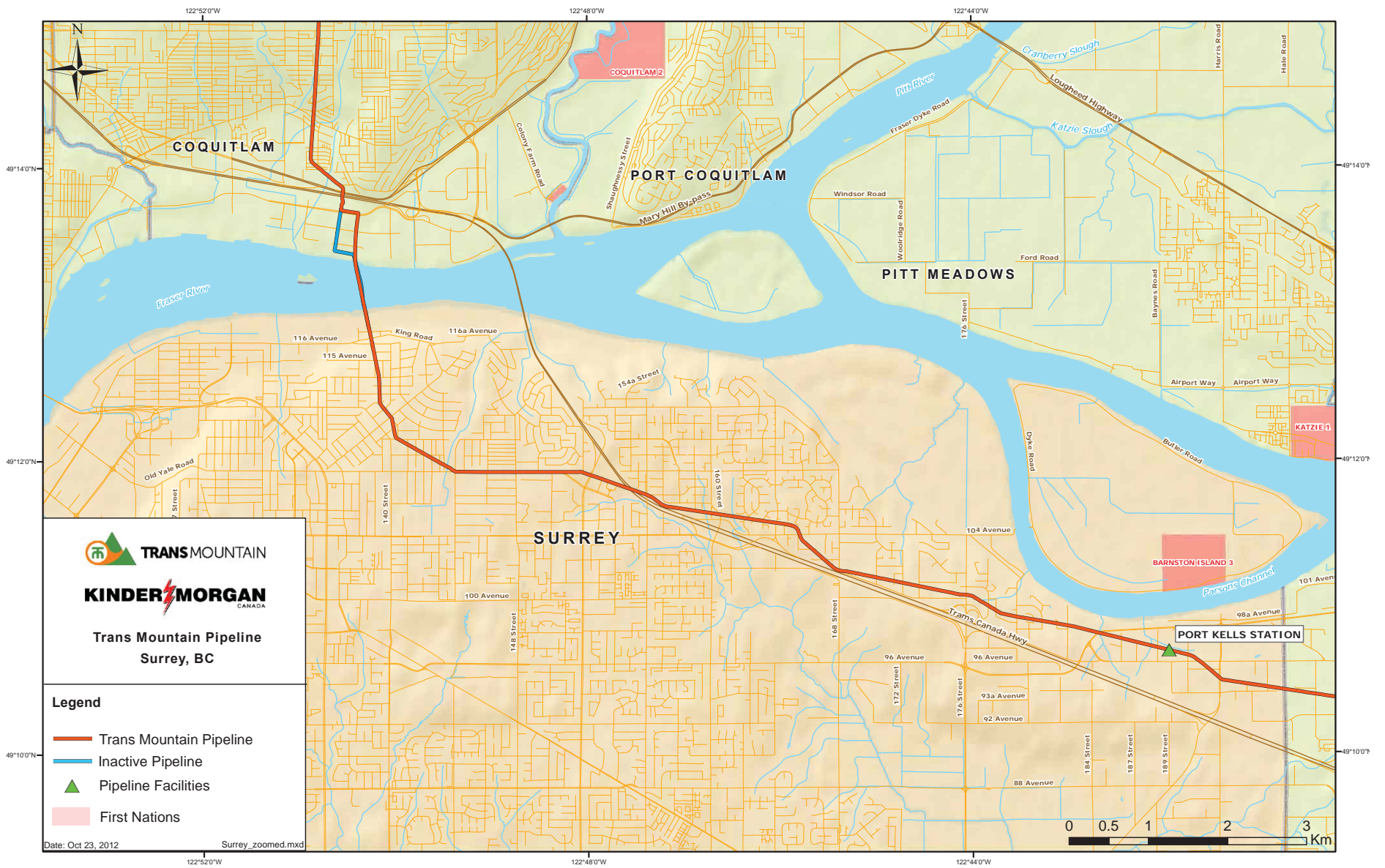
Trans Mountain Information

Pipeline Length	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
17 km	\$347,000	\$785,000



Trans Mountain Information

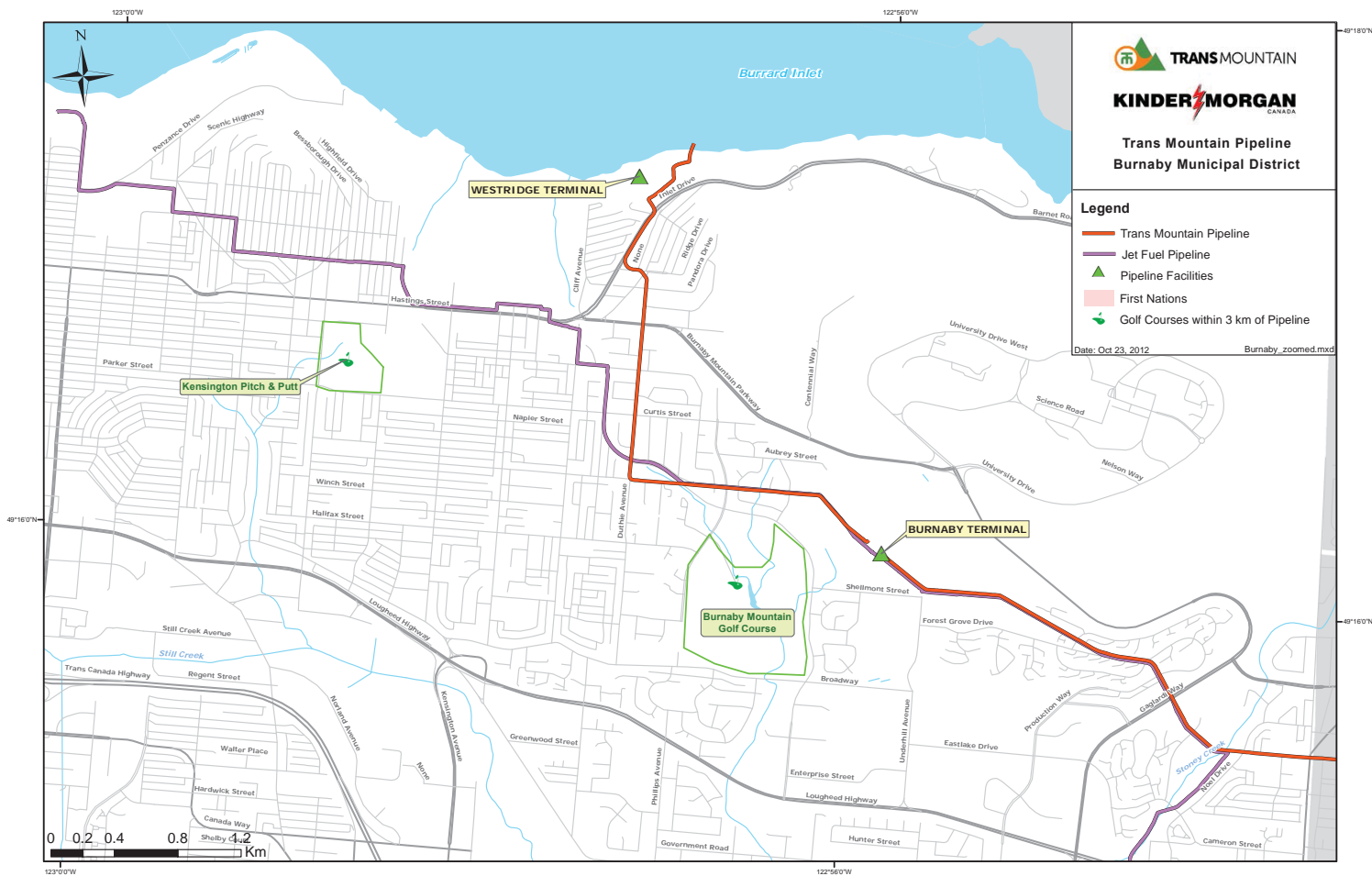
Pipeline Length	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
14 km	\$543,000	\$940,000





Trans Mountain Information

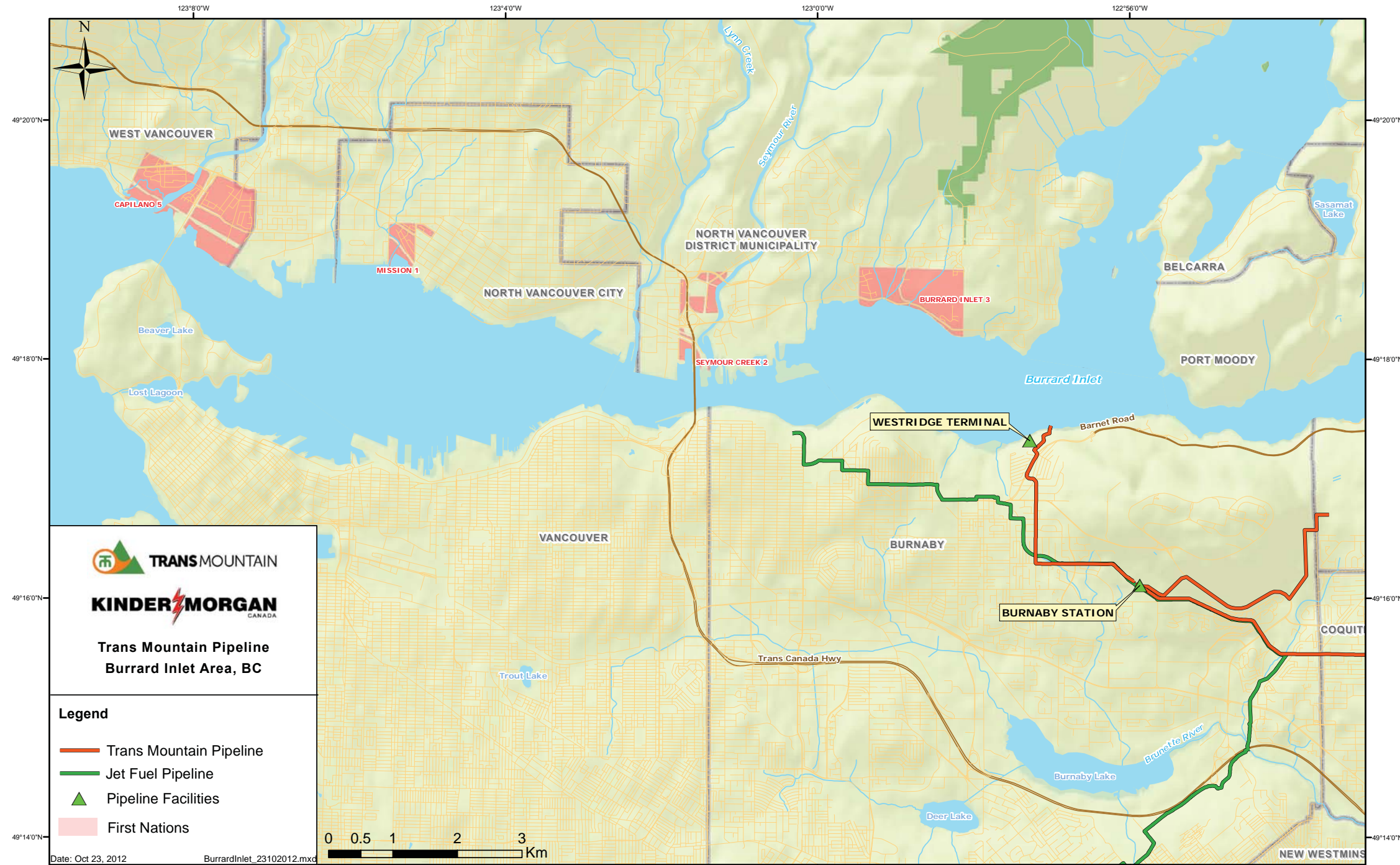
Pipeline Length	Pipeline Facilities	Employees	2011 Municipal Taxes	Annual Municipal Taxes after Proposed Expansion
5.7 km	Westridge Terminal Burnaby Pump Station	51	\$6,534,000	\$11,949,000





TRANSMOUNTAIN

BURRARD INLET





TRANS MOUNTAIN

DISCUSSION GUIDE



PROPOSED TRANS MOUNTAIN EXPANSION PROJECT

PUBLIC INFORMATION SESSIONS

OCTOBER – DECEMBER 2012

November 15, 2012



TABLE OF CONTENTS

About This Discussion Guide	3
About Our Community Engagement	3
Community Engagement Timeline	4
Aboriginal Engagement	5
Landowners Along the Trans Mountain Pipeline	6
History of Trans Mountain	7
Trans Mountain Current Operations	8
About the Trans Mountain Expansion Project	9
Trans Mountain Expansion Project Timeline	11
Proposed Expansion Map	12
Expansion Project Overview	13
Pipeline Specifications	15
Project Benefits	17
Pipeline Routing	19
Environmental Commitment and Assessment	20
Marine Emergency Response	22
Marine Safety	23
Westridge Marine Terminal	24
National Energy Board	25
Pipeline Safety	27
Pipeline Monitoring and Emergency Response	28
Our Oil Spill History	29
Public Input into the National Energy Board Process	30



ABOUT THIS DISCUSSION GUIDE

The purpose of this discussion guide is to provide you with information and facts about the proposed expansion of the Trans Mountain Pipeline system. The guide offers an overview and outline of the proposed project to give you a greater understanding of its scope and help answer any questions you may have.

We encourage you to fill out the feedback form included with this guide or let us know your thoughts through the other options listed below. The input and advice from local interests is essential and we will consider every comment and concern.

WAYS TO PARTICIPATE IN THE ENGAGEMENT PROCESS

- Discussion guide and feedback form
- Public information sessions
- Stakeholder meetings
- Online feedback form
- Written submission by email or mail
- Online forums, discussions and surveys

ABOUT OUR COMMUNITY ENGAGEMENT

An open, extensive and thorough engagement process on all aspects of the proposed Trans Mountain Expansion Project is underway along the pipeline corridor between Strathcona County, Alberta (near Edmonton) and Burnaby, British Columbia and the marine corridor. We are reaching out to all landowners along the pipeline and meeting with community leaders, elected officials, environmental groups and Aboriginal peoples to get their input and perspective.

Information sessions and public presentations provide opportunities for public input and queries. We are listening and responding so we can decide the best approaches to any issues that arise. We remain committed to earning your trust and confidence.



COMMUNITY ENGAGEMENT TIMELINE

Late Spring/Early Summer 2012: Project Introduction

Meetings with Aboriginal peoples, municipalities, elected officials and interest groups took place to introduce the project, identify interests and concerns and seek input on how to engage communities.

Fall 2012: Public Information Sessions

We are conducting public information sessions in communities along the project corridor to introduce the project, identify local interests and concerns and to seek input on the scope of the Environmental and Socio-Economic Assessment (ESA).

Comments received in the fall 2012 engagement process will be compiled and reported in early 2013 on the project website at www.transmountain.com.

Winter/Spring 2013: Continued Community Engagement

We will conduct regional discussions on specific topics of interest to communities such as environmental assessment, socio-economic assessment, routing and marine environmental studies.

Summer/Fall 2013: Public Information Sessions

We will conduct public information sessions on the results of environmental field studies and seek input on proposed mitigation measures.

GATHERING FEEDBACK

Feedback received from public information sessions, meetings and comment forms will be used by the Trans Mountain Expansion Project team to help inform the following aspects of the project:

- Identifying routing alternatives where it is not practical to follow the existing Trans Mountain right-of-way
- Determining the scope and nature of the Environmental and Socio-Economic Assessment
- Identifying potential mitigation measures to reduce environmental or socio-economic impacts
- Identifying potential local or regional benefits associated with the project

All comments and concerns gathered as part of the stakeholder engagement program will be incorporated into the project's Facilities Application which will be filed with the National Energy Board (NEB) in late 2013. These comments and concerns will be considered by the NEB in making its final determination regarding the proposed project.



ABORIGINAL ENGAGEMENT

- The Trans Mountain Pipeline crosses many Aboriginal territories
- Trans Mountain values its relationships with Aboriginal peoples in whose territories we operate
- We recognize and appreciate that Aboriginal peoples' interests and responsibilities are unique
- We are committed to working with Aboriginal communities in a spirit of co-operation to build and sustain lasting relationships
- We are committed to working with Aboriginal communities and Aboriginal companies in the planning and construction of the proposed project
- We are engaging with Aboriginal people, where traditional knowledge of the land and its people can help Trans Mountain build a better project
- We actively encourage Aboriginal contractors to bid on our contracting opportunities, including joint-venture partnerships with other local service providers, to expand the resource pool available in BC and Alberta



LANDOWNERS ALONG THE TRANS MOUNTAIN PIPELINE

- Trans Mountain has established relationships with landowners, neighbours and communities along the pipeline corridor developed over the 60 years we have operated the pipeline
- Along the 1,150-km route, the Trans Mountain Pipeline crosses a large number of private properties, as well as public lands
- Agreements are in place with landowners along the route between Strathcona County, Alberta (near Edmonton) and Burnaby, BC that have allowed Trans Mountain to build and operate the existing pipeline
- For the proposed expansion project, we will be contacting landowners to obtain permission to conduct environmental and engineering studies and to answer questions about the project
- Once the route is selected, land agents will visit all landowners to discuss pipeline location on their land and to negotiate land agreements to enable Trans Mountain to construct and operate the new pipeline
- Through negotiated land acquisition agreements, landowners grant pipeline companies the right to use land to build, operate and maintain pipelines



- Trans Mountain's objective is to treat each landowner fairly and equitably
- The National Energy Board (NEB) has produced a guide for landowners and the public that provides details about the regulatory process governing pipeline projects
- This information is available on the NEB website at www.neb-one.gc.ca



HISTORY OF TRANS MOUNTAIN

- For almost 60 years, the Trans Mountain Pipeline system has been safely and efficiently providing the only West Coast access to Canadian oil products
- The Trans Mountain Oil Pipeline Company was established in 1951 to construct and operate the Trans Mountain Pipeline between Strathcona County, Alberta and Burnaby, BC
- In operation since October 1953, the Trans Mountain Pipeline was established to create a reliable energy supply for Canada and the United States
- The initial capacity was 150,000 barrels per day with 4 pump stations along the line and a marine loading dock
- Since 1953, the capacity of the pipeline system has been increased a number of times by twinning parts of the line and adding associated facilities
- The most recent expansion of the Trans Mountain pipeline was the award-winning Anchor Loop Project, completed in 2008, through Jasper National Park and Mount Robson Provincial Park



TRANS MOUNTAIN – CURRENT OPERATIONS

The Trans Mountain Pipeline originates in Strathcona County near Edmonton where petroleum products are received and stored in the Edmonton terminal for injection into the pipeline.

The products are then transported along the line to terminals and refineries in Kamloops, Burnaby and Washington State.

The Burnaby Terminal is connected by pipeline to the Westridge Marine Terminal in Burnaby, which is the only western Canadian marine loading facility connected to a federally-regulated pipeline.

Kinder Morgan Canada does not own the products that are transported through the Trans Mountain Pipeline. The products belong to its customers.

INDUSTRY AND PRODUCTS IN THE PIPELINE

- Pipelines transport oil (light and heavy crude), refined products and natural gas over long distances, from producing regions of Canada to refineries and processing plants, where these energy sources are converted into useful fuels such as gasoline, diesel and commercial-grade natural gas



- Petroleum products include:
 - o Fuels we use every day, such as gasoline, aviation fuel, diesel and heating oil
 - o Solvents and lubricants
 - o Raw materials for manufacturing other petrochemicals
 - o Products used every day such as plastics, synthetic fabrics and electronics
- For more information on Canada's petroleum industry, visit the Canadian Association of Petroleum Producers (CAPP) website at: www.capp.ca
- The Trans Mountain Pipeline is part of Canada's 100,000-km underground pipeline network that transports almost all of Canada's daily crude oil and natural gas production
- For more information on Canada's pipeline industry and infrastructure, visit the Canadian Energy Pipeline Association (CEPA) website at: www.cepa.com



ABOUT THE TRANS MOUNTAIN EXPANSION PROJECT

After receiving strong commitments from its customers, Trans Mountain, in April 2012, announced a proposed expansion of the Trans Mountain Pipeline system between Strathcona County (near Edmonton) and Burnaby.

In operation since 1953, the 1,150-km existing Trans Mountain Pipeline system, owned by Kinder Morgan Canada, has been operating safely and efficiently providing the only West Coast pipeline access for Canadian oil products, including being the major transporter of gasoline to the interior and south coast of British Columbia.

If approved, the proposed Trans Mountain Expansion Project would add approximately 900 km of new, twinned pipeline that would increase the nominal capacity of the system from 300,000 barrels per day to 750,000 barrels per day. Where practical, the routing of the proposed expansion will remain within the existing Trans Mountain Pipeline right-of-way.

National Energy Board Process

The NEB will run its own engagement process once Trans Mountain's Facilities Application has been filed. Through this process, the NEB will solicit input and comments from the public on the proposed project.

In making a recommendation to the federal cabinet whether the proposed Trans Mountain Expansion project should proceed, the NEB reviews the project's economic, technical and financial feasibility, and its environmental and socio-economic impact. The NEB will consider all comments gathered during Trans Mountain's pre-application engagement program as well as comments submitted to the NEB during the regulatory review phase.



Project at a Glance

- The projected capital cost of the project is \$4.1 billion
- Twinning the existing pipeline would take place within the existing right-of-way corridor where practical, minimizing construction impact in new areas
- Proposed expansion of the Trans Mountain Pipeline would increase the nominal capacity of the system from 300,000 barrels per day to 750,000 barrels per day
- The expansion would result in a dual-line operation (approximately 900 km of new pipeline) with:
 - The existing line for refined products, synthetic crude oils, light crude oils
 - The proposed new line for heavier oils
- New pump stations and expansion of existing stations along the route with 13 new/co-located stations
- Additional storage capacity at existing storage terminals in Strathcona County, Sumas and Burnaby
- Expansion of Westridge Marine Terminal in Burnaby
- New pipeline capacity between Burnaby Terminal and Westridge Marine Terminal



Numbers based on preliminary estimate, subject to change



TRANS MOUNTAIN EXPANSION PROJECT TIMELINE

In April 2012, Kinder Morgan Canada announced it will proceed with its proposed plans to expand the capacity of the existing Trans Mountain system after receiving strong commitments from its customers. Here is a look at the key activities and estimated timeline that will unfold over the next five years.



LATE SPRING/EARLY SUMMER 2012:

Meetings and discussions began with regulators to define the process and determine the regulatory requirements needed for the expansion Facilities Application. Initial meetings with Aboriginal peoples, landowners, communities and stakeholders.



SUMMER 2012:

Engagement with Aboriginal peoples, landowners, communities and stakeholders took place in summer 2012 and is continuing. On June 29, 2012, Trans Mountain filed a Toll Application with the National Energy Board. The Toll Application is Trans Mountain's proposed tolling structure for its customers on the proposed expanded pipeline system. This application does not seek approval for the proposed expansion facilities and does not involve technical or environmental aspects of the proposed expansion project. The focus of the Toll Application is to seek approval from the National Energy Board regarding how Kinder Morgan Canada will charge its customers for moving product through the proposed expanded pipeline.



JUNE 2012 TO SPRING 2013:

*** WE ARE HERE IN THE PROCESS.** Continue open and transparent engagement. Undertake comprehensive pipeline routing studies, traditional knowledge studies, environmental and socio-economic assessments.



LATE 2013:

The goal is to file a comprehensive Facilities Application with the National Energy Board in late 2013 to start a regulatory project review. The timing will be determined by meeting the established regulatory requirements that govern the application process and consultation efforts. Continue open and transparent engagement.



2014 TO 2015:

Regulatory review. Continue open and transparent engagement.



2016 TO 2017:

If the project is approved, construction of the proposed expansion could begin. Continue open and transparent engagement.



2017:

If approved, the proposed expanded Trans Mountain Pipeline to start operating.

PROPOSED EXPANSION MAP





TRANS MOUNTAIN EXPANSION PROJECT OVERVIEW

- Proposed expansion: approximately 900 km of new pipeline along the existing Trans Mountain Pipeline system between Strathcona County, Alberta (near Edmonton) and Burnaby, BC
- Increased nominal capacity from 300,000 barrels per day to 750,000 barrels per day
- Customers have signed 20-year contracts with Trans Mountain for much of the extra capacity
- Proposed dual-line operation
 - The existing line: refined products, synthetic crude oils, light crude oils
 - The proposed new line: heavier oils
- New 30-inch pipeline proposed in the following areas:
 - Strathcona County, Alberta to Edson, Alberta
 - From Rearguard, BC to Darfield, BC
 - From Black Pines, BC to Burnaby, BC
- New 36-inch pipeline proposed for Hargreaves, BC to Rearguard, BC
- Two new 30-inch delivery lines planned from the Burnaby Terminal to the Westridge Marine Terminal
- Existing pipelines to be reactivated:
 - Edson, Alberta to Hargreaves, BC
 - Darfield, BC to Black Pines, BC
- Project cost: approximately \$4.1 billion



Numbers based on preliminary estimate, subject to change

PROPOSED FACILITIES

Pump Stations



- 9 new pump stations at existing locations
- 4 new pump stations located at 2 new sites

Storage Tanks



- 18 new storage tanks at 3 existing storage terminals in:
 - Strathcona County, Alberta
 - Burnaby, BC
 - Sumas, BC
- All new storage tanks are expected to be built within existing facility boundaries

Westridge Marine Terminal



- 3 loading berths: total of 3 berth faces
- 1 utility berth with spill response equipment and utility tugs



PIPELINE SPECIFICATIONS



- Oil pipelines are made from steel with a diameter typically ranging from 4 to 48 inches
- Trans Mountain will use 30-inch pipe for most of the proposed expanded pipeline
- Trans Mountain will use pipe manufactured from high-grade steel to stringent Canadian Standards Association (CSA) and American Petroleum Institute (API) specifications in the proposed pipeline expansion
- CSA tightly regulates requirements for steel chemistry, material properties, manufacturing tolerances and quality control
- With a strong focus on inspection and maintenance, pipelines have an indefinite lifespan

BUILDING A PIPELINE – Step by Step

Surveying and Staking: After finalizing a route, crews survey and stake the right-of-way and any temporary workspace needed for construction.

Clearing: Trees and vegetation are removed from the right-of-way.

Grading: Area is cleared and graded. The topsoil is removed and stockpiled for replacement and future reclamation.

Trenching: Excavators dig the trench to the required depth. Pipelines are buried in trenches that are generally a minimum of 0.9 metres deep, depending on sub-surface conditions.

Stringing: Individual lengths of pipe ranging from 12 to 24 metres long are laid out end-to-end along the right-of-way.

Bending: Individual joints of pipe are bent using a hydraulic bending machine for directional changes and to fit the terrain.

Joining: Welders join the pipes together with either manual or automated welding processes. All welds are tested using high-tech methods such as X-ray or ultrasound.

Coating: The pipeline coating protects against corrosion. The pipeline is delivered to the right-of-way pre-coated. Field application coating is applied to welded joints.

Lowering: The welded pipeline is lowered into the trench with heavy lifting machines called side booms.

Valves and Fittings: Valves and other fittings are installed at intermediate locations as required by the CSA pipeline code. The valves are used once the line is operational to isolate the pipeline for maintenance or in the event of an emergency.

Backfilling: Soils are replaced in the order in which they were removed.

Pressure Testing: Pipelines are hydrostatically tested to 125 per cent of the anticipated operating pressure.

Cleanup: The pipeline right-of-way is reclaimed. Temporary facilities are removed. The land is re-contoured and re-seeded as part of restoration.





PROJECT BENEFITS

- The project will provide benefits to Canadians by creating jobs and government revenues and contributing to Canadian businesses and to the overall economy
- Most economic benefits will occur in BC and Alberta and will include opportunities for communities along the route
- The project will provide an important boost to the BC and Alberta construction industries
- The proposed Trans Mountain Expansion Project will allow Canada to promote its resources on the world market where oil commands world pricing
- Access to Tidewater markets is anticipated to boost the oil price for Canadian producers by a total of \$28 billion in the first 10 years

LOCAL BENEFITS

- Substantial expenditures, jobs and economic spinoffs in BC and Alberta communities in project development and during construction
- Training and skills development that will build capacity for Aboriginal workers
- Contracting, employment and vendor opportunities for local and regional businesses
- Investments and advancements in areas such as pipeline development and spill response
 - o Example: \$250,000 contribution to BCIT Marine Simulation Centre
- Trans Mountain is looking for feedback and ideas on how your community could participate in and benefit from the expansion project

BCIT Marine Simulation Centre



ECONOMIC IMPACTS

Trans Mountain has conducted preliminary analyses of the potential economic impact of the project (all numbers are approximate)

Estimated Direct Expenditures:

- \$4.1 billion during design and construction (2012 – 2018)
 - o \$2.6 billion in BC and \$1.5 billion in Alberta
- \$3.6 billion during operations (2019 – 2048)
 - o \$2.5 billion in BC and \$1.1 billion in Alberta

Estimated Employment:

- 47,200 person-years of employment generated (full-time equivalents) during construction and operations (2012 – 2048)
 - o 27,200 person-years in BC
 - o 11,500 person-years in Alberta
 - o Plus indirect/induced employment in other provinces and territories
- Expanded operations: 35 new permanent full-time jobs in BC and 29 in Alberta

Estimated Tax Revenues:

- \$811 million for Government of Canada over life of project
- \$557 million for provincial governments over life of project (\$320 million for BC, \$145 million for Alberta and \$93 million for rest of Canada)

- \$600 million increased municipal property taxes during operations
 - o \$535 million in BC (\$19.9 million annually)
 - o \$64 million in Alberta (\$2.4 million annually)
- Trans Mountain is assessing expected local economic benefits to communities along the pipeline route – when complete, information will be shared



These estimates may change as project details are refined



PIPELINE ROUTING

Objectives in Determining Route Options:

- Build the proposed new pipeline safely, while minimizing impacts to landowners and neighbours
- Follow the existing Trans Mountain Pipeline right-of-way, where practical

Significant changes in land use and urban growth since the original pipeline was built will require identifying new routing options in some locations

Route Considerations:

- Follow established transportation and utility corridors
- Minimize impact on landowners
- Minimize impact on environment
- Minimize constraints on municipal infrastructure
- Minimize impact on public
- Minimize impact on Aboriginal communities

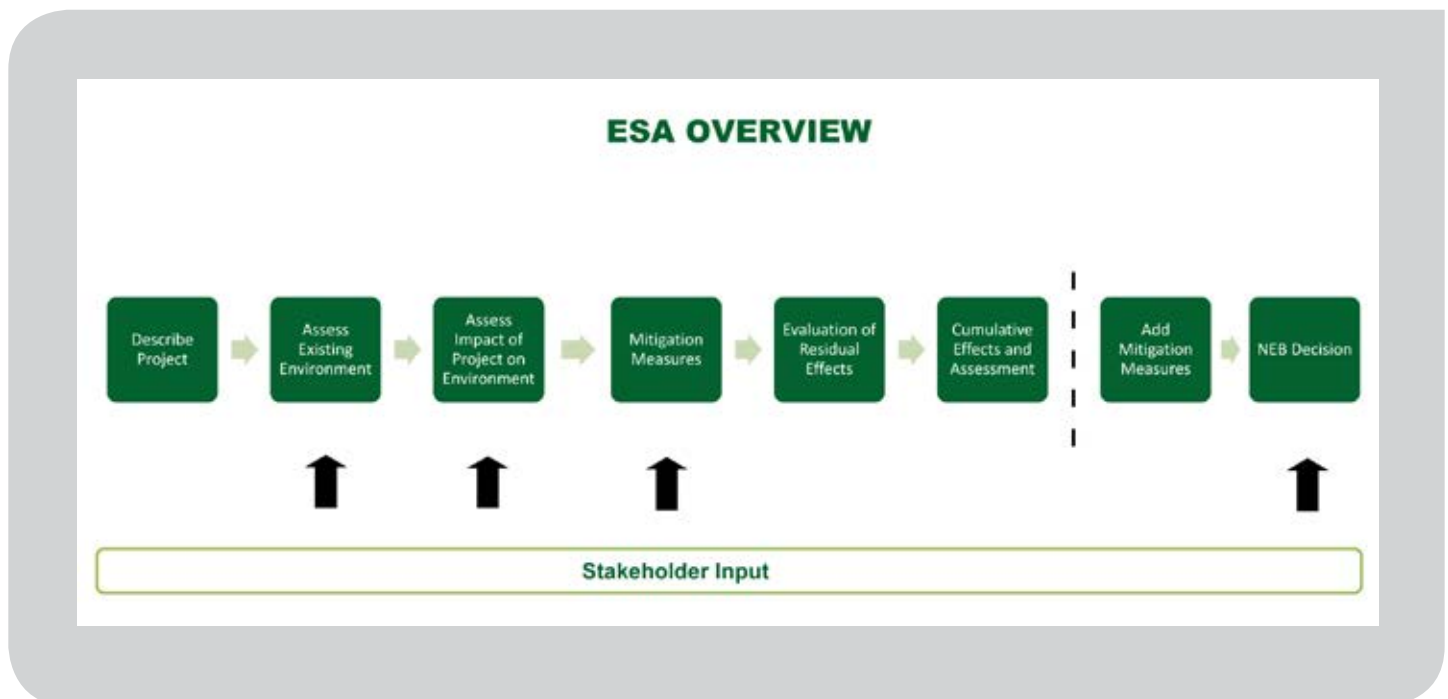


Identifying Route Options

- Routing studies and consultation with Aboriginal peoples, landowners and communities
- In locations where routing options are required, studies will be conducted within a 150m assessment corridor to identify an 18m operational right-of-way
- Routing studies will consider
 - o Human Environment:
 - Land use: residences, commercial, recreation, parks
 - o Natural Environment:
 - Sensitive areas
 - Water crossings
 - Wetlands and wildlife
 - o Engineering:
 - Technical constraints/possible construction techniques
 - Geotechnical conditions
 - Pipeline length
 - Number and difficulty of crossings (highways, roads and other line crossings)
- Final, detailed routing will be determined during the design and construction planning stage, after late 2013

ENVIRONMENTAL COMMITMENT AND ASSESSMENT

- Trans Mountain is committed to environmental stewardship
- Trans Mountain will undertake an extensive Environmental and Socio-Economic Assessment (ESA) of the pipeline, related facilities and increases in vessel traffic resulting from the proposed project
- Detailed Environmental Protection Plans (EPPs) will be developed for the project
- The ESA will examine both natural and human elements associated with the land and marine environments
- Numerous topic-specific field studies will take place along the proposed pipeline route and in/around facilities
- The ESA, EPPs and topic-specific field reports will be part of the Facilities Application to be submitted to the National Energy Board in late 2013





NATURAL ENVIRONMENT

- Field studies will examine the effects and develop mitigation measures related to:
 - o Wildlife, including birds
 - o Wetlands
 - o Air and noise emissions
 - o Soils
 - o Surface water quality and quantity
 - o Groundwater quality and quantity
 - o Fish and fish habitat
 - o Vegetation
 - o Ecological risks

HUMAN ENVIRONMENT

- Field studies will examine the effects and develop mitigation measures related to:
 - o Traditional Land and Resource Use
 - o Archaeology and Heritage Resources
 - o Human Occupancy and Resource Use
 - o Employment and Economy
 - o Infrastructure and Services
 - o Human Health
 - o Viewsheds and Aesthetics
 - o Social and Cultural Well-Being



MARINE EMERGENCY RESPONSE

- Western Canada Marine Response Corporation (WCMRC) is Canada's West Coast-certified response organization responsible for emergency response preparedness
- With a team of well-trained professionals WCMRC is on call 24/7 to manage oil spill response on the BC coast
- Under the 1995 Canada Shipping Act, both oil-handling facilities (shipping or receiving) and vessels 150 gross tonnes and greater carrying oil for delivery, and/or ships 400 gross tonnes and greater calling on a Canadian port must, by law, have an arrangement with a certified response organization
- The Regional Environmental Emergencies Team (REET) provides environmental expertise drawn from experts within response agencies and all levels of government including First Nations
- We work closely with Transport Canada, the Canadian Coast Guard, the provincial government and Environment Canada in preparedness and prevention strategies





MARINE SAFETY

- Tankers must adhere to highly-regulated safety protocols when entering BC waters
 - o Ships require Canadian Coast Guard approval to enter Canadian waters
 - o All tankers in local waters are double hulled and have a number of compartments
 - o Two qualified Canadian pilots are on board all tankers leaving Westridge Marine Terminal
 - o Tankers are tethered to escort tugs capable of controlling the ship if necessary
- Trans Mountain has developed additional safety standards for vessels coming in to Westridge Marine Terminal including:
 - o Ship registry assessment in the months leading up to proposed loading
 - o Ship inspections prior to loading



WESTRIDGE MARINE TERMINAL – LOADING THE TANKERS

- Tanker operations are regulated by Transport Canada, Canadian Coast Guard, Pacific Pilotage Authority and Port Metro Vancouver
- Trans Mountain also pre-screens and inspects vessels before they are allowed to load at the Westridge Marine Terminal
- The largest vessels calling at the Trans Mountain Westridge Marine Terminal are Aframax tankers – due to harbour restrictions, they are loaded only to 90 per cent of their 650,000-barrel capacity
- Aframax tankers are considered mid-size range of tankers that operate globally
- We have loaded marine vessels since 1956 without a single spill from vessel operations
- Loading an average tanker takes 24 hours, after safety and operating procedures have been established





NATIONAL ENERGY BOARD

- The Trans Mountain Pipeline is regulated by the National Energy Board (NEB), a fully independent agency of the Government of Canada established in 1959 to regulate international and interprovincial aspects of the oil, gas and electric utility industries
- The NEB's mandate is to promote safety, security, environmental protection and enhance economic efficiency for the regulation of pipelines, energy development and trade in the Canadian public interest
- As an NEB-regulated entity, Trans Mountain requires approval from the NEB prior to being able to construct the proposed Trans Mountain Expansion Project

Other Regulatory Agencies

- Trans Mountain will also need to seek approval from a number of other regulatory agencies



Facilities Application (to be filed late 2013)

- Trans Mountain will file a Facilities Application to the National Energy Board (NEB) in late 2013 to begin regulatory review of the proposed expansion project
- The Facilities Application will ask the NEB for authorization to build and operate the necessary facilities for the proposed Trans Mountain Expansion Project
- The Facilities Application will include the Environmental and Socio-Economic Assessment (ESA), as well as documentation of the Aboriginal engagement, landowner and public consultation, and engineering components of the proposed expansion project
- The NEB will consider whether the proposed project will meet current and future public needs
- The NEB review considers the ESA, public input, impact of the project and proposed measures to be taken to minimize any impacts
- At the end of its review, the NEB will provide a recommendation to the Governor in Council as to whether the proposed project should proceed

Toll Application (filed June 2012)

- The NEB has jurisdiction over how tolls or fees are charged on pipelines
- On June 29, 2012 Trans Mountain filed a Toll Application for NEB approval of the toll or fee structure for the proposed project
- The Toll Application addresses commercial matters related to the tolls that would be charged to the shippers
- The Toll Application does not impact whether the NEB would approve the proposed Trans Mountain Expansion Project





PIPELINE SAFETY

Our Commitment

- We will take every possible action to prevent a spill and have developed a number of programs to protect and inspect Trans Mountain Pipeline
- No spill is acceptable, but we have plans to respond, clean up, remediate and learn from every incident should one occur
- In the event of a spill, we will examine all aspects of our operations and make modifications wherever possible to prevent a recurrence

Pipeline Safety

- Pipelines remain the safest and most efficient method for transporting petroleum products
- As long as pipelines are properly maintained, their lifespan is indefinite

Pipeline Protection

- Our pipeline integrity management includes regular inspection, maintenance and repair programs managed by a dedicated Technical Services group

- The pipeline has protective coatings and a cathodic protection system to prevent rust and corrosion
- Technology is used to detect changes in pipeline condition and wall thickness

DAMAGE PREVENTION

- The pipeline is marked and signage along the line is maintained
- We conduct regular aerial and ground patrols of the pipeline to look for any irregularities or unauthorized activities along the pipeline corridor
- Permits are issued for any ground disturbance activities near the pipeline
- Education workshops and information mailouts help keep the public aware of the potential risk of activities near the pipeline corridor

“One Call” Program: Call Before You Dig

A central agency to call to find out what is buried on a site and where not to dig.

PIPELINE MONITORING AND EMERGENCY RESPONSE

Monitoring

- Control Centre Operations staff operate and monitor the pipeline 24/7 year round from a Control Centre in Edmonton
- The Supervisory Control and Data Acquisition (SCADA) system monitors the pressures and operating conditions of the pipeline
- Information is transferred from SCADA to the Leak Detection system in real time
- If pipeline flow or pressure changes outside of prescribed norms, an alarm will alert the operator
- If necessary, Trans Mountain can shut the system down remotely using automated valves to stop the flow of product and isolate sections of the pipeline for investigation

Emergency Response

- Trans Mountain staff, combined with trained responders and contractors, provide for 24/7 response management
- Trans Mountain is responsible for cleanup and remediation of incidents related to its operations along the pipeline corridor

- Trans Mountain carries liability insurance to provide coverage for all aspects of spill management, including compensation and remediation
- The Incident Command System (ICS) outlines clear emergency response roles and responsibilities, including use of local emergency responders and qualified clean-up contractors, so Trans Mountain can act quickly to protect its employees, the public and the environment
- Emergency response equipment is located at strategic locations along the pipeline





OUR SPILL HISTORY

History

We recognize the potential for pipeline spills. Our safety programs aim to minimize the effects of spills. We have a strong focus on management systems and preventative maintenance programs, including protection of stream and river crossings. These systems programs are fully documented and subject to audit by the National Energy Board (NEB).

- We are responsible for reporting spills greater than 1.5 cubic metres (approximately 9.5 barrels) to the NEB, the regulator of our system since 1961
- We have loaded marine vessels since 1956 without a single spill from vessel operations
- Since 1961, Trans Mountain has reported 78 spills on its pipeline system to the NEB, some of which are below the reportable threshold
- More than 70 per cent of all spills have occurred at Trans Mountain pump stations or terminals
- Trans Mountain pump stations and terminals have monitoring and spill containment systems that are rigorously maintained and meet NEB standards

What We Have Learned

- Following each spill we have conducted a thorough incident investigation, with recommendations and a Corrective Action Plan
- Our pipeline spill history shows how we have learned from these recommendations and improved our technology and management programs



PUBLIC INPUT INTO NATIONAL ENERGY BOARD PROCESS

- The National Energy Board (NEB) encourages interested members of the public to participate in proponent-led engagement processes prior to the filing of the Facilities Application
- The NEB is required to hold a public hearing for all pipelines longer than 40 kilometres in length
- The purpose of a public hearing is to gather and review relevant information, including information from the public



Public Participation in a National Energy Board Hearing

- There are three ways that individuals or groups can participate in a hearing:
 - **Filing a letter of comment:** a written statement about the writer's views
 - **Asking to make an oral statement:** presenting views in-person at a public hearing – anyone wishing to make an oral statement must notify the NEB in advance
 - **Applying for intervenor status:** An individual or group granted intervenor status by the NEB may file written evidence, receive all filings submitted by the company, comment on evidence filed and make a final argument
- For more information on the National Energy Board regulatory process and opportunities for public input see: www.neb.gc.ca

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KINDER  MORGAN
IN CANADA



KINDER MORGAN

Kinder Morgan, headquartered in Houston, Texas, is the largest midstream and the fourth largest energy company in North America with more than 120,700 kilometres (75,000 miles) of pipelines and 180 terminals. Its pipelines transport natural gas, gasoline, crude oil, CO₂ and other products, and its terminals store petroleum products and chemicals and handle such products as ethanol, coal, petroleum coke and steel.

In Canada, Kinder Morgan operates a number of pipeline systems and terminal facilities including the Trans Mountain pipeline, the Express and Platte pipelines, the Cochin pipeline*, the Puget Sound and the Jet Fuel pipelines, the Westridge marine terminal, Vancouver Wharves in British Columbia and the North Forty terminal in Edmonton, Alberta.

PIPELINE BUSINESS IN CANADA

Subsidiary Kinder Morgan Canada (KMC), headquartered in Calgary, Alberta, transports approximately 20 per cent of all liquid petroleum products produced in Alberta to markets in western North America through its 4,000-km (2,500-mile) network of pipelines.

A leader in the energy transportation industry, Kinder Morgan Canada was honoured with the 2010 Alberta Emerald Award in recognition of its environmental stewardship on the Anchor Loop project.

KMC is committed to ensuring the safety of its pipelines and the protection of the environment and communities where it operates.

KMC is strongly positioned to meet west coast market growth through its pipeline and terminal network.

KMC operates:

- Trans Mountain Pipeline System
- Jet Fuel Pipeline System (Greater Vancouver Area)

- Puget Sound Pipeline System
- Express Pipeline System
- Platte Pipeline System
- Cochin Pipeline System*

Trans Mountain Pipeline System

In operation since 1953, Trans Mountain pipeline (TMPL) is the only pipeline system in North America that transports both crude oil and refined products to the west coast. TMPL moves product from Edmonton, Alberta, to marketing terminals and refineries in the central British Columbia region, the Greater Vancouver area and Puget Sound area in Washington State, as well as to other markets such as California, the U.S. Gulf Coast and overseas through its Westridge marine terminal located in Burnaby, British Columbia. Only crude oil and condensates are shipped into the United States.

TMPL System Facts

- Length: 1,150 km (715 miles)
- Diameter: 150 km (93.4 miles) of 36-inch pipe, 170 km (105 miles) of 30-inch pipe and 827 km (514 miles) of 24-inch pipe
- Capacity: 48,000 m³/d (300,000 bpd) (approx.)
- Transit time: six days to Kamloops; nine days to Burnaby (approx.)
- Pump stations: 24
- Regulator: National Energy Board (NEB)

Edmonton Terminal

The TMPL mainline originates at the Edmonton terminal, located in an industrial area of Sherwood Park, Alberta. With 20 incoming feeder lines from throughout Alberta, the terminal is an important petroleum storage hub with unparalleled upstream and downstream connectivity. It provides temporary storage for crude oil and petroleum products that are transported by the Trans Mountain pipeline. It currently contains 19 storage tanks with an overall volume of approximately 417,000 m³ (2.6 million bbl). Construction is underway to expand the terminal by adding 10 tanks and related

*The Cochin system is operated by Kinder Morgan's Products Pipelines group in Houston, Texas. However, specific Canadian operational requirements are handled by Kinder Morgan Canada.

facility infrastructure by the end of 2013. This will bring the terminal's total storage capacity to approximately 986,000 m³ (6.2 million bbl).

The main control centre located at the Edmonton terminal remotely monitors all aspects of pipeline operations with a Supervisory Control and Data Acquisition system (SCADA).

Kamloops Terminal

Refined products from Edmonton are routed to Kamloops for local distribution. Kamloops is also a receiving site for products from northeastern British Columbia that are bound for the west coast. The site contains two storage tanks with an overall volume of 23,000 m³ (144,000 bbl).

Sumas Pump Station and Terminal

The Sumas pump station and the Sumas terminal are located in Abbotsford, British Columbia. Both facilities route products from the TMPL mainline into Washington State via KMC's Puget Sound pipeline system. The terminal contains six storage tanks with an overall volume of 103,000 m³ (650,000 bbl).



Burnaby Terminal

The Burnaby terminal is the terminus of the TMPL mainline. It receives both crude oil and refined products for temporary storage and distribution through

separate pipelines to local terminals, a refinery and the Westridge marine terminal. The Burnaby terminal has 13 storage tanks with an overall volume of 250,000 m³ (1.6 million bbl).

Westridge Marine Terminal

The Westridge marine terminal is located within Port Metro Vancouver in Burnaby, British Columbia. In operation since 1957, the terminal can accommodate ships up to approximately 100,000 dead weight tons and barges.



In addition to shipping crude oil, the facility also receives jet fuel, which is delivered to the Vancouver International Airport through the Jet Fuel pipeline system.

The Westridge marine terminal is regulated by Transport Canada and NEB. Three storage tanks have an overall volume of 46,000 m³ (290,000 bbl).

Products in the Pipeline

TMPL transports crude oil, refined and semi-refined products together in the same line. This process, known as batching, means that a series of products can follow one another through the pipeline in a batch train.

A typical batch train in the mainline is made up of a variety of materials being transported for different shippers. Products next to each other in the pipeline can mix. This mixing — or product interface — is kept to a minimum by putting the products in a specific sequence. Any products that do mix are re-refined for use.

TMPL Expansion

After receiving strong commitments from its customers, KMC has announced a proposed expansion of TMPL between Edmonton, Alberta and Burnaby, British Columbia.

The proposed TMPL expansion, if approved by NEB, would add approximately 900 km (559 miles) of new, twinned pipeline that would increase the capacity of the system from 300,000 barrels per day to up to 750,000 bpd. Where practical, the routing of the proposed expansion will remain within the existing TMPL right-of-way.



KMC has begun an open, extensive and thorough engagement with landowners, Aboriginal groups, communities and stakeholders on all aspects of the proposed expansion project. Engineering, environmental, and socio-economic assessments along with traditional knowledge studies will be conducted. The goal is to file a comprehensive facilities application with NEB in late 2013 to start a regulatory project review.

Recent Projects

In 2008, Kinder Morgan successfully completed two major projects. The Trans Mountain Pump Station expansion (TMPSE) added 10 new pump stations along the existing system. The Anchor Loop Project twinned (or looped) a 159-kilometre (99-mile) section of the existing TMPL system between Hinton, Alberta, and Hargreaves, British Columbia. Two new pump stations were also built

as part of Anchor Loop. Together TMPSE and Anchor Loop increased the TMPL capacity up to 300,000 bpd.

Anchor Loop Project

The award winning Anchor Loop pipeline was one of the most challenging pipeline projects to be built in North America. Rugged mountainous terrain, narrow rights-of-way and proximity to existing infrastructure created some of the toughest pipelining conditions in the world. However, the biggest challenge was working in the environmentally sensitive areas of Jasper National Park and Mount Robson Provincial Park — a UNESCO designated Rocky Mountain Parks World Heritage Site. Many view Anchor Loop as a legacy project that surpassed stringent environmental standards and regulations.

In 2008, when construction on the Anchor Loop project was completed, KMC committed to a five-year post-construction monitoring program to evaluate the success and effectiveness of environmental protection and restoration measures on the project. The program was developed in collaboration with Parks Canada and will continue well into the future to not only meet the five-year post-construction monitoring requirements, but also to monitor sensitive environmental areas for many years to come.

In 2010, KMC's restoration efforts on the Anchor Loop project were recognized with the Alberta Emerald Award for environmental stewardship and responsibility.



Jet Fuel Pipeline System

The Jet Fuel pipeline system transports jet fuel from the Chevron refinery and distribution facilities in the Burnaby area to the Burnaby terminal and then to the Vancouver International Airport terminal.

The 41-km (25-mile) Jet Fuel pipeline system has been in operation since 1969. It includes five storage tanks at the Vancouver International Airport terminal with an overall volume of 7,155 m³ (45,000 bbl). The system is regulated by the Oil and Gas Commission and the British Columbia Utilities Commission.

Puget Sound Pipeline System

In operation since 1956, the Puget Sound system ships Canadian crude oil and refined products via the TMPL system from Abbotsford, British Columbia, for delivery to Washington State refineries at Anacortes, Cherry Point and Ferndale.

Puget Sound System Facts

- Length: 111 km (69 miles)
- Diameter: 16- to 20-inch
- Capacity: 28,600 m³/d (180,000 bpd)* (approx.)
- Transit time: one day (approx.)
- Pump stations: one
- Regulator: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, and the Federal Energy Regulatory Commission

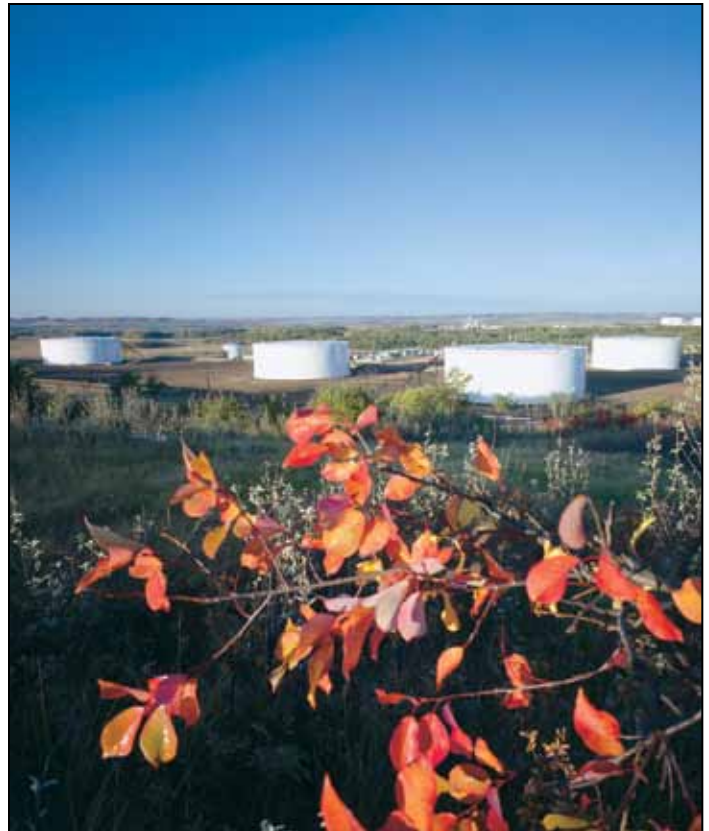
* Puget Sound capacity, as shown, is limited to a combined delivery capability of heavy and light petroleum to both Anacortes and Ferndale/Cherry Point.

Express & Platte Pipeline Systems

The Express-Platte system consists of two crude oil pipelines — the Express pipeline and the Platte pipeline. This 2,700-km (1,700-mile) integrated oil transportation network connects Canadian and U.S. producers to refineries in the Rocky Mountain and Midwest regions of the United States.

Express Pipeline System

In operation since 1997, the Express pipeline receives a variety of light, medium and heavy crude oil produced in western Canada at Hardisty, Alberta, a rapidly growing Canadian oil hub, and delivers them to markets in Montana, Wyoming, Utah and Colorado. The Express pipeline interconnects with the Platte pipeline system at Casper, Wyo. The pipeline terminal in Hardisty contains six tanks with an overall volume of 143,000 m³ (900,000 bbl).



Express System Facts

- Length: 1,263 km (785 miles)
- Diameter: 24-inch
- Capacity: 44,500 m³/d (280,000 bpd) (approx.)
- Transit time: 12 days (approx.)
- Pump stations: 19
- Regulator: National Energy Board (Canadian segment), and U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, and the Federal Energy Regulatory Commission (U.S. segment)

Platte Pipeline System

In operation since 1952, the Platte system transports crude oil from Casper, Wyo., to Wood River, Ill. While entirely located in the United States, the system is operated by KMC. The pipeline terminal in Casper contains 12 storage tanks with an overall volume of 224,000 m³ (1.4 million bbl).



Platte System Facts

- Length: 1,500 km (932 miles)
- Diameter: 20-inch
- Capacity: 27,000 m³/d (170,000 bpd) from Casper to Guernsey, and 26,000 m³/d (164,000 bpd) from Guernsey to Wood River (approx.)
- Transit time: 17 days (approx.)
- Pump stations: 19
- Regulator: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, and the Federal Energy Regulatory Commission

Cochin Pipeline System

In operation since 1979, the Cochin pipeline system transports propane from Fort Saskatchewan, Alberta, to Windsor, Ontario. In the United States, Cochin passes

through North Dakota, Minnesota, Iowa, Illinois, Indiana, Ohio and Michigan before crossing into Sarnia, Ontario.

Kinder Morgan recently completed a successful binding open season for the Cochin Reversal project which will allow the company to offer a new service to move light condensate from Kankakee County, Ill., to existing terminal facilities near Fort Saskatchewan, Alberta. The project involves modifying the western leg of the Cochin Pipeline to connect to Explorer Pipeline Company's pipeline in Kankakee County and to reverse the product flow to move the condensate northwest to Fort Saskatchewan.

Subject to the timely receipt of necessary regulatory approvals and necessary capital improvements, light condensate shipments could begin as early as July 1, 2014. The project is currently expected to provide approximately 95,000 barrels per day of light condensate capacity on Cochin, providing a new source of supply to meet the growing demand for this product.

Cochin System Facts

- Length: 2,900 km (1,800 miles)
- Diameter: 12-inch
- Capacity: 11,000 m³/d (70,000 bpd) (approx.)
- Pump stations: 31
- Propane Terminals: five
- Storage cavern: one in Windsor
- Regulator: National Energy Board in Canada and the Federal Energy Regulatory Commission in the United States.



TERMINAL BUSINESS IN CANADA

Headquartered in Calgary, Alberta, Kinder Morgan Canada Terminals LP (KMCT) is a subsidiary of Kinder Morgan. KMCT owns and operates two strategically located terminals in western Canada.

Vancouver Wharves

Strategically located in North Vancouver, British Columbia, Kinder Morgan Vancouver Wharves bulk commodity marine terminal provides cargo handling, storage, and vessel loading and unloading services for over 3.5 million tons of bulk cargos annually. Since Kinder Morgan acquired the facility in 2007, significant facility improvements and a focus on safety, quality and environmental protection have provided customers with a high level of confidence in entrusting their valuable cargo for shipment through this vital transportation link. Top industry producers in British Columbia's mining sector, Alberta's petroleum industry and western Canada's grain producers rely on Kinder Morgan to ensure consistent and reliable deliveries of their products to overseas customers.

Expansion of available terminal capacity at the facility is ongoing, and supported by the federal and provincial governments investing into strategic infrastructure initiatives, such as the Pacific Gateway North Shore Corridor Improvement projects. Vancouver Wharves is well positioned to deliver the terminal capacity, along with enhanced rail corridor capacity, to meet increasing demand for Canadian exports to overseas markets.

North Forty Terminal

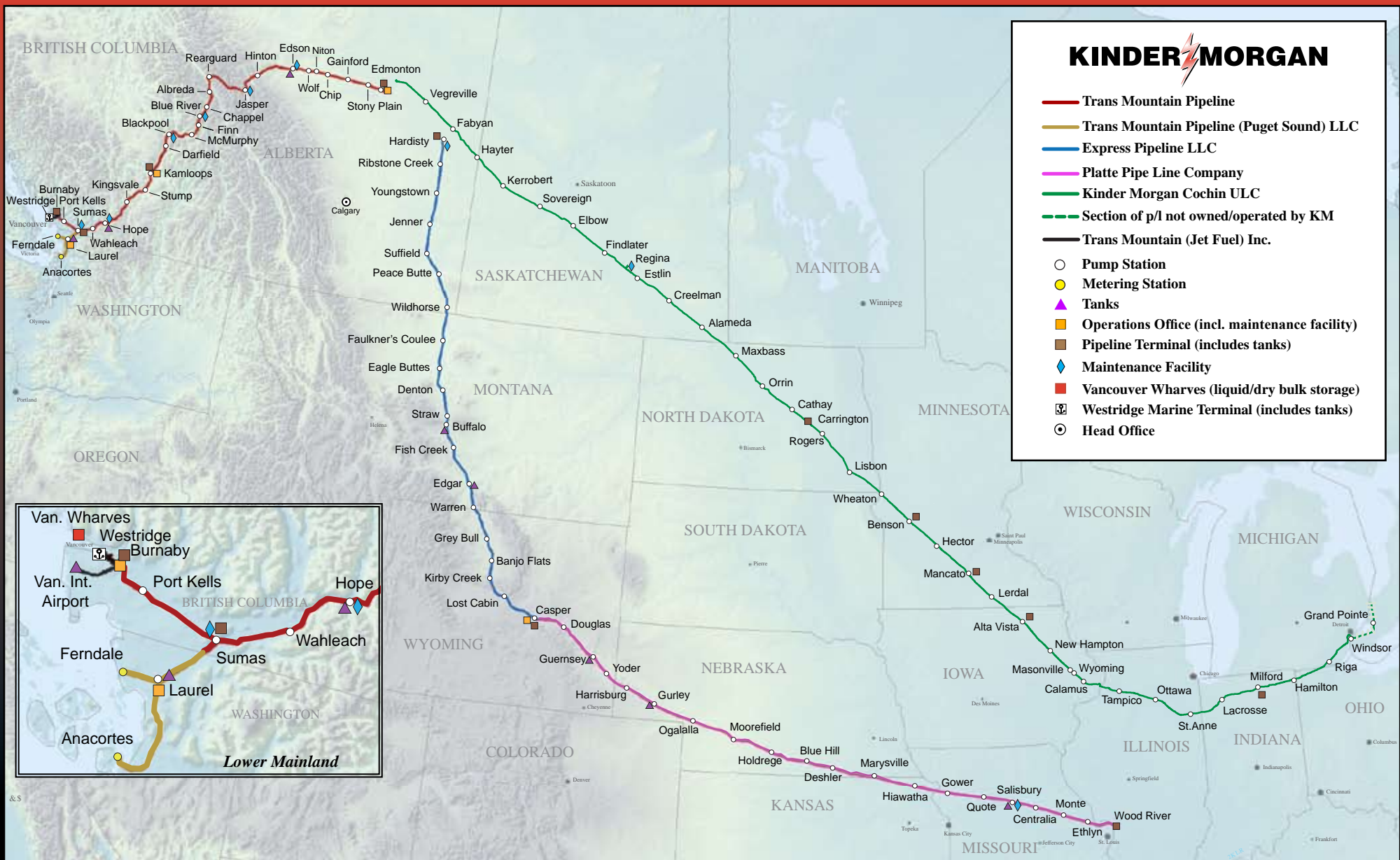
Located in Strathcona County, east of Edmonton, Alberta, the North Forty terminal provides merchant crude oil storage and blending services to western Canadian producers, refiners and marketers. The terminal consists of nine tanks totaling 350,000 m³ (2.2 million bbl) of dedicated customer storage that allows for maximum flexibility including time storage, blending and pipeline staging. Through the Edmonton terminal expansion that is now underway, KMCT will increase its merchant storage capability by 3.6 million barrels by the end of 2013 with further expansion available dependent upon customer demand.



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Data presented in this document are approximate in nature and are based on current public information regarding the respective pipeline systems and terminal facilities. Please note pipeline capacity is influenced by the density of the products shipped.



Call Before You Dig

Alberta One-Call: (800) 242-3447

British Columbia One Call: (800) 474-6886

Sask 1st Call: (866) 828-4888

Washington State One Call: 811

July 2012

Element	Accidents and Malfunctions
ESA Component	Pipelines and Facilities

Anticipated Key Issues:

- Effects of:
 - accidental spills and spill response
 - fire
 - damage to foreign utilities
 - release of drilling mud
 - transportation accidents

Proposed Indicators:

- Candidate indicators for each of the following elements are proposed to evaluate the potential effects of an accident or malfunction:
 - soil and soil productivity
 - water quality and quantity
 - air emissions
 - fish and fish habitat
 - wetlands
 - vegetation
 - wildlife and wildlife habitat
 - traditional land and resource use
 - human occupancy and resource use
 - human health — human health risk assessment
 - marine sediment and water quality
 - marine fish and fish habitat
 - marine mammals
 - marine birds
 - Aboriginal marine resource use
 - marine commercial and recreational use and tourism

Proposed Study Areas:

- **Local Study Area (LSA):** The area where the biophysical or socio-economic indicator is most likely to be directly and indirectly affected by project infrastructure and activities. The LSA is typically defined based on project-specific effects, such as the area in which the behavioural response, habitat alteration, or visual effect occurs, or where chemical effects are detectable.
- **Regional Study Area (RSA):** The area where the direct and indirect influence of other land uses and activities could overlap with project-specific effects and cause cumulative effects on the biophysical or socio-economic indicator. The RSA is typically defined with reference to ecologically or socially relevant units such as the air shed, soil landscape, stream network, ecological land unit, watershed, designated habitat area or population range, resource management area, Borden Block, census or municipal district.

Proposed Assessment Approach:

- Spill scenario evaluation, including spill prevention and response
- Qualitative analysis of other issues

Element	Acoustic Environment
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Increased noise during pipeline construction in urban areas, pump additions, pump station construction, tank installation, and expansion of the Westridge Marine Terminal
- Increased noise during operation at pump stations, tank farms and the Westridge Marine Terminal

Proposed Indicators:

- The following candidate indicator for acoustic environment is proposed:
 - change in ambient noise levels

Proposed Study Areas:

- **Local Study Area (LSA):** The area where Project-specific effects could be predicted or measured with a reasonable degree of accuracy and confidence, consisting of a 1,500-m radius beyond all Project noise sources.
- **Regional Study Area (RSA):** The potential effects on human receptors are not anticipated to extend beyond the Acoustic Environment LSA and, therefore, an RSA for Acoustic Environment has not been established.

Proposed Assessment Approach:

- Conduct an ambient sound survey that is representative of sound levels at noise receptors and existing facilities
- Use equipment sound level data and computer noise model data to determine the Project's relative impact
- Compare all noise levels to Alberta Energy Resource Conservation Board's *Directive 038 Noise Control* and the BC Oil and Gas Commission's *Noise Control Best Practices Guideline*
- Compliance with local noise bylaws
- Identify mitigation and, if applicable, monitoring measures

Element	Air Emissions
ESA Component	Pipelines and Facilities

Anticipated Key Issues:

- criteria air contaminants during construction
- cumulative increase in criteria air contaminants during operations

Proposed Indicators:

- The following candidate indicators for air emissions are proposed:
 - criteria air contaminants [sulphur dioxide (SO₂), oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter(PM)_{2.5}, PM₁₀] — emissions associated with equipment and vehicles as well as with the burning of non-merchantable timber
 - ozone — emissions associated with tanks
 - hydrogen sulphide (H₂S) and mercaptans — potential to cause nuisance odours
 - benzene — potential effects on human health
 - volatile organic compounds, toluene, ethylbenzene, xylene (BTEX) – emissions associated with tanks and spills

Proposed Study Areas:

- **Local Study Area (LSA):** The zone of influence where Project-specific effects could be predicted or measured with a reasonable degree of accuracy and confidence, consisting of a 10-km wide band centred on the proposed pipeline right-of-way (*i.e.*, typically 5 km on both sides of the proposed construction right-of-way) or a 5 km radius of a facility
- **Regional Study Area (RSA):** The area where the direct and indirect influence of other activities could overlap with Project-specific effects and cause cumulative effects on the air quality indicator. The RSA is defined as a band, approximately approximate 40-km wide, centred on the proposed pipeline right-of-way (*i.e.*, typically 20 km on both sides of the proposed construction right-of-way) or within a 20-km radius of a facility

Proposed Assessment Approach:

- Monitor air quality from existing sources to document air quality parameters such as ozone and CO
- Additional ambient monitoring where existing stations are not sited to measure parameters such as Volatile Organic Compounds (VOCs)
- Air-quality modelling to quantify changes to ground-level and receptor-level concentrations during construction, normal operations and upset scenarios for key indicators in the Air Quality RSA
- Identify mitigation, monitoring, and follow-up measures required to confirm project-specific air quality predictions
- Include standard mitigation references
- Compare future project conditions with local, provincial and federal ambient air quality objectives and guidelines and emissions limits
- Compliance with existing standards and guidelines

Element	Economy and Employment
ESA Component	Pipelines and Facilities

Anticipated Key Issues:

- Creation of local, regional, provincial and national employment and income
- Creation of local, regional, provincial and national procurement/business opportunities
- Increased local, regional, provincial government revenues
- Increased training and capacity-development opportunities
- Disruption of some local businesses/industries
- Inequitable access to Project employment/procurement opportunities

Proposed Indicators:

- The following candidate indicators for economy and employment are proposed:
 - employment and income
 - Gross Domestic Product (GDP)
 - government revenues
 - local economic benefits

Proposed Study Areas:

- **Regional Study Area (RSA):** The area where the direct and indirect influences of other activities could overlap with Project-related effects and cause cumulative effects on the employment and economy indicators. The RSA will be confirmed through public consultation and community baseline information, however it will likely consist of: regional districts, counties and municipalities crossed by the route; other communities that are a potential source for Project-related employment and procured goods and services; and Aboriginal communities whose reserves or traditional territory is crossed by the route

Proposed Assessment Approach:

- Use Statistics Canada's Open Provincial Input-Output Model to simulate the Project's economic impact in terms of direct and indirect output, GDP, labour income, direct and indirect person-years of employment, and federal/provincial/territorial tax
- Use existing information to assess property taxes
- Consult with local/regional land use planners, economic development representatives and Aboriginal communities to understand existing economic and employment conditions and to scope effects
- Consider Aboriginal input relating to information, issues and concerns identified by those Aboriginal communities potentially affected
- Identify standard mitigation and enhancement measures

Element	Fish and Fish Habitat
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Loss or alteration of fish habitat
- Cumulative loss of fish habitat
- Increased access for harvesters
- Fish species of concern

Proposed Indicators:

- The following candidate indicators for fish and fish habitat are proposed:
 - sport fish instream habitat (trout, salmon, char, whitefish, pike)(valuable sport, commercial and subsistence fishery)
 - riparian habitat (indicates watershed integrity and existing disturbance)
 - species of special concern (species of conservation concern)

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and cleanup of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, temporary construction workspace, temporary stockpile sites, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA):** The area likely to be affected by direct disturbance and sediment deposition during construction and operations, consisting of the area extending 100m above the crossing corridor to 300m downstream of the crossing corridor.
- **Regional Study Area (RSA):** The area where the direct and indirect influence of other land uses and activities could interact with Project-specific effects and may cause cumulative effects on the fish and fish habitat indicator; includes all drainages directly affected by the Project.

Proposed Assessment Approach:

- Field studies to document habitat quality and availability by species within the crossing corridor
- Consider Aboriginal Traditional Knowledge related to fish, including identification of potential fish species within each watercourse or waterbody investigated; descriptions of the seasonality of fish, aquatic habitat, water quality and quantity and suitability for navigation; accounts of changes to aquatic resources over time; and discussions of traditional fishing techniques as well as issues and concerns identified by potentially affected Aboriginal communities
- GIS analyses and models to quantify habitat available for key indicator species in each water-body, drainage crossed by the route
- Identify mitigation, compensation, monitoring and follow-up required to offset or confirm Project-specific in-stream and riparian habitat loss predictions
- Identify standard mitigation and monitoring references and aquatic-specific standard references
- Review of mitigation measures by federal and provincial agencies

Element	Greenhouse Gas (GHG) Emissions
ESA Component	Pipelines and Facilities

Anticipated Key Issues:

- GHG emissions during construction and operations

Proposed Indicators:

- The following candidate indicators for GHG emissions are proposed:
 - Methane (CH₄), carbon dioxide (CO₂), nitrous oxide (N₂O) – common GHG

Proposed Study Areas:

- **International:** GHGs are global in nature, therefore, the spatial boundary consists of the area extending beyond Canada

Proposed Assessment Approach:

- Quantify Project-related GHG emissions during construction and operations for key indicators
- Identify mitigation measures, if any
- Compare future with project conditions against provincial and national GHG inventory totals

Element	Heritage Resources
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Direct and indirect effects to archaeological, palaeontological and historical sites

Proposed Indicators:

- The following candidate indicators for heritage resources are proposed:
 - archaeological sites
 - palaeontological sites
 - historic sites

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and cleanup of the Project and associated physical works and activities including, where appropriate, the permanent right-of-way, pump stations, tanks, Westridge Marine Terminal, temporary construction workspace, temporary stockpile sites, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA):** The area likely to be affected by direct disturbance consisting of a 1-km wide band extending from the proposed pipeline right-of-way (*i.e.*, 500m on both sides of the proposed construction right-of-way) to incorporate effects to sites that may extend beyond the Project footprint
- **Regional Study Area (RSA):** The area where the direct and indirect influence of other land uses and activities could overlap with Project-specific effects and cause cumulative effects on the heritage resource indicator

Proposed Assessment Approach:

- Field studies to document the presence and extent of any archaeological, palaeontological or historic resources
- Consider Aboriginal Traditional Knowledge related to cultural resources, including identification and subsurface testing of lands having potential for historical or archaeological sites and discussion of their potential meanings, and assistance with site interpretations as well as issues and concerns identified by potentially affected Aboriginal communities
- Identify mitigation measures and monitoring
- Review and clearance of mitigation measures by provincial agencies

Element	Human Health — Health Risk Assessment (HHRA)
ESA Component	Pipelines and Facilities

Anticipated Key Issues:

- Effects:
 - of routine air emissions from pump stations, tanks and the Westridge Marine Terminal
 - of accidental spills and spill response through breathing in the chemicals; skin contact; and exposure via the food chain
 - on sub-populations considered to be particularly vulnerable to chemical exposures, such as infants, children, the elderly, individuals with pre-existing medical conditions, and those residing close to the Project facilities
 - on the safety of Aboriginal traditional food supplies, such as wild game, fish, berries and other types of country food

Proposed Indicators:

The following candidate indicators for human health are proposed:

- hazard quotients (HQs)
- margins-of-safety (MOS)

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and clean-up of the pipeline and associated physical works and activities (including, where appropriate, the permanent right-of-way, pump stations, tanks, Westridge Marine Terminal, temporary construction workspace, temporary stockpile sites, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA) and Regional Study Area (RSA):** The area where Project-specific effects could be predicted or measured with a reasonable degree of accuracy and confidence, and the area where the direct and indirect influences of other activities could overlap with Project-related effects and cause cumulative effects on human health indicators. This includes the LSA/RSA boundaries of water quantity and quality, air emissions, fish and fish habitat, traditional land and resource use, and socio-economics. Focus will be on nearest surface developments to the Project-related sources of chemical contaminants including:
 - nearby permanent residences and seasonal residences (including trappers' cabins)
 - schools/day-care centres, community halls
 - hospitals and assisted living centres
 - campgrounds, day-use areas and other recreational areas
 - nearby traditional hunting, fishing, trapping, berry-picking areas
 - nearby communities, hamlets, villages, residential sub-divisions
 - nearby urban centres

Proposed Assessment Approach:

- Follow conventional Human Health Risk Assessment paradigm consisting of Problem Formulation, Exposure Assessment, Toxicity Assessment and Risk Characterization
- Integrate with other disciplines providing data as inputs to the Human Health Risk Assessment, including water quantity and quality, air emissions, fish and fish habitat, traditional land and resource use, socio-economics
- Consult with local, regional, Aboriginal stakeholders and local, provincial and federal health authorities to verify concerns and scope work
- Identify mitigation measures

Element	Human Health and Community
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Effects:
 - on infectious diseases, including sexually transmitted infections
 - on alcohol and drug misuse
 - on injuries, especially traffic-related injury
 - on mental well-being
 - related to economic changes
 - related to exposure to contaminants or perception of exposure to contaminants
 - on diet and nutrition, especially within Aboriginal communities
 - on health in Aboriginal communities
 - among vulnerable subpopulations
 - on health care providers

Proposed Indicators:

The following candidate indicators for community health are proposed:

- rates of disease and injury
- mental well-being and stress
- dietary and nutrition outcomes
- health-related infrastructure and determinants
- strain on health care providers
- other relevant indicators identified through public and Aboriginal consultation

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and cleanup of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, pump stations, Westridge Marine Terminal, temporary construction workspace, temporary stockpile sites, temporary staging sites, camps, access routes, powerlines and more.
- **Regional Study Area (RSA):** The area where the direct and indirect influences of other land uses and activities could overlap with Project-related effects and cause cumulative effects on the social and biological environments that influence human health. The RSA will be confirmed through public consultation and baseline community information, however it will consider communities close enough to the route to potentially be: a source of labour; a source of procured goods or services; a location of community infrastructure/services influenced by the Project; or an accommodation or camp location for Project workers. This may include communities located approximately 50 km from the route. It will also include Aboriginal communities whose reserves or traditional territory is crossed by the route

Proposed Assessment Approach:

- Collect existing information about population, workforce, regional and local health status and vulnerable subpopulations
- Integrate results from other disciplines including: socio-cultural, economy, water, air, noise, Aboriginal Traditional Knowledge/Traditional Land Use, Human Health Risk Assessment
- Consult with local and regional stakeholders to verify existing concerns and to scope effects
- Qualitative assessment of effects based on project description information, stakeholder and Aboriginal input and professional judgement
- Identify mitigation, enhancement and if applicable, monitoring measures

Element	Human Occupancy and Resource Use
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Disturbance of:
 - agricultural land and livestock effects
 - recreational and tourism areas (including parks and protected areas)
 - industrial and commercial areas
 - hunting, trapping, fishing and guiding or commercial/ sportfishing areas
 - managed forest areas
 - residences/residential property
 - First Nation reserves
 - trails or navigable waters
- Changes in land and resource access
- Change in surface or groundwater quality for domestic, commercial, agricultural or recreational use
- Visual and aesthetic disturbance

Proposed Indicators:

- The following candidate indicators for human occupancy and resource use are proposed:
 - land/resource disturbance or displacement
 - changes in access
 - ground/surface water quality
 - visual/aesthetic change

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and clean-up of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, pump stations, tanks, Westridge Marine Terminal, temporary construction workspace, temporary stockpile sites, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA):** The area in which human occupancy and resource uses are most likely to be affected by the Project's construction and operation, consisting of a 1–2-km wide band extending from the pipeline right-of-way (*i.e.*, 500 m to 1 km on both sides of the proposed construction right-of-way).
- **Regional Study Area (RSA):** The area where the direct and indirect influence of other land uses and activities could overlap with Project-specific effects and cause cumulative effects on the human occupancy and resource use indicator. This includes the RSA boundaries of fish and fish habitat, wetlands, vegetation and wildlife.

Proposed Assessment Approach:

- Collect existing information about current and planned human occupancy and land and resource use
- Map/GIS analysis of proposed route to determine land/resource disturbances
- Analysis and integration of results from other biophysical disciplines assessing effects
- Consult with local/regional land use planners, economic development representatives, land/resource users and groups to verify existing conditions and to scope effects
- Consider Aboriginal input relating to information, issues and concerns identified by potentially affected Aboriginal communities
- Identify mitigation enhancement and monitoring measures

Element	Infrastructure and Services
ESA Component	Pipelines and Facilities

Anticipated Key Issues:

- Increased use of regional highways and roads; increased traffic and traffic incidents
- Increased use of other transportation infrastructure, such as railway, regional airports, ports
- Disturbance to pipelines, water/sewer lines
- Disruption of and/or improvements to power transmission/distribution lines
- Increased pressure on local and regional housing
- Increased pressure on health, social, educational, emergency, protective and recreation services
- Increased pressure on regional water/waste infrastructure
- Need for government expenditures related to new or enhanced infrastructure and services

Proposed Indicators:

- The following candidate indicators for infrastructure and services are proposed:
 - highway and secondary road use
 - rail, airport, port use
 - disturbance to sub-surface infrastructure
 - changes in power/transmission infrastructure
 - housing and commercial accommodation demand
 - capacity/utilization of health, social, educational, emergency, protective and recreation services
 - capacity/utilization of municipal water/waste infrastructure

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and cleanup of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, pump stations, tanks, temporary construction workspace, temporary stockpile sites, camps, access routes, powerlines and more.
- **Regional Study Area (RSA):** The area where the direct and indirect influences of other land uses and activities could overlap with Project-related effects and cause cumulative effects on the infrastructure and service indicators. The RSA will be confirmed through public consultation and baseline community information; however it will consider communities close enough to the route to potentially be: a source of labour; a source of procured goods or services; a location of community infrastructure/services influenced by the Project; an accommodation or camp location for Project workers; or a Project construction office location. This may include communities located approximately 50 km from the route. The RSA will also include Aboriginal communities whose reserves or traditional territory are crossed by the route.

Proposed Assessment Approach:

- Collect existing information about infrastructure and services capacity and utilization
- Consult with key local and regional infrastructure/service providers to verify existing service conditions and to scope effects
- Consider Aboriginal input relating to information, issues and concerns identified by potentially affected Aboriginal communities
- Conduct map/GIS analysis of proposed route to determine infrastructure disturbances
- Qualitative assessment of effects based on project description information, stakeholder and Aboriginal group input and professional judgement
- Identify mitigation, enhancement and if applicable, monitoring measures

Element	Physical and Meteorological Environment
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Terrain instability
- Alteration of topography

Proposed Indicators:

- The following candidate indicators for physical and meteorological environment are proposed:
 - steep slopes and sidehills
 - watercourse crossings
 - areas where blasting is required
 - areas of remnant trench crown or excessive trench subsidence
 - areas with potential for acid generating rock

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and clean-up of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, temporary construction workspace, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA):** The area likely to be affected by terrain instability during construction and operations, consisting of a 1-km wide band extending from the proposed pipeline right-of-way (*i.e.*, 500 m on both sides of the proposed construction right-of-way) to incorporate effects that may extend off the footprint such as blasting or water erosion on slopes.
- **Regional Study Area (RSA):** Potential effects are not anticipated to extend beyond the Physical and Meteorological Environment LSA , therefore an RSA for Physical and Meteorological Environment has not been established.

Proposed Assessment Approach:

- Use soil survey to determine shallow bedrock and surface instability
 - Review geophysical evaluations to determine feasibility of watercourse crossing techniques (example:horizontal directional drill)
 - Use terrain assessments to identify areas where blasting is required and areas of potential terrain instability
 - Develop site-specific and standard mitigation and reclamation measures to be implemented during construction and operation
 - Identify post-construction monitoring strategy for areas of concern, such as areas with potential for slumping or rockfalls
-

Element	Social and Cultural Well-Being
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Increased economic well-being tied to Project-related economic opportunities such as employment, procurement and training
- Differential access to Project opportunities
- Aboriginal participation in Project opportunities
- Effects on Aboriginal culture
- Social issues related to community-worker interactions and income use
- Pressure on community infrastructure, services and housing

Proposed Indicators:

- The following candidate indicators for social and cultural well-being are proposed:
 - employment and procurement opportunities
 - training opportunities
 - size of temporary/in-migrating workforce
 - incidence of crime and social issues
 - use of community infrastructure and services
 - other relevant biophysical and socio-economic indicators identified through public and Aboriginal consultation

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and cleanup of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, pump stations, tanks, Westridge Marine Terminal, temporary construction workspace, temporary stockpile sites, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA):** The area in which human occupancy and resource uses are most likely to be affected by the construction and operation of the Project, consisting of a 1–2-km wide band extending from the pipeline right-of-way (*i.e.*, 500 m to 1 km on both sides of the proposed construction right-of-way).
- **Regional Study Area (RSA):** The area where the direct and indirect influence of other land uses and activities could overlap with Project-specific effects and cause cumulative effects on the social and cultural well-being indicator. This includes the RSA boundaries of fish and fish habitat, wetlands, vegetation and wildlife.

Proposed Assessment Approach:

- Collect existing information about current and planned human occupancy and land and resource use
- Map/GIS analysis of proposed route to determine land/resource disturbances
- Analysis and integration of results from other biophysical disciplines assessing effects
- Consult with local/regional land use planners, economic development representatives, land/resource users and groups to understand existing conditions and to scope effects
- Consider Aboriginal input relating to information, issues and concerns identified by potentially affected Aboriginal communities
- Identify mitigation and if applicable, monitoring measures

Element	Soil and Soil Productivity
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Decreased soil productivity
- Compaction and rutting
- Wind and water erosion
- Soil contamination
- Bedrock and stone disposal issues

Proposed Indicators:

- The following candidate indicators for soil and soil productivity are proposed:
 - areas of topsoil and subsoil mixing
 - exposed, bare soils with the potential to cause changes in evaporation and transpiration rates
 - soils susceptible to degradation resulting from compaction and rutting as well as wind and/or water erosion
 - slopes prone to water erosion
 - location of hydrostatic test water release
 - areas of shallow bedrock or stony soils
 - identification of historic contaminated sites

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and cleanup of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, pump stations, temporary construction workspace, temporary stockpile sites, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA):** The area likely to be affected by direct disturbance consisting of a 1-km wide band extending from the proposed pipeline right-of-way and facilities (*i.e.*, 500 m on both sides of the proposed construction right-of-way) to incorporate effects that may extend off the footprint such as wind/water erosion.
- **Regional Study Area (RSA):** Potential effects are not anticipated to extend beyond the soils' LSA , therefore an RSA for soil and soil productivity has not been established.

Proposed Assessment Approach:

- Use soil surveys to determine areas susceptible to admixing, erosion, and compaction and rutting
- Identify mitigation and monitoring measures

Element	Vegetation
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Loss or alteration of native vegetation, old forest areas, rare ecological communities or rare plant populations
- Weed introduction and spread
- Forest pests
- Effects of airborne emissions
- Vegetation species of special concern (*Species at Risk Act* plant species not presently anticipated to be affected by Project)

Proposed Indicators:

- The following candidate indicators for vegetation are proposed:
 - percentage of vegetation within the Vegetation LSA and RSA that is disturbed versus undisturbed native vegetation (indicates existing and Project-related loss/alteration of vegetation)
 - old forest areas (indicates landscape quality)
 - species and ecological communities of special concern (indicates rarity of vegetation on the footprint; species of conservation concern)
 - presence of infestations of Noxious and Provincial weed species (indicates landscape quality)
 - presence or risk of forest pests (indicates sensitivity or viability of vegetation communities)

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and cleanup of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, pump stations, temporary construction workspace, temporary stockpile sites, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA):** The area in which vegetation resources are most likely to be affected by the construction and operation of the Project, consisting of a 300-m wide band extending from the pipeline right-of-way (*i.e.*, 150m on both sides of the proposed construction right-of-way) with a wider boundary where there are any old forest areas or potential/known rare ecological communities are intersected by the proposed Project. Additionally, the LSA will be expanded to a 2-km radius extending from the proposed pump stations.
- **Regional Study Area (RSA):** The area where the direct and indirect influence of other land uses and activities could interact with Project-specific effects and may cause cumulative effects on vegetation. Key considerations include the separation distance typically used to distinguish one rare plant population from another and the distance at which wind effects (as a result of clearing) may extend into an area of native vegetation. The RSA will be confirmed (pending verification of vegetation heights along the footprint) but will likely range from a 5 to 10-km band extending from the pipeline right-of-way (*i.e.*, 2.5 to 5 km on both sides of the proposed construction right-of-way).

Proposed Assessment Approach:

- Field studies to confirm vegetation community mapping, terrestrial ecosystem mapping (TEM) and ecological land classification (ELC)
- Field studies to document rare ecological communities, rare plant populations and weed presence/abundance
- Consider Aboriginal Traditional Knowledge (ATK) related to vegetation, including: identification of traditionally harvested plants; description of Aboriginal participant uses and preparation techniques, plant rarity and abundance; and accounts of changes to vegetation resources over time as well as issues and concerns identified by potentially affected Aboriginal communities
- Use of TEM mapping and existing mapping to identify old forest areas and potential rare ecological communities
- Use of consultation program field studies and outcomes to identify forest pest infestations
- Identify mitigation and monitoring measures

Element	Water and Water Quality
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Groundwater use requirements and the ability of the local groundwater resources to provide sustainable supply
- Release of drilling mud into surface water or aquifer formation
- Damage to structures due to compaction during dewatering (if required)
- Release of uncontrollable artesian flows
- Encountering methane beds
- Water quality or quantity changes to nearby groundwater which may result in adverse effects for other stakeholder or environmental receptors
- Surface water quality and quantity

Proposed Indicators:

- The following candidate indicators for water quality and quantity are proposed:
 - geological/hydrogeological conditions favourable for water supply potential
 - high-yielding wells to show water supply potential
 - high density of existing wells (indicates potential stakeholder vulnerability)
 - known water quality issues (indicates existing pressures and potential vulnerability)
 - known or potential artesian flow areas
 - areas with methane gas potential
 - watercourse crossings and potential source waterbodies for hydrostatic testing

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and cleanup of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, pump stations, tanks, temporary construction workspace, temporary stockpile sites, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA):** The area likely to be affected by direct disturbance during construction and operations, including the area extending 300-m downstream of the crossing corridor as well as aquifer areas in hydraulic connection with the footprint.
- **Regional Study Area (RSA):** The area where the direct and indirect influence of other land uses and activities could overlap with Project-specific effects and cause cumulative effects on the surface water quality and quantity indicator, including all drainages directly affected by the Project.

Proposed Assessment Approach:

- Review existing geological, hydrogeological and other information to determine potential hydrogeological conditions along the pipeline right-of-way and proposed facilities; GIS mapping and assessment strategies will be applied
- Develop site-specific hydrogeological investigation activities that may include field verified surveys, hydraulic response testing, monitoring requirements and water quality parameter surveys
- Field studies to document surface water quality at crossings and wetlands along the route
- Consider Aboriginal Traditional Knowledge (ATK) related to water, including descriptions of the water quality and quantity and suitability for navigation, issues/concerns identified by potentially affected Aboriginal communities
- Identify mitigation and, if applicable, monitoring measures and develop water management plan

Element	Wetlands
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Net loss of wetlands and wetland habitat
- Loss or alteration of wetland:
 - hydrologic function
 - loss or alteration of wetland water quality function
 - loss or alteration of wetland habitat function

Proposed Indicators:

- The following candidate indicators for wetlands are proposed:
 - baseline wetland habitat health and function (no-net loss requirement of the Federal Policy on Wetland Conservation)
 - percentage of disturbed and undisturbed wetlands on the footprint (indicates existing disturbance)
 - red- or blue-listed wetlands and rare ecological wetland communities (indicates high value wetlands on the footprint)

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and cleanup of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, pump stations, tanks, temporary construction workspace, temporary stockpile sites, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA):** The area in which wetland resources are most likely to be affected by the construction and operation of the Project. The Wetland Local Study Area is defined as a 300-m wide band extending from the pipeline right-of-way (*i.e.*, 150 m on both sides of the proposed construction right-of-way) with a wider boundary where there are any large wetlands or waterbodies or where potential/known rare ecological wetland communities exist. The LSA will also be expanded to a 2-km radius extending from the proposed pump stations, where air contaminants resulting from diesel engine operation may interact with wetland vegetation.
- **Regional Study Area (RSA):** The area where the direct and indirect influence of other land uses and activities could interact with Project-specific effects and may cause cumulative effects on wetlands, waterbodies and drainages directly affected by Fish and Fish Habitat Regional Study Area where regional hydrology is the overall driver for wetland occurrence

Assessment Approach:

- Field studies to document wetland type and classifications encountered along the Footprint
- Incorporate results of Terrestrial Ecosystem Mapping (TEM) into site selection for field studies focused on representative wetland classification confirmation
- Consider Aboriginal Traditional Knowledge (ATK) related to vegetation, including: identification of traditionally harvested plants; description of Aboriginal participant uses and preparation techniques, plant rarity and abundance; and accounts of changes to vegetation resources over time, as well as issues and concerns identified by potentially affected Aboriginal communities
- Review of mitigation measures by federal and provincial agencies
- Identify mitigation and monitoring measures

Element	Wildlife and Wildlife Habitat
ESA Component	Pipelines and Facilities

Anticipated Key Issues:

- Habitat availability and effectiveness including quantity and quality
- Wildlife movement: barriers/filters during construction and operation
- Wildlife mortality risk: disturbance of occupied breeding, roosting, overwintering habitat, vehicle collisions
- Wildlife species of special concern

Proposed Indicators:

- The following candidate indicators for wildlife and wildlife habitat are proposed:
 - *9 mammals*: American Badger, American Marten, Canada Lynx, Fisher, Grizzly Bear (northwestern population), Moose, Mountain Beaver, Mountain Goat, Woodland Caribou (southern mountain population)
 - *13 birds*: Cape May Warbler, Great Blue Heron, grassland birds, Horned Grebe, Northern Goshawk, Olive-sided Flycatcher, Rusty Blackbird, Sharp-tailed Grouse, Short-eared Owl, Spotted Owl, Trumpeter Swan, Western Screech-Owl, Williamson’s Sapsucker
 - *3 reptiles*: Painted Turtle, Rubber Boa, Western Rattlesnake
 - *3 amphibians*: Western Toad, lentic (pond-dwelling) amphibians, lotic (stream-dwelling) amphibians

Proposed Study Areas:

- **Footprint**: the area directly disturbed by surveying, construction and cleanup of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, temporary construction workspace, pump stations, tanks, Westridge Marine Terminal, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA)**: The area in which wildlife resources are most likely to be affected by the construction and operation of the Project. The LSA will vary for each wildlife indicator, up to a 2-km wide band extending from the pipeline right-of-way (*i.e.*, 1 km on both sides of the proposed construction right-of-way). Key considerations for LSA delineation will include known species range and information related to species sensitivity such as zone of influence or response to disturbance.
- **Regional Study Area (RSA)**: The area where the direct and indirect influence of other land uses and activities could interact with Project-specific effects and may cause cumulative effects on wildlife and wildlife habitat. The Wildlife RSA will be confirmed through public consultation.

Proposed Assessment Approach:

- Field studies to confirm habitat suitability for wildlife indicators [Terrestrial Ecosystem Mapping (TEM)] and to document wildlife presence, habitat suitability, sensitive habitat features, movement corridors
- Incorporate Aboriginal Traditional Knowledge (ATK) related to wildlife, including: identification of wildlife, wildlife signs, and important habitats; accounts of changes to wildlife resources over time; and discussions of traditional hunting and trapping techniques, as well as issues/concerns identified by potentially affected Aboriginal communities
- Habitat modelling in Wildlife Local Study Area based on TEM
- Quantify change in habitat availability (ha) and evaluate habitat effectiveness (sensory disturbance, edge effects, avoidance/zone of influence)
- Quantify change in linear feature density for species with relevant thresholds to assess mortality risk
- Address combined effects on an indicator-specific basis
- Identify mitigation and if applicable, monitoring measures

Element	Ecological Risk Assessment (ERA)
ESA Component	Pipelines and Facilities – Pipeline Spills

Anticipated Key Issues:

- Effects:
 - effects on surface water and surface water quality
 - effects to fish, fish eggs and fish habitat
 - effects to benthic invertebrates and aquatic plants
 - effects to shoreline soils
 - effects to shoreline vegetation, and invertebrates
 - effects to semi-aquatic and terrestrial birds and mammals

Proposed Indicators:

The following candidate indicators for ecological risk are proposed:

- acute exposures to contaminants of potential concern (COPC) in river water
- acute exposures to floating and stranded oil
- acute exposures to COPC in sediment
- chronic exposures to river water and sediment pore water
- chronic exposures to sediment
- chronic exposures to shoreline soils, invertebrates and vegetation

Proposed Study Areas:

- Final boundaries to confirmed based on modelled scenarios

Proposed Assessment Approach:

- Follow conventional ecological risk assessment pathway consisting of Problem Formulation, Hazard Assessment, Toxicity Assessment and Risk Characterization
- Consider Aboriginal traditional knowledge related to information, issues and concerns identified by potentially affected Aboriginal communities
- Spill scenario evaluation including spill prevention and response

Element	Cumulative Effects
ESA Component	Pipeline and Facilities, Marine Transportation

What are Cumulative Effects?

- Cumulative effects are the environmental and socio-economic effects likely to result from a project in combination with the environmental effects of other past, present and future projects or activities
- The main sources of cumulative ecological effects are: direct habitat loss; indirect habitat loss adjacent to facilities, clearings, and corridors; and increased mortality from altered interspecies relationships (such as predation and invasive species) and human activities (such as hunting, roadkill)
- The main sources of cumulative social effects are short- or long-term changes in population size, particularly from in-migration; associated demand for goods and services; and indirect effects on community quality of life

Proposed Indicators:

- Candidate indicators for each of the following elements are proposed to help quantify the project’s contribution to cumulative effects:
 - soil and soil productivity
 - water quality and quantity
 - air emissions
 - acoustic environment
 - fish and fish habitat
 - wetlands
 - vegetation
 - wildlife and wildlife habitat
 - species at risk
 - heritage resources
 - traditional land use and resource
 - human occupancy and resource use
 - social and cultural well-being
 - infrastructure and services
 - employment and economy
 - human health and community health
 - marine sediment and water quality
 - marine fish and fish habitat
 - marine mammals
 - marine birds
 - Aboriginal marine resource use
 - marine commercial and recreational use

Proposed Study Areas:

- **Regional Study Area (RSA)** — The area where the direct and indirect influence of other land uses and activities could overlap with project-specific effects and cause cumulative effects on the biophysical or socio-economic indicator. This is typically defined with reference to ecologically or socially relevant units, such as air shed, soil landscape, stream network, ecological land unit, watershed, designated habitat area or population range, resource management area, Borden Block, census or municipal district.

Proposed Assessment Approach:

- Identify the Project’s potential residual effects
 - Determine the spatial and temporal boundaries for each environmental and socio-economic element where residual effects have been identified for the Project
 - Identify existing activities and known future developments with residual effects that may act in combination with residual effects of the Project
 - Identify potential cumulative effects
 - Develop technically and economically feasible mitigative measures
 - Determine the significance of the cumulative effects
-

Element	Traditional Land and Resource Use
ESA Component	Pipeline and Facilities

Anticipated Key Issues:

- Potential effects to traditional livelihoods and culture from combined Project-specific effects on vegetation, wetlands, wildlife and wildlife habitat, fish and fish habitat, and water quality/quantity
- Potential effects to traditional livelihoods and culture from combined Project-specific effects on human occupancy and resource use, heritage resources, social and cultural well-being, human health, infrastructure and services, and employment and economy

Proposed Indicators:

- The following candidate indicators for traditional land and resource use are proposed:
 - interference with navigation on watercourses
 - loss, alteration or disruption of use of trails and travelways
 - loss, alteration or disruption of use of habitation sites
 - loss or alteration of vegetation
 - disruption of harvesting, hunting, trapping and/or fishing activities
 - increased hunting, trapping and/or fishing by the temporary construction workforce
 - increased hunting, trapping and/or fishing by non-local hunters due to improved access
 - loss or damage to trapline equipment
 - loss, alteration or disruption of gathering places
 - loss, alteration or disruption of sacred areas

Proposed Study Areas:

- **Footprint:** The area directly disturbed by surveying, construction and cleanup of the pipeline and associated physical works and activities including, where appropriate, the permanent right-of-way, temporary construction workspace, temporary staging sites, camps, access routes, powerlines and more.
- **Local Study Area (LSA):** The area where there is a reasonable potential for localized Project-related effects to affect existing traditional land and resource uses, such as trapping, hunting, fishing and gathering areas.
- **Regional Study Area (RSA):** The area where the direct and indirect influences of other land uses and activities could overlap with Project-related effects and cause cumulative effects on the traditional land and resource use indicator. This includes the RSA boundaries of water quality and quantity, fish and fish habitat, wetlands, vegetation, wildlife and wildlife habitat, heritage resources, human occupancy and resource use, social and cultural well-being, human health, infrastructure and services, and employment and economy.

Proposed Assessment Approach:

- Background research to review available harvest data, Aboriginal Traditional Knowledge (ATK) and traditional land use (TLU) reports
- Determine spatial relationships of source data to the Project using GIS
- Map reviews, interviews and ground reconnaissance with potentially-affected Aboriginal communities, where warranted
- Consider ATK for the Project and use Project-specific reports and field studies
- Identify mitigation measures
- Identify TLU sites and potential Project-related effects;
- Discussions of potential mitigation strategies are conducted directly with participants during field study
- Confidential and proprietary information will be reviewed during follow-up meetings with communities that shared their information to confirm accuracy of the information to be incorporated into Project reports and to provide approval for the inclusion of any confidential and proprietary information within the Project report

Element: Marine Ecological Risk Assessment

ESA Component: Pipeline and Facilities – Westridge Marine Terminal (Operations)

Anticipated Key Issues:

- effects to sea water and sea water quality
- effects to fish and fish habitat
- effects to benthic invertebrates
- effects to marine mammals
- effects to shorebirds and sea birds

Proposed Indicators:

- The following candidate indicators for ecological risk are proposed:
 - sediment community receptors – benthic invertebrates and fish
 - aquatic community receptors - marine plants, invertebrates and fish
 - selected marine mammals
 - selected shorebirds and seabirds

Proposed Study Areas:

- final boundaries to confirmed based on emissions and effluent data

Proposed Assessment Approach:

- estimate contaminants of potential concern emission and liquid discharges over life of the facility
- follow conventional ecological risk assessment pathway consisting of Problem Formulation, Hazard Assessment, Toxicity Assessment and Risk Characterization
- consider Aboriginal traditional knowledge related to information, issues and concerns identified by potentially affected Aboriginal communities

Element: Marine Air and Greenhouse Gas (GHG) Emissions

ESA Component: Marine Transportation

Anticipated Key Issues:

- criteria air contaminants and GHG emissions from increased vessel traffic
- cumulative increase in criteria air contaminants

Proposed Indicators:

- The following candidate indicators for marine air and GHG emissions are proposed:
 - criteria air contaminants (sulphur dioxide [SO₂], oxides of nitrogen [NO_x], carbon monoxide [CO], particulate matter[PM]_{2.5}, PM₁₀) - emissions associated with vessels
 - volatile organic compounds, toluene, xylene (BTEX) – emissions associated with vessels and spills
 - methane (CH₄), carbon dioxide (CO₂), nitrous oxide (N₂O) – common GHG

Proposed Study Areas:

- **Regional Study Area:** the area where the direct and indirect influence of other discharges and activities could overlap with proposed Trans Mountain Expansion Project-specific effects and cause cumulative effects on the marine air and GHG indicator. This includes the shipping lanes and adjacent waters between the Westridge Marine Terminal in Burnaby and the Strait of Georgia

Proposed Assessment Approach:

- air quality modelling to quantify changes to ground-level and receptor-level concentrations during construction, normal operations and upset scenarios for key indicators in the regional study area
- compare future with project conditions with local, provincial and federal ambient air quality objectives and guidelines and emission limits
- compliance with existing standards and guidelines

Element: Marine Birds

ESA Component: Marine Transportation

Anticipated Key Issues:

- alteration of movement resulting from increased marine vessel traffic
- increase in mortality risk from vessel strikes and lighting
- change in habitat availability resulting from increased vessel traffic

Proposed Indicators:

- The following candidate indicators for marine birds are proposed:
 - marbled murrelet (breeding resident and alcid)
 - great blue heron (breeding resident, wading bird and species of conservation concern)
 - surf scoter (fall to spring migrant, seabird, species of conservation concern)
 - pelagic cormorant (breeding resident and species of conservation concern)
 - California gull (fall migrant and species of conservation concern)
 - harlequin duck (fall to spring migrant and seabird)
 - wood duck (summer visitor and waterfowl)
 - bald eagle (breeding resident and raptor)
 - spotted sandpiper (spring and fall migrant and shore bird)

Proposed Study Areas:

- **Regional Study Area:** the area where the direct and indirect influence of other discharges and activities could overlap with proposed Trans Mountain Expansion Project-specific effects and cause cumulative effects on marine birds. This includes the shipping lanes and adjacent waters between the Westridge Marine Terminal in Burnaby and the Brotchie Ledge pilot boarding station near Victoria.

Proposed Assessment Approach:

- desktop review to assess abundance and distribution of marine birds in regional study area
- qualitative assessment of possible marine bird population effects due to alteration of behaviour resulting from project-related increase in marine vessel traffic
- qualitative assessment of risk of physical injury or mortality to marine birds resulting from project-related increase in marine vessel traffic
- quantitative assessment of habitat lost or altered due to vessel passage
- consider Aboriginal Traditional Knowledge related to environmentally and culturally-important habitats; accounts of changes to marine bird resources over time and issues and concerns identified by potentially-affected Aboriginal communities
- identify Project-specific mitigation, monitoring and follow-up measures

Element: Marine Noise

ESA Component: Marine Transportation

Anticipated Key Issues:

- increased noise associated with increased vessel traffic

Proposed Indicators:

- The following candidate indicator for marine noise is proposed:
 - change in ambient noise levels

Proposed Study Areas:

- **Regional Study Area:** the area where the direct and indirect influence of other discharges and activities could overlap with proposed Trans Mountain Expansion Project-specific effects and cause cumulative effects on the marine air and GHG indicator. This includes the shipping lanes and adjacent waters between the Westridge Marine Terminal in Burnaby and the Strait of Georgia

Proposed Assessment Approach:

- use measured sound level data and computer noise model data to determine the relative impact of the Project
- compare all noise levels to BC Oil and Gas Commission's *Noise Control Best Practices Guideline*

Element: Marine Noise

ESA Component: Marine Transportation

Anticipated Key Issues:

- increased noise associated with increased vessel traffic

Proposed Indicators:

- The following candidate indicator for marine noise is proposed:
 - change in ambient noise levels

Proposed Study Areas:

- **Regional Study Area:** the area where the direct and indirect influence of existing marine transportation related noise could overlap with proposed Trans Mountain Expansion Project-specific effects and cause cumulative effects on the marine noise indicator. This includes the shipping lanes and adjacent waters between the Westridge Marine Terminal in Burnaby and the Strait of Georgia

Proposed Assessment Approach:

- use measured sound level data and computer noise model data to determine the relative influence of Project related noise from vessel traffic.
- compare noise levels to applicable regulations including the BC Oil and Gas Commission's *Noise Control Best Practices Guideline*

Element: Marine Species at Risk

ESA Component: Marine Transportation

Anticipated Key Issues:

- change in habitat availability
- risk of physical injury or mortality
- behavioural disturbance resulting from increased marine vessel traffic

Proposed Indicators:

- The following candidate indicators for marine species at risk are proposed:
 - eulachon (species of conservation concern)
 - quillback rockfish (species of conservation concern)
 - marbled murrelet (species of conservation concern)
 - great blue heron (species of conservation concern)
 - surf scoter (species of conservation concern)
 - pelagic cormorant (species of conservation concern)
 - California gull (species of conservation concern)
 - Steller sea lion (species of conservation concern)
 - harbour porpoise (species of conservation concern)
 - southern resident killer whale (species of conservation concern)
 - humpback whale (species of conservation concern)

Proposed Study Areas:

Regional Study Area: the area where the direct and indirect influence of other discharges and activities could overlap with proposed Trans Mountain Expansion Project-specific effects and cause cumulative effects on marine species at risk. This includes the shipping lanes and adjacent waters between the Westridge Marine Terminal in Burnaby and the Brotchie Ledge pilot boarding station near Victoria.

Proposed Assessment Approach:

- desktop review to characterize marine species at risk habitat in regional study area
- consider Aboriginal Traditional Knowledge related to important habitat and issues and concerns identified by potentially affected Aboriginal communities
- GIS analyses to quantify marine species at risk habitat affected by vessel traffic
- identify marine-specific mitigation measures

Element: Marine Ecological Risk Assessment

ESA Component: Marine Transportation (Marine Spills)

Anticipated Key Issues:

- acute and chronic effects to aquatic communities (phytoplankton, zooplankton, macro-invertebrates and fish)
- acute and chronic effects to sub-tidal sediment communities
- acute and chronic effects to intertidal communities including algae, zooplankton, macro-invertebrates, fish, shore birds, sea birds and, mammals, including cetaceans

Proposed Indicators:

- The following candidate indicators for ecological risk are proposed:
 - aquatic community receptors (marine plants, invertebrates and fish)
 - intertidal communities
 - marine and semi-aquatic mammal populations
 - piscivorous birds, shorebirds and seabird populations

Proposed Study Areas:

- final boundaries to confirmed based on modelled scenarios

Proposed Assessment Approach:

- follow conventional ecological risk assessment pathway consisting of Problem Formulation, Hazard Assessment, Toxicity Assessment and Risk Characterization
- consider Aboriginal traditional knowledge related to information, issues and concerns identified by potentially affected Aboriginal communities
- spill scenario evaluation including spill prevention and response



Diluted Bitumen in Pipelines

What is bitumen? Bitumen is a thick, molasses-type product that is found in regions around the world, but more locally in the oil sands regions of northern Alberta, Canada. Sometimes, it's found near the surface mixed in with sand and other debris, while in other instances, it can be found deep in the ground under several layers of rock.

How is bitumen extracted and what is diluted bitumen? There are two ways to extract bitumen. The first involves using large mining trucks and shovels to scrape the surface of the ground and collect the oil found in the sand. This is called surface mining. Once collected, the mined material is processed to remove the sand and other debris.

The second method involves injecting steam deep into the ground. The steam heats up the bitumen and forms a mixture of bitumen and water, which then flows to the surface in the same way conventional oil does. This is called in-situ production. Once on the surface, the water is separated from the bitumen.

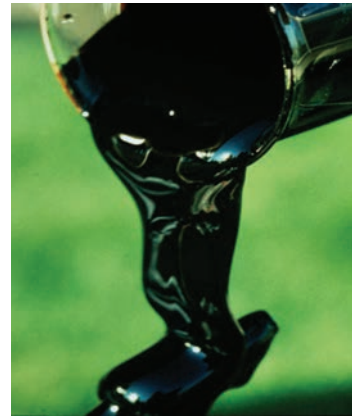


Figure 1: Image courtesy of Syncrude Canada Ltd.



Figure 2: Image courtesy of Syncrude Canada Ltd.

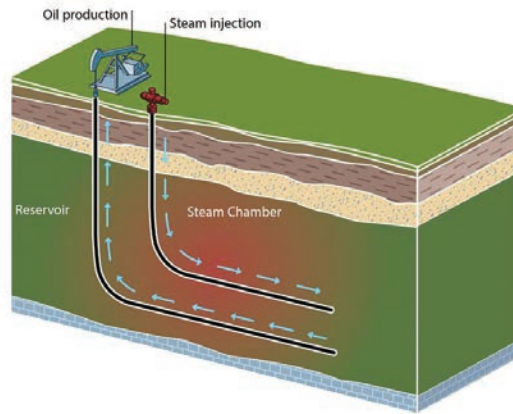
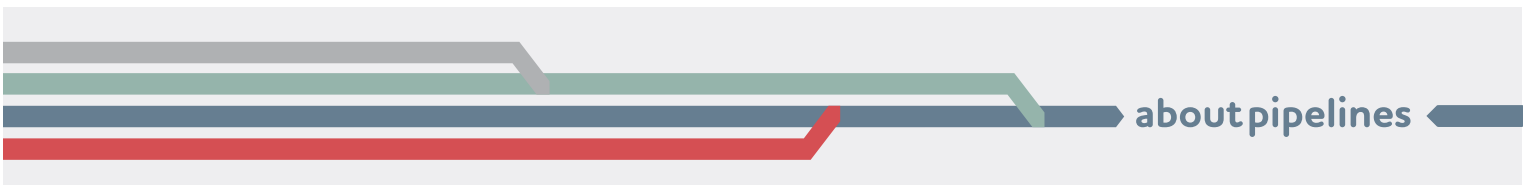


Figure 3: Image courtesy of the Centre for Energy

"For pipelines carrying diluted bitumen, the risk of corrosion is not any different than pipelines carrying conventional crude."

Ziad Saad
Vice President,
Safety & Sustainability
Canadian Energy Pipeline
Association

Following extraction, the bitumen can be processed locally into a suite of refined petroleum products including synthetic crude, which is similar to conventional light crude. Bitumen is too thick to flow in a pipeline at ground temperature, so it needs to be thinned with a very light petroleum product called diluent.



Diluent is typically either light crude, such as 'synthetic crude', or 'condensate', which is extracted from the ground along with natural gas. Synthetic crude and condensate on their own have been produced and transported by pipeline for decades.

Does diluted bitumen increase the risk of pipeline corrosion? No. Pipelines transporting diluted bitumen are not at any greater risk of corrosion than pipelines carrying other types of petroleum products, such as conventional crude. The only significant difference between diluted bitumen and conventional crude is that diluted bitumen carries diluent.¹ Neither the properties of diluent or bitumen carry any characteristics that would cause more corrosion.

There are two components in the diluted bitumen that have raised concern, namely acid and sulphur. These components exist in varying degrees in all crude types. If crude is heated to a temperature higher than 200 degrees Celsius, corrosion to pipelines transporting diluted bitumen may occur.² However, these pipelines don't operate anywhere near that temperature; they typically operate at much cooler temperatures. For more information on corrosion, please visit www.aboutpipelines.com.

How safe is it to transport diluted bitumen? Transporting diluted bitumen is as safe as transporting other types of crude oil. This is because there is virtually no difference between the two products. Our industry has been safely transporting diluted bitumen in pipelines for more than 30 years and conventional crude for more than 60 years.

What happens if there is a leak and diluted bitumen is spilled? Is it harder to clean up than conventional crude? No. Pipeline operators have developed and implemented emergency response plans and procedures tailored to the characteristics of the pipeline they operate, including the type of product it carries. However, in the event that diluted bitumen were to be spilled, the procedures for cleaning up the spill would be similar to cleaning up a conventional crude spill. Environmental and site-specific conditions will also determine the type of procedures and equipment used during the emergency. For more information on pipeline emergency response procedures, please visit www.aboutpipelines.com.

1 Alberta Innovates: Comparison of the Corrosivity of Dilbit and Conventional Crude, pg.iv

2 Alberta Innovates: Comparison of the Corrosivity of Dilbit and Conventional Crude, pg.iii

For more information on diluted bitumen in pipelines, please visit:

Canadian Energy Pipeline Association
www.aboutpipelines.com

Alberta Innovates
www.albertainnovates.ca

American Petroleum Institute:
Facts About Pipeline Safety and Canadian Crude
www.api.com

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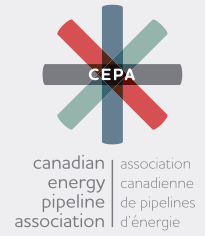
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Corrosion

What is corrosion? Corrosion is a naturally occurring phenomenon which happens when metal reacts with the environment, such as water or soil. If you think of a chain that's been left out in the rain, over time that chain will develop rust and start to corrode. Pipelines are no different. Over time and without protection, pipelines can corrode as well.

So how do we protect our pipelines? There are two main ways to protect our pipelines. The first involves applying a coating to the pipeline when it's being manufactured. The most common type of coating is an epoxy coating, which is a paint-like substance that seals the steel surface of the pipeline. The epoxy interferes with corrosion mechanisms affecting the pipeline. In the field, other specific types of coatings are also used to prevent corrosion. Often these coatings are case-specific, depending on the situation. For example, a special type of cement coating is used in river crossings to weigh the pipe down and also protect against mechanical damage during installation.

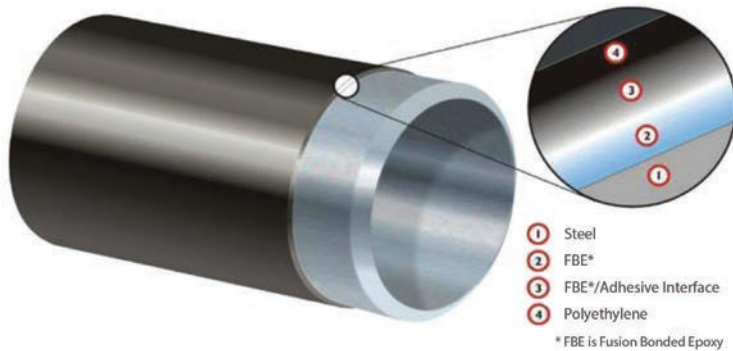
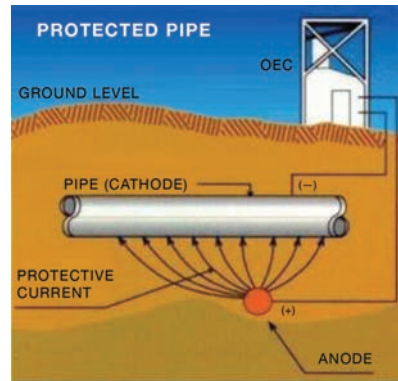


Figure 2: Images courtesy of Kinder Morgan Canada and Shaw Pipe



Another way to protect the pipeline is through the use of cathodic protection. Cathodic protection is a technique used to control the corrosion of a metal surface by using another piece of metal to draw corrosion away from the pipe through the use of a carefully calibrated electrical current.

A combination of metal, water and air is necessary for corrosion to occur. While external corrosion is more prevalent than internal corrosion on transmission pipelines, failures are extremely rare. This is due, in part, to rigorous maintenance practices. Internal corrosion is also rare because the product in the pipeline is always flowing and frequently cleaned with scrapers.

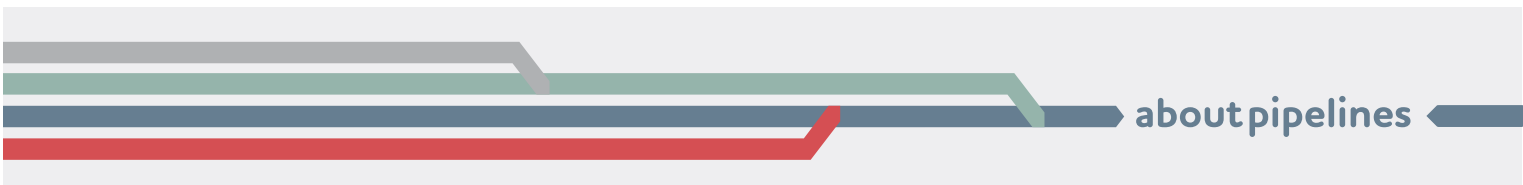
Scrapers can look like large wire brushes that rotate as they go through the pipeline. This helps to clean the pipe and prevent any build-up of material. In some cases, a corrosion inhibitor, a chemical substance used to prevent corrosion from taking place, is used.



Figure 1: Image courtesy of Kinder Morgan Canada

"Corrosion is significantly mitigated when pipelines are properly monitored and protected."

Ziad Saad
Vice President,
Safety & Sustainability
Canadian Energy Pipeline
Association



What are some of the tools used to monitor corrosion? Even though failures due to pipeline corrosion are very rare, our pipeline operators continuously monitor their pipelines with different technology and tools. Some of these tools include in-line inspection tools, such as pigs, and visual inspections. Pigs, which stands for pipeline inspection gauge, are large metal devices that look like a plunger. They're inserted into the pipeline and pushed along by the force of the product flowing through the pipeline. Smart pigs measure several different things from inside the pipeline, such as restrictions and deformations in the pipe, as well as metal loss. If metal loss is detected, then the pipeline operator will take action, which in some cases may include replacing a section of the pipe with brand new pipe.

Although it's important to have the tools in place to identify potential issues on the pipeline, visual inspections are also important. Pipeline field personnel walk the right-of-way looking for clues, such as pooling of oil or changes in the environment. Planes and helicopters can also give the pipeline operators a birds-eye view of what's happening on the ground. If any of these clues are discovered, the pipeline operators will act quickly to investigate the situation and repair the affected pipe.



Figure 3: Image courtesy of BJ Pipeline Inspection



Figure 4: Image courtesy of BJ Pipeline Inspection

With the proper protection and monitoring, pipeline operators, in the vast majority of cases, are able to identify and mitigate any potential issues long before a leak or a failure occurs.

For more information on corrosion, please visit:

Canadian Energy Pipeline Association
www.aboutpipelines.com

Alberta Innovates
www.albertainnovates.ca

American Petroleum Institute:
Facts About Pipeline Safety and Canadian Crude
www.api.com

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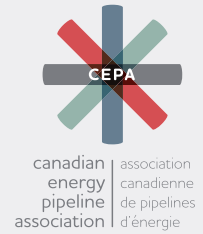
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Emergency Response

Pipelines are the safest and most reliable means of transporting large volumes of crude oil, natural gas and liquid petroleum products. Pipeline incidents are rare considering our member companies operate 110,000 kilometres of pipelines. In 2011, the transmission pipeline industry in Canada moved 1.2 billion barrels of liquid petroleum products and 5.3 trillion cubic feet of natural gas. Our most recent statistics show that 99.99% of liquid products are transported safely.

Despite being the safest way to transport oil and gas products over long distances, no pipeline is completely risk-free. Unfortunately incidents, from time-to-time, do occur and when this happens, pipeline operators are trained and required to manage these emergency situations. With an effective emergency response plan (ERP) in place, the chances of long-term impacts on the community and the environment are greatly reduced.

What is a pipeline emergency? A pipeline emergency is an unforeseen incident that could endanger the health, safety or welfare of the public and the environment.

What is an emergency response plan? An ERP outlines the necessary steps and decisions required to manage an emergency situation. It contains specific steps that the pipeline operator must take in order to control the incident.



Figure 2: Workers use vacuums to clean up oil

Pipeline operators are expected to have ERPs in place by the regulator, whose role is to review and audit these plans. An ERP contains many types of information critical in managing an emergency situation. It includes manuals on how to proceed with the deployment of emergency personnel, evacuation plans, location of access points, communications procedures and protocols. In the case of large incidents, many pipeline operators use the Incident Command System (ICS), which is an organizational structure used for the command, control and coordination of an emergency response. ICS was originally developed in response to a series of wildfires in southern California in the 1970s.



Figure 1: Workers undergo safety training

“Emergency Response Plans are critical to ongoing pipeline operations. They allow pipeline operators to respond effectively to any emergency that could impact the public and the environment.”

Ziad Saad
Vice-President,
Safety & Sustainability
Canadian Energy
Pipeline Association

What key factors need to be considered by the pipeline operator? Managing an emergency is a complex and critically important matter. Pipeline operators make many decisions to address an emergency. For example, in the case of a spill, some of the key factors include: proximity to residences, waterways and wildlife, protecting the aquatic habitat if the spill occurred in a waterway, the amount and type of hydrocarbon released and how to handle it, weather conditions, anticipated behavior of the hydrocarbon, resource and equipment requirements, the amount of time it will take to get key personnel on-site, site accessibility, containment sites and control points. These are just a few of the factors that pipeline operators must consider and the ERP must address.

What are the steps required to manage a pipeline incident on-site? While pipeline operators may have slightly different procedures, the most important aspect of responding to an emergency is determining how to safely conduct an emergency response while at the same time containing and reducing the risk to the public and the environment. These steps could include: protecting property, identifying and managing the site, evaluating the hazards and risks, selecting the appropriate protective clothing and equipment, managing information and resource coordination, implementing response objectives, decontaminating, and cleaning up the site.

How are emergency response plans reviewed and kept up-to-date?

Emergency response plans are developed, regularly reviewed and updated, as required, by the pipeline operator and submitted to the appropriate regulator. Pipeline operators conduct regular emergency response exercises, consult with agencies that are involved in emergency response procedures and inform everyone who may be associated with an emergency response activity of the practices and procedures to be followed. In addition, companies conduct outreach activities to inform nearby residents of what to do in the case of a pipeline emergency.



Figure 3: Workers use booms in safety training exercises

For more information on emergency response plans, please visit:

- Canadian Energy Pipeline Association – www.aboutpipelines.com
- National Energy Board – www.neb-one.gc.ca
- Energy Resources Conservation Board – www.ercb.ca
- Incident Command System Canada – www.icscanada.ca
- Pipeline Association for Public Awareness – www.pipelineawareness.org
- Individual pipeline company websites

“Emergency Response Plans provide useful roadmaps for first responders to work side-by-side with pipeline operators during an emergency.”

Ziad Saad
 Vice-President,
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canadian energy pipeline association
association canadienne de pipelines d'énergie

Safe Pipeline Operations

Operating safe and reliable pipelines is critical to the pipeline industry. It is the fundamental premise behind everything that our member companies do. Pipeline operators undertake a wide range of activities in order to prevent incidents from occurring on their pipeline facilities.

What are the key aspects of operating a safe pipeline? There are several key aspects a pipeline operator can do to maintain the safety of their pipeline. Some of these are:

- Pipeline Integrity Management
- Corrosion Prevention
- Inspection
- Monitoring, Leak Detection and Isolation
- Damage Prevention

What is involved in Pipeline Integrity Management? Pipeline Integrity Management involves a series of activities, using a systematic, comprehensive approach, to manage the safety and integrity of pipeline systems. Pipeline integrity management is achieved through thoughtful design, prudent selection of materials,



Figure 2: Image courtesy of TransCanada PipeLines Ltd.

use of careful construction practices and the diligent operation of pipeline systems. During the operational life of a pipeline, operating companies strive to maintain pipeline integrity through the application of multiple practices to maintain safe, environmentally responsible, and reliable service from their systems.

What is Corrosion Prevention? Corrosion is a naturally occurring phenomenon that happens when metal reacts to the environment in which it exists. Pipeline operators try to prevent corrosion by applying coatings to the outside of their pipelines. This helps to isolate the steel of the pipeline from the underground environment and so inhibits the development of external corrosion. Additionally, cathodic protection is applied to pipeline systems to provide supplemental protection against the development of external corrosion at any location where the coated pipe surfaces may have been damaged. For more information on corrosion, please take a look at our fact sheet on the subject, which can be found at www.aboutpipelines.com.

What do we mean by Inspection? Every year, pipeline operators are involved in inspecting and re-inspecting elements of their pipeline systems. There are different ways to inspect a pipeline. One of these ways is through the use of 'smart' in-line inspection tools. These computerized tools travel inside the pipeline and have the ability to identify and locate pipeline anomalies.



Figure 3: Image courtesy of BJ Pipeline Inspection Services

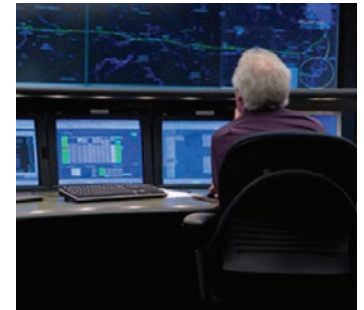


Figure 1: Image courtesy of Alliance Pipeline

These anomalies are then prioritized and assessed by qualified engineers and corrective actions may take place. Corrective actions could include digging up and repairing the piece of pipe or replacing sections of the pipe.

What is involved in Monitoring, Leak Detection and Isolation?

Monitoring, leak detection and isolation also play an important role in operating a safe pipeline. Pipeline operators are continuously monitoring the pipeline, 24 hours per day, 365 days per year, from their control centres. Every pipeline operator has a control centre, which is the hub of pipeline operations. These control centres use devices, such as Supervisory Control and Data Acquisition (SCADA) systems, to collect information from sensors installed along the pipeline route. This information is then transmitted back to the control centre. In the control room, highly qualified technicians, who have received extensive training in pipeline operations and emergency response, evaluate the information and determine if further action is required.



Figure 4: Image courtesy of Alliance Pipeline

The SCADA systems also allow the pipeline operators to remotely control pipeline flows by starting and stopping pumps and compressors, and opening and closing valves. If a significant leak occurs, automated leak detection systems, which continuously monitor pipeline flows, have the ability to alert the control centre technicians. The technician may be required to isolate sections of the pipeline with automated or manual block valves that are strategically located along the pipeline. Pipeline operators also use other leak detection methods such as aerial and ground patrols, as well as investigating concerns raised by the public.

What do we mean by Damage Prevention? The most common cause of damage to a buried pipeline is the uncontrolled excavation or undertaking of a digging project without the knowledge of where that pipeline is located. To prevent damaging the pipeline, it is critically important for pipeline operators, and those in communities through which pipelines pass, that are involved in underground work around pipelines to follow safe digging practices through accurate identifying, locating, and marking of buried utilities. The public can also play its part by contacting a provincial One Call centre or line locating service before doing any digging, especially with mechanical equipment. This will help prevent project delays, disruption of essential services, property damage, environmental contamination and serious injury.

Will following safe pipeline operations prevent incidents from occurring? Although they are the safest way to transport oil and natural gas products, pipelines are not completely risk-free. Pipeline integrity management programs and other preventative measures have been in place since the 1950s. They are used to reduce the risk associated with the operation of a pipeline as much as possible. In fact, our member companies, through CEPA, have initiated a program called CEPA Integrity First™. This program is designed to improve pipeline performance in the area of safety, environment and socio-economic matters. For more information on CEPA Integrity First™, please visit our website at www.aboutpipelines.com.

For more information on operating a safe pipeline, please visit:

Canadian Energy Pipeline Association
www.aboutpipelines.com

Canadian Common Ground Alliance
www.canadiancga.com

Integrity Management CSA Z662

Individual pipeline company websites

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TRANSMOUNTAIN EXPANSION PROJECT

PROJECT UPDATE

June, 2012 Issue

INSIDE:

History of the Trans Mountain Pipeline system **2**

Expanding Capacity and Creating Opportunities **2**

A Look at the Proposed Route **3**

About Kinder Morgan Canada **4**

In spring 2012, Kinder Morgan Canada announced it will move forward with its proposed plans to expand the capacity of the existing Trans Mountain Pipeline system – between Edmonton, Alberta and Burnaby, British Columbia – following strong commitments received from its customers. This first Project Update provides an overview of the proposed expansion project and next steps.

INITIATING A FIVE-YEAR PROCESS

Kinder Morgan Canada has begun an open, extensive and thorough consultation on all aspects of the proposed expansion project. We will talk with landowners, Aboriginal groups, communities and stakeholders.

During this period of dialogue, we will identify concerns and seek input to ensure our stakeholders have a voice in the decision-making process. This discussion in the pre-application phase will last up to two years, with ongoing dialogue throughout all phases of the proposed expansion project. In order to move forward, our project proposal must meet regulatory and permitting requirements from all levels of government. Here are some key next steps and activities:

- Conduct engineering, environmental and socio-economic assessments, along with traditional knowledge studies, to help determine routing options.

“We are still early in the engagement process of the project. We value and respect our open relationships with many communities and organizations interested in our business. We are committed to an inclusive, extensive and thorough engagement with all stakeholders on all aspects of the proposed Trans Mountain Expansion Project.”

Ian Anderson, President of Kinder Morgan Canada

- File an application to the National Energy Board (NEB) in late 2013 to initiate regulatory review of the proposed expansion project
- If the NEB approves the application, construction could start in 2016 with the proposed expanded pipeline system in operation in 2017

Operating and building pipeline infrastructure affects many along the route, and we recognize the potential impact to our neighbours and communities where we operate.

Our objective is to treat each landowner fairly and equitably. For those who may be directly affected by the proposed expansion project, our goal is to ensure we identify and addresses landowners’ concerns, answers questions and to mitigate any potential impacts.

At Kinder Morgan Canada, we are proud of the long record of the Trans Mountain Pipeline system’s safe and reliable operations and positive relationships with our neighbours. We look forward to working with all stakeholders as we embark on the next chapter of this important piece of infrastructure in British Columbia and Alberta.



TRANSMOUNTAIN

THE TRANS MOUNTAIN PIPELINE SYSTEM

Providing 60 years of Safe and Efficient Service

The Trans Mountain Pipeline, in operation since 1953, ranks as one of Canada's most important industrial achievements. Spanning 1,150 kilometres between Edmonton, Alberta and Burnaby, British Columbia, the pipeline transports crude oil and refined petroleum products.

Owned by Kinder Morgan Canada (KMC), the system provides the only West Coast access for Canadian oil products including about 90 per cent of the gasoline supplied to the interior and BC's south coast.

The pipeline's capacity has increased a number of times over the last six decades by twinning parts of the line and adding associated facilities.

Part of the Community

KMC works with some 2,200 landowners and more than 20 municipalities along the Trans Mountain Pipeline system throughout BC and Alberta. The Trans Mountain Pipeline system also crosses 15 First Nation Reserves and the traditional territories of many Aboriginal groups. The company pays more than \$24 million each year in property taxes to municipalities and First Nation governments.

At KMC, we actively seek opportunities to contract with Aboriginal businesses located within communities where we operate.

KMC has 450 employees in BC and Alberta with an annual payroll of \$49 million. Our employees work closely with all levels of government and regulators to ensure the Trans Mountain Pipeline runs safely and efficiently.

Expanding Capacity and Creating New Opportunities

Between October 2011 and April 2012, KMC initiated a process to determine future interest from shippers for products to be transported through the Trans Mountain Pipeline system. These shippers signed binding 20-year contracts for additional capacity on the pipeline system. Based on these finalized commitments, KMC is proposing to expand the capacity of the Trans Mountain Pipeline system from the current 300,000 barrels per day (bpd) to up to 750,000 bpd at a projected cost of \$4.1 billion.

THE PROPOSED TIMELINE

The proposed expansion of the Trans Mountain Pipeline system is in the early stages of community and stakeholder engagement. The discussion and completion of the proposed project are expected to unfold over a period of five years. Here's a look at the key activities associated with the expansion and review process.

SUMMER 2012

- Continue and expand open and transparent engagement with landowners, Aboriginal groups, communities and stakeholders. The engagement will continue throughout the life of the proposed expansion project.
- Before the facilities application, Kinder Morgan Canada will file a tolling application with the National Energy Board that outlines the Company's proposed tolling structure for its customers. This application will not seek approval for the proposed expansion facilities and will not involve technical or environmental aspects of the proposed expansion project. The focus of the tolling application will be to seek approval from the National Energy Board regarding how Kinder Morgan Canada will charge its customers for moving product through the proposed expanded pipeline.



LATE SPRING/EARLY SUMMER 2012

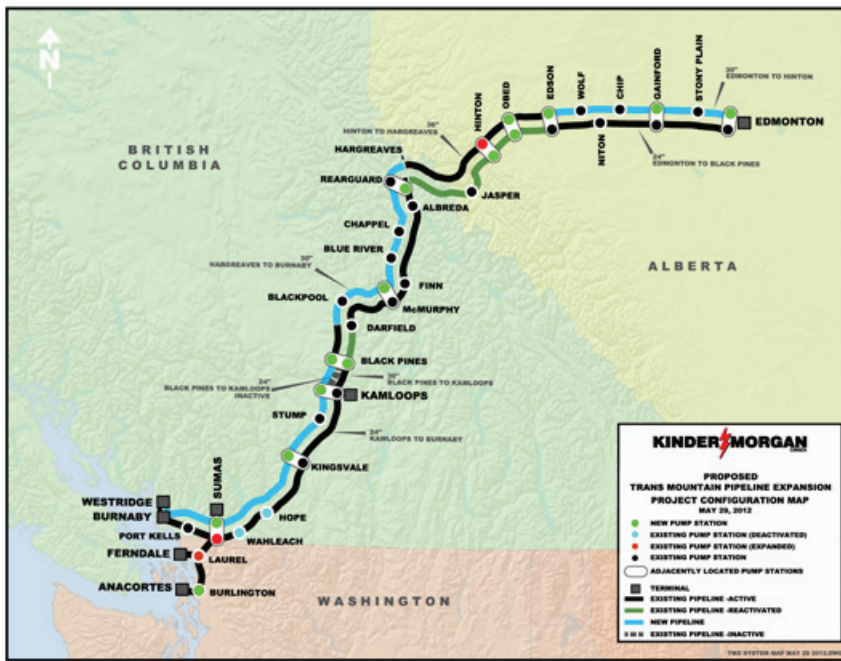
- Meetings and discussions with regulators to define the process and determine federal and provincial regulatory requirements needed for the expansion facilities application.
- Initial meetings with landowners, Aboriginal groups, communities and stakeholders.



JUNE 2012 TO FALL 2013/SPRING 2014

- Undertake comprehensive pipeline routings, traditional knowledge studies, environmental and socio-economic assessments.
- Continue open and transparent engagement.





Key Facts about the Proposed Expansion

Here are some of the key facts and features about the proposed expansion project:

- Projected capital cost: \$4.1 billion
- The expansion would create a dual-line operation with approximately 900 km of new line:
 - The existing line for refined products, synthetic crude oils and light crude oils
 - The proposed new line for heavier crude oils
- New pump stations and expansion of existing stations along the route
- Additional storage capacity at existing storage terminals
- Expansion of the Westridge Marine Terminal in Burnaby

The proposed expanded pipeline will closely follow the existing routing of the Trans Mountain system. Detailed routing studies will determine the preferred right-of-way and focus on reducing potential environmental impacts by minimizing, where possible, crossing sensitive streams, high-quality wetlands, culturally- sensitive locations and populated areas. Extensive dialogue with landowners, Aboriginal groups, communities and stakeholders will ensure their views are included within our plans for the proposed expansion project.

LATE 2013

- The goal is to file a comprehensive facilities application with the National Energy Board in late 2013 to start a regulatory project review. The timing will be determined by meeting the established regulatory requirements that govern the application process and consultation efforts.
- Continue open and transparent engagement.

2016

- If the project is approved, construction of the proposed expansion could begin.
- Continue open and transparent engagement.

2014 TO 2015

- Regulatory review.
- Continue open and transparent engagement.

2017

- Following completion of the construction, the proposed expanded Trans Mountain Pipeline would start operating.





Pipelines are the safest and most efficient mode for transporting large quantities of energy that people use every day. For example, it would take the equivalent of 1,400 tanker trucks per day leaving Edmonton for Burnaby, one every minute over a 24-hour period, to transport what our Trans Mountain Pipeline can safely move in a single day.

CONTACT US

Your input is important as we take all the necessary steps in the project expansion process. Our lands team will personally contact landowners who may be directly affected by our proposed expansion plans to discuss questions or concerns. We invite you to stay connected with us to find out more about all aspects of the Trans Mountain Pipeline proposed expansion project.

✉ E-mail: info@transmountain.com

☎ Phone: **1.866.514.6700**

🌐 Website: www.transmountain.com

ABOUT PIPELINE PROJECTS AND THE NATIONAL ENERGY BOARD

Following Kinder Morgan Canada's announcement of the proposed expansion of the Trans Mountain Pipeline system, it could be another 18 months before a regulatory application is submitted to the National Energy Board (NEB). Extensive consultation with stakeholders, socio-economic and environmental assessments and engineering will be undertaken before the application can be filed.

The results of these studies will form the basis of the application to the NEB. Filing the application will initiate a comprehensive regulatory and public review of the proposed expansion project.

The NEB has produced a guide for landowners and the public that provides details about the regulatory process that govern pipeline projects before they can proceed. This information is available at: www.neb-one.gc.ca

KINDER MORGAN IN CANADA

Kinder Morgan Canada operates a number of pipeline systems and terminal facilities in Canada including the Trans Mountain Pipeline, the Express and Platte pipelines, the Cochin pipeline, the Puget Sound and the Trans Mountain Jet Fuel pipelines, the Westridge Marine Terminal in Burnaby, the Vancouver Wharves Terminal in North Vancouver and the North Forty Terminal in Edmonton.

The Trans Mountain Pipeline system moves product from Edmonton to marketing terminals and refineries in the central BC region, the Greater Vancouver area and the Puget Sound area in Washington state, as well as to other markets such as California, the US Gulf Coast and overseas through the Westridge Marine Terminal.



PROPOSED TRANS MOUNTAIN EXPANSION PROJECT

FIELD PROGRAM DESCRIPTIONS

June, 2012



OVERVIEW

During the 2012 and 2013 field seasons, a number of environmental and engineering field programs are planned for the proposed Trans Mountain Expansion Project. These programs will take place in both Alberta (AB) and British Columbia (BC) and involve the work of a number of teams in various disciplines.

The field program may start as early as June 2012 and will run through October 2013. The various surveys required for the proposed Project are described in this document with further details of the timing and nature of each survey included in Table 1 on page 4.

In general, environmental surveys are completed to assess the existing environmental conditions and types of land use in the proposed pipeline corridor. The surveys are designed to meet the National Energy Board (NEB) requirements – the federal agency responsible for regulating and approving pipeline projects that cross provincial boundaries, and to assist in project design, construction and restoration. The results of these surveys will be included within the Environmental and Socio-Economic Assessment which will form part of the proposed pipeline and associated facilities application to the NEB.



PROGRAM DESCRIPTIONS

WILDLIFE

Wildlife studies are conducted to determine the presence of wildlife species and wildlife habitat potential. Wildlife surveys are observation-based surveys.

The timing of these surveys is critical to gather the appropriate information. For example, song bird surveys generally take place between late May and the end of June. The surveys are done between 4 am to approximately five hours past sunrise. Wildlife resource specialists may walk or use ATVs to survey locations from existing access roads or trails.



SOILS

Soils studies are completed to determine the type and condition of soils along the proposed pipeline corridor. The studies for the Project will mostly involve a ground-based agricultural soil survey program.

Access in cultivated fields will be on foot, with vehicles parked off fields in appropriate and safe locations such as approaches and shallow ditches unless vehicle/ATV use is approved by the landowner. In forested areas with limited access potential, helicopters may be used in combination with ATVs.

If land access approval is granted, the data collection sites will be carefully accessed by pick-up truck or quad. Investigations will be conducted at regularly-spaced sites. For example, in active agricultural areas, typically two to three sites per 800 m will be inspected. In the Agricultural Land Reserve in BC, one site every 250 m will be inspected and sampled by auguring a borehole approximately 8 cm in diameter to a maximum depth of 1.2 m and immediately filling in the hole following data collection. Select areas may be investigated at a later date with a drill truck to a two-metre depth.

VEGETATION

Vegetation studies focus on determining the nature and type of vegetation along the proposed pipeline corridor. The field program will encompass vegetation surveys (general and rare plant) and wetland surveys, as well as a Vegetation Community Mapping component.

Vegetation and wetland resource specialists will walk from existing access roads or trails to locations where surveys are to be conducted and record data. Plant samples may be collected if identification is not possible in the field. At the Vegetation Community Mapping investigation sites, wildlife and soils specialists will accompany vegetation specialists in the collection of data.

As part of Vegetation Community Mapping, plots will be located intermittently along the proposed pipeline corridor. Crews may dig holes with the use of a hand-held auger to obtain soil and parent material samples for examination up to a depth of 1 m. In peatlands, a small diameter (about 2 cm) probe on a rod will be pushed into the peat to mineral material up to a depth of approximately 1.6 m. All holes will be filled in immediately following data collection.

NOISE AND AIR QUALITY

Determining ambient sound and air quality levels at select locations are the focus of the air and noise programs for the Project.

Noise scientists will access the study locations by foot from the nearest road or trail. At each of the sound monitoring locations, a sound level meter will be set up and run for a minimum of 24 hours to measure all sounds at each location. Microphones will be set up on tripods at an approximate height of 1.5 m above the ground and fitted with wind screens. During the ambient sound survey, simultaneous weather monitoring and audio recordings will be made using a portable weather station and digital audio recording devices.

At each air quality monitoring location, a portable air quality monitoring station will be set up. The monitoring station will record specific air quality parameters (such as ozone, carbon dioxide, and carbon monoxide). Air quality specialists will return to the location and collect the data gathered by the monitoring station at a pre-selected time interval.



AQUATIC RESOURCES

Aquatic resource studies are completed to determine the nature and quality of the waters and aquatic habitats along the proposed pipeline corridor. These studies involve hydrology, wetlands, water quality, watercourse crossing and groundwater well surveys.

Crews will access the area using existing roads and will access the water body on foot and / or by boat. Groundwater wells will be accessed on foot.

- Hydrology field program: includes stream flow measurements and morphological data collection at selected streams crossings. Typical equipment involves water collection bottles and hand-held devices for measuring flow rates.
- Water quality program: includes water and sediment sampling at selected waterbodies to provide an overview of water and sediment chemistry. Typical equipment includes: water collection bottles and hand-held water quality multi-meters.
- Watercourse crossing studies program: involves collecting fish and fish habitat information by fish sampling (such as angling or electrofishing), extensive visual observations and measurement recordings.
- Wetland classification program: involves classifying wetlands and evaluating wetland function along the proposed pipeline corridor.
- Groundwater surveys involve site inspections by groundwater specialists to locate and sample groundwater wells. Samples will be analyzed for specific groundwater quantity and quality parameters.



ARCHAEOLOGY AND PALAEOLOGY

Surveys are completed to identify and assess archaeological and palaeontological resource potential or sensitivity along the proposed pipeline corridor. Sites may be accessed by foot or ATV from the nearest road or trail. Archaeological and palaeontological resources will be identified by visual inspection and, where necessary, potential shovel testing. The depth of the shovel tests will be up to 10 cm. All holes will be filled in immediately following data collection.

TRADITIONAL KNOWLEDGE STUDIES

The traditional knowledge studies involve the collection of traditional knowledge from potentially affected Aboriginal communities through their participation in the biophysical field programs for the Project.

While in the field, Aboriginal participants will provide traditional knowledge input into the design and execution of the biophysical field programs, establish baseline environmental and socio-economic conditions, document the nature and location of trails, habitation sites, medicinal and food source plants, hunting, fishing, trapping, gathering places and sacred areas and identify mitigation opportunities that contribute to Project design.

FORESTRY AND FOREST HEALTH

Visual forestry and forest health surveys are completed to assess and document tree species populations and densities, timber quality, and volumes on forested stands along the proposed pipeline corridor. As part of this evaluation, a forest health assessment will be conducted to provide a measure of the effects of forest pests and pathogens such as the pine beetle. Forestry resource specialists may walk or use ATVs to survey locations from existing access roads or trails.

ENGINEERING CIVIL SURVEY

During the early routing phase of the Project, engineering civil surveys are completed to confirm the location of the existing Trans Mountain pipeline within the existing easement. The surveys will also identify the existing easement boundary and review if new construction can occur within the existing right-of-way.

As part of this effort, surveyors may be in the areas along the existing pipeline corridor with equipment set up on known monuments and tying in survey control points near intersections or other Trans Mountain Pipeline system facilities. Surveyors typically walk or use ATVs from existing access roads or trails.

Once the routing process is complete, additional surveys will be required to locate and mark the centreline for the new pipeline, the construction right-of-way, and any additional lands required for construction at road, water, rail and utility crossings.



ROUTE AND FACILITY SITE SELECTION

Engineering and routing specialists conduct field surveys to determine route feasibility and identify environmental concerns or constraints for potential route refinements and facility site locations. As part of this program, travel off the existing easement boundary may be required. Work will be completed on foot or with the use of an ATV or snowmobile.

ONE CALL SURVEY

At select locations where subsurface testing (e.g. digging) may be required (e.g. soils program), a One Call survey will be completed prior to digging to locate buried utilities. Surveyors will access the location on foot to mark buried utilities. The markers will show the location of the buried utility and will be colour-coded to show utility type. Each buried utility may be marked by a separate surveyor.

ADDITIONAL RESOURCES:

Trans Mountain Expansion Project
Contact Information:

✉ E-mail: info@transmountain.com

☎ Phone: **1.866.514.6700**

🌐 Website: www.transmountain.com

The NEB Filing Manual can be viewed online at www.neb-one.gc.ca



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Table 1 provides a summary overview of currently planned field programs by discipline and proposed general timing of these field programs.

TABLE 1 SUMMARY OF 2012 AND 2013 FIELD PROGRAMS FOR THE TRANSMOUNTAIN EXPANSION PROJECT

Field Program	Crew Size	Proposed Dates	Duration
Wildlife	Two wildlife specialists	Summer 2012 Winter / Summer 2013	Variable, depending on survey, examples with approximate durations include: - Bird point counts, 15 minutes at most at a survey station. - Winter track transects may be 1-4 hours, depending on transect length. - Diurnal (i.e., daytime) surveys at wetlands 0.5-4 hours per wetland. - Nocturnal bat surveys are all night for echolocation detectors (not manned continuously); mist nets are dusk till about 2 am and stationary at a single location(s) for the night.
Soils	Two soil specialists	Summer / Fall 2012 Winter / Summer 2013	Variable, approximately 10 km per day.
Vegetation	Two vegetation specialists (vegetation / rare plant surveys) One vegetation, one wildlife and one soils specialist (vegetation community mapping)	Summer/ Fall 2012 vegetation surveys / rare plant and vegetation community mapping Spring / Summer 2013 vegetation / rare plant surveys	Vegetation / rare plant surveys, approximately 1-5 km per day. Vegetation community mapping, for ground-based plots seven or more plots per day may be visited. Duration will vary slightly among disciplines.
Wetlands	Two wetland specialists	Summer / Fall 2012 Spring / Summer 2013	Visiting five to seven wetlands per day.
Noise and Air Quality	Two noise specialists and two air quality specialists	Spring 2013	Data recorded in 24-hour intervals up to a one month program.
Aquatic Resources	Two to four water resource specialists	Late spring / Summer 2012 Winter / Summer 2013	Up to eight hours per large waterbody and approximately a couple hours per Wadeable System or groundwater well. Estimate four habitat investigations per day in winter.
Archaeology	Two archaeologists	Fall 2012 Summer 2013	Approximately 3 km per day.
Palaeontology	Two palaeontologists	Summer 2012 and Summer 2013	Approximately 5 km per day.
Forestry and Forest Health	Two resource specialists	Summer 2012 and Spring 2013	Total program duration is five days.
Traditional Knowledge Studies	Various	Summer 2012 to Summer 2013	Data is collected as part of the above programs.
Engineering Civil Survey	Two or more surveyors	Summer 2012 to Summer 2013	Variable.
Route and Facility Site Selection	A combination of two to four engineers and environmental resource specialists	Summer 2012 to Summer 2013	Variable.
One Call	One to two surveyors per utility	As needed, Summer 2012 to Summer 2013	Each buried utility will typically be located and marked within a couple of hours.



LISTENING AND LEARNING: KEYS TO WORKING TOGETHER

We have embarked on an open, extensive and thorough engagement process on all aspects of the proposed Trans Mountain Expansion Project along the route between Edmonton and Burnaby and marine corridor. We promise to hear every voice and every concern.

Our conversation has begun in earnest and we've received much feedback from interested British Columbians and Albertans about different aspects of our project. Of all the feedback we've received, risk and safety — particularly pipeline safety and marine safety — have been the primary concerns. This concern is echoed in the B.C. Government's five conditions for oil pipeline projects. We're confident that, with the co-operation of others, this concern can be addressed.

We understand the safety of our coastline is paramount, and are proud to be able to say that all 900 tankers that have ever loaded and sailed from the Westridge Marine Terminal in Burnaby have done so without a single spill.

This record is thanks to a culture of safety within Trans Mountain, the network of safety and response organizations in the marine community and the regulations and requirements established to ensure safe transit of oil tankers in the local waters.

When it comes to marine safety, Kinder Morgan Canada (KMC) also stands with B.C. in advocating for the necessary level of federal funding and response capabilities. At the

same time, we believe companies must also pay their fair share, as it is companies that are liable for potential spills — not communities.

On the pipeline itself, we've had very few incidents in a history spanning nearly 60 years. For us no spill is acceptable, but we have plans to respond, clean up, remediate and learn from every incident should one occur. While we cannot promise there won't ever be a spill, we can tell you this: we're doing everything we can to prevent spills.

There's been much discussion about heavy oils and bitumen and whether these types of products pose increased risk. Bitumen isn't something new, but a resource Trans Mountain has been transporting for close to 30 years — with no scientific or operational evidence that it is any more corrosive to the pipeline than other products. The bitumen in our pipeline is less dense than salt or fresh water, at a maximum density of 0.94, and will float if there's a spill.

Beyond risks and safety, another overall theme we've heard loud and clear from individuals is that people want to know about the benefits of expanding the Trans Mountain Pipeline.

The project promises to yield significant economic benefits for communities along the route. It will create both construction and long-term jobs, and we are committed to hire companies and workers from communities and Aboriginal groups along the pipeline.

Communities can also benefit from opportunities associated with this project to create legacies such as investments in the green economy, environmental stewardship,

INSIDE:

A Harvest of Dialogue Opportunities this Fall **2**

Determining the Proposed Pipeline Route **2**

Studying the Field **3**

Recovering the Local Environment after a Pipeline Spill **3**

First Nations communities and improvements to drive a world-leading spill response and clean-up capability. We have some ideas, but also want to hear yours.

We know the public is very interested in our project and are seeking channels to provide input. A large part of our project team is local, based in communities along the pipeline. We've been reaching out to the 2,200 landowners along the pipeline and meeting with community leaders, elected officials, environmental groups and Aboriginal groups to get their perspective.

We'll soon be expanding our public engagement program, giving communities the opportunity to learn more about the proposed expansion and provide feedback on some of our routing options, soliciting ideas on the kinds of benefits they'd like to see, and listening and responding to their concerns.

Lastly, through the discussions we've had so far, we understand people want and need reliable information and facts that will provide them with greater understanding of our proposed project and assist them in forming opinions, allowing for an even more informed and effective dialogue. We'll do our best to provide that information through various channels, including a new and much more expansive website, meetings and various engagement events.

Our Trans Mountain project team will do its very best to gain your trust and confidence. We remain committed to earning your trust and confidence — not simply to be able to say we did but because it's the only way forward.

Ian Anderson,
President of Kinder Morgan Canada.





COMPREHENSIVE COMMUNITY ENGAGEMENT: A HARVEST OF DIALOGUE OPPORTUNITIES THIS FALL

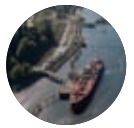
This fall marks a new season of information sessions and community forums with all stakeholders concerned and interested in the Trans Mountain Pipeline Expansion Project.

As part of the process to determine the route of the proposed pipeline expansion, a series of discussion opportunities will be available to all landowners, neighbours, Aboriginal groups, stakeholders and communities to ensure their views are included.

Stakeholder sessions will include information sessions and public presentations with opportunities for public input and queries.

The information sessions will be advertised in local papers, on the Trans Mountain Expansion Project website, community websites and event calendars, and by other local organizations.

People can participate in online forums, discussions and surveys on the project website at www.transmountain.com. You can also follow the project on Twitter: @TransMtn.



Key Factors

A variety of factors will be considered in selecting the most practical route for the proposed expansion of the Trans Mountain Pipeline

- **Human:**
 - Land use (such as residences, commercial, recreation and parks)
 - Traditional uses
- **Environment:**
 - Sensitive areas
 - Water crossings
- **Engineering:**
 - Public and worker safety
 - Physical constraints
 - Geotechnical conditions
 - Number and difficulty of crossings (such as highways, roads and foreign line crossings)

Route Study Schedule

Sept. 2012 – Mar. 2013:

- Routing field studies
- Preliminary route options identified

Nov. 2012 – Mar. 2013:

- Public engagement on routing

STUDIES, COMMUNITY DISCUSSIONS AND PRACTICAL SOLUTIONS WILL DETERMINE PROPOSED NEW PIPELINE ROUTE



Pipelines are installed within a strip of land called a right-of-way. Companies that own and operate pipelines acquire rights to use the land for construction, operation and maintenance of pipelines.

Determining the pipeline route for the proposed expanded Trans Mountain Pipeline will involve a range of studies and community discussions that would be incorporated into Trans Mountain's Facilities Application to the National Energy Board, anticipated to be filed in late 2013.

STUDYING THE FIELD



Crews have begun their field work related to the proposed expansion of the Trans Mountain Pipeline.

From examining vegetation, soils and wetlands to observing and documenting fish and wildlife habitat, the field programs include a wide range of activities. More than 30 environmental and socio-economic studies will be carried out in 2012 and 2013 along the Trans Mountain Pipeline system from Edmonton to the Westridge Marine Terminal in Burnaby.

The goal of each field program is to collect environmental information that will be included in the Trans Mountain Expansion Project's application to the National Energy Board.

A Range of Studies

This year, the environmental field programs will span the length of the pipeline. Studies include rare plant surveys, wetland identification and classification, terrain ecosystem mapping, wildlife surveys, fish and fish habitat surveys, and heritage resource studies. Air and noise monitoring systems will also be set up. In 2013, the studies from this year will continue as well as those dealing with soils, water quality, view shed modelling, palaeontology, species at risk and vegetation.

Surveying Wildlife



Some examples of wildlife surveys include breeding bird surveys, amphibian surveys, nocturnal bat surveys and winter track surveys. Wetlands will be mapped and classified and we'll be looking for the nature and type of plants within the proposed expansion project area. Marine environmental studies at the Westridge Marine Terminal will help assess the marine sediments, invertebrates, vegetation, mammals, birds, and fish species. The project is also planning to work closely with Aboriginal groups to gather traditional knowledge information.

Compiling Data and Reports

The technical reports compiled through the field studies will be included in the Environmental and Socio-Economic Assessment that is filed with the National Energy Board as part of the Trans Mountain comprehensive Facilities Application for the proposed expansion project. Mitigation strategies and management plans will be developed in discussions with regulators, Aboriginal groups and stakeholders to help minimize the potential effects of the project on the environment. All of these reports will be posted on the Trans Mountain Expansion Project and National Energy Board websites once the final application is submitted in late 2013.

RECOVERY OF THE LOCAL ENVIRONMENT AFTER A PIPELINE SPILL

Five years after a third-party contractor accidentally struck and ruptured the Trans Mountain Pipeline between the Burnaby and Westridge terminals, the local marine plant and animal life is experiencing continuous revitalization.

The July 24, 2007 incident released just over 1,400 barrels of oil into the surrounding area covering residential buildings, yards and roadways. Some of the oil entered storm sewers with release into Burrard Inlet.

Kinder Morgan Canada (KMC) worked closely with government and municipal authorities and response contractors to clean up the released oil on the land and water and to mitigate the impacts of the release.

In order to return the neighbourhood to its pre-spill condition, homes affected by the spill were restored; contaminated soil and other materials were removed; and gardens and lawns were replanted and landscaped. When the clean-up efforts were determined to be complete, the BC Ministry of Environment endorsed the efforts with a certificate of compliance.

Cleanup in the marine environment was completed and signed off by a multi-agency assessment team. As a proactive measure, KMC set up a program for annual monitoring of contaminant levels in Burrard Inlet. Monitoring results have indicated residual low level contamination with a marked improvement in environmental conditions each year. Studies suggest that the Burrard Inlet habitat has been experiencing continuous revitalization in the population and diversity of plant and animal life since the 2007 incident. This trend will continue to be monitored.



Where practical, the route for the proposed expanded pipeline will remain along the existing Trans Mountain Pipeline right-of-way. Where land use has changed significantly since the pipeline went into operation in 1953, there may be a need to route parts of the new line away from the existing right-of-way. In these cases, Trans Mountain will look at alternatives through comprehensive routing studies in combination with its consultation process.

"We will continue to do what we've always done, treat people fairly and equitably through respectful dialogue," said Greg Toth, Project Director for the Trans Mountain Expansion Project.

"With the proposed additional pipeline, our objective is for the least disruption and not to displace people from their homes or businesses."

For alternative routes, Trans Mountain will be working with municipalities and utility companies to route the proposed pipeline on previously-developed land and in transportation and utility corridors, and to minimize new linear disturbance.

COMMITMENT TO PIPELINE SAFETY

Regular inspection, maintenance and repair are the focus of Trans Mountain's integrity management program to ensure that all the necessary preventative measures are taken to maintain the long-term physical condition of its pipeline.

Damage prevention teams make sure the pipeline right-of-way is clearly marked, free of encroachments and accessible for surveillance, maintenance and emergency response. The teams supervise ground disturbance activities near the pipeline, respond to requests to locate the pipeline (One-Calls), issues permits for work in the area of the line and reports on unauthorized activity on the right-of-way.

In the event of a pipeline incident or spill, Trans Mountain uses the Incident Command System (ICS) to direct emergency response efforts. The system outlines clear roles and responsibilities for Federal, Provincial, Municipal and Aboriginal agencies in order to manage and co-ordinate the activities required to deal with a pipeline incident. Working with local emergency responders, Trans Mountain regularly conducts exercises to make sure everyone is well prepared to respond quickly to an incident.



CONTACT US:

Trans Mountain Expansion Project

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UNIQUE RESTORATION MEASURES USED IN ANCHOR LOOP PROJECT

A project that added 158 kilometres of pipeline and additional capacity to the Trans Mountain system through Jasper National Park and Mount Robson Provincial Park four years ago is setting new standards in pipeline construction and environmental restoration.

Kinder Morgan Canada (KMC) committed to a five-year post-construction monitoring program of the Anchor Loop project. Since 2008, the program has been evaluating the success and effectiveness of environmental protection and restoration measures. The results show restoration efforts have been successful, as indicated by:

- Successful establishment of seed-producing native grass species in upland areas
- Functional and stable riparian and wetland areas
- Evidence of increasing species diversity in aquatic, riparian and terrestrial plant communities

- Forests located near the right-of-way show no increase in insect population or diseases following construction clearing
- Wildlife trees and visual barriers being used by wildlife as habitat features
- Successful recovery of areas disturbed during construction

At the start of the project, KMC committed to preserve the area's natural beauty and tourist attraction, and collaborated with Parks Canada to develop a state-of-the-art restoration program designed to maintain ecological integrity. Through careful execution of the project, KMC fulfilled its promise to return the right-of-way and surrounding highly-visible and environmentally-sensitive area to a condition that will allow the land to return to its original condition.

Post-construction monitoring and ongoing right-of-way maintenance will continue with efforts such as weed management, seeding and planning in selected areas.

APPENDIX C

VOLUME 3A, APPENDIX D DIGITAL FILE ERRATA

Appendix D Phase 3 Open House Materials

Display Boards:

- Welcome
- The Timeline
- Proposed Trans Mountain Pipeline Expansion Map
- Project Overview
- Pipeline Specifications
- Building a Pipeline
- Industry & Products
- Pipeline Safety
- Pipeline Monitoring and Emergency Response
- Identifying Route Options
- Routing Objectives
- Corridor Assessment Elements
- Corridor Assessment and Selection Process
- Human Activity and Land Use Module
- Water Module
- Air Module
- Anchor Loop (BC Interior)
- Lac du Bois Grasslands (BC Interior)
- Abbotsford Pipeline Facilities (Abbotsford)
- Sumas Air Quality (Abbotsford)
- Odour Program (Abbotsford)
- Sumas Mountain Terminal (Abbotsford)
- Employment & Procurement 1
- Employment & Procurement 2

Maps:

- Alberta
- Edmonton
- Parkland County
- Wabamun
- Pembina
- Yellowhead
- Hinton
- Fraser-Ft-George
- Valemount
- Valemount-BlueRiver
- Blue River
- Blue River-Clearwater
- Clearwater
- Clearwater-Darfield
- Darfield-Kamloops
- Kamloops
- Kamloops Banner
- KP 793 - KP 810

- North Kamloops
- South Kamloops
- Kamloops-Merritt
- Merritt
- Merritt - KP965
- KP965 - Hope
- Hope
- Hope-Chilliwack
- Chilliwack
- Chilliwack-MetroVan
- MetroVancouver
- Abbotsford
- Langley
- Surrey
- Coquitlam
- Burnaby

Handouts:


- TMEP March 2013 Project Update Newsletter
- NEB A Proposed Pipeline or Power Line Project, What You Need to Know
- NEB Landowner Guide
- NEB Responding to Emergencies Pamphlet
- CEPA - About Pipelines (2012) Our Energy Connections
- CEPA - Corrosion
- CEPA - Diluted Bitumen
- CEPA - Emergency Response
- CEPA - Pipeline Safety

We Want to Hear From You

- We are seeking your input on areas of the proposed project that are of interest or concern to you and your community
- We encourage you to review the materials and to speak with the project representatives at this session

HAVE YOUR SAY:
transmountain.com/talk





In April 2012, Kinder Morgan Canada announced it will proceed with its proposed plans to expand the capacity of the existing Trans Mountain system after receiving strong commitments from its customers. Here is a look at the key activities and estimated timeline that will unfold over the next five years.



LATE SPRING/EARLY SUMMER 2012:

Meetings and discussions began with regulators to define the process and determine federal and provincial regulatory requirements needed for the expansion Facilities Application. Initial meetings with Aboriginal peoples, landowners, communities and stakeholders.



SUMMER 2012:

Engagement with Aboriginal peoples, landowners, communities and stakeholders took place in summer 2012 and is continuing. On June 29, 2012, Trans Mountain filed a Toll Application with the National Energy Board. The Toll Application is Trans Mountain's proposed tolling structure for its customers on the proposed expanded pipeline system. This application does not seek approval for the proposed expansion facilities and does not involve technical or environmental aspects of the proposed expansion project. The focus of the Toll Application is to seek approval from the National Energy Board regarding how Kinder Morgan Canada will charge its customers for moving product through the proposed expanded pipeline.



JUNE 2012 TO SUMMER 2013:

*** WE ARE HERE IN THE PROCESS.** Continue open and transparent engagement. Undertake comprehensive pipeline routing studies, traditional knowledge studies, environmental and socio-economic assessments.



LATE 2013:

The goal is to file a comprehensive Facilities Application with the National Energy Board in late 2013 to start a regulatory project review. The timing will be determined by meeting the established regulatory requirements that govern the application process and consultation efforts. Continue open and transparent engagement.



2014 TO 2015:

Regulatory review. Continue open and transparent engagement.



2016 TO 2017:

If the project is approved, construction of the proposed expansion could begin. Continue open and transparent engagement.

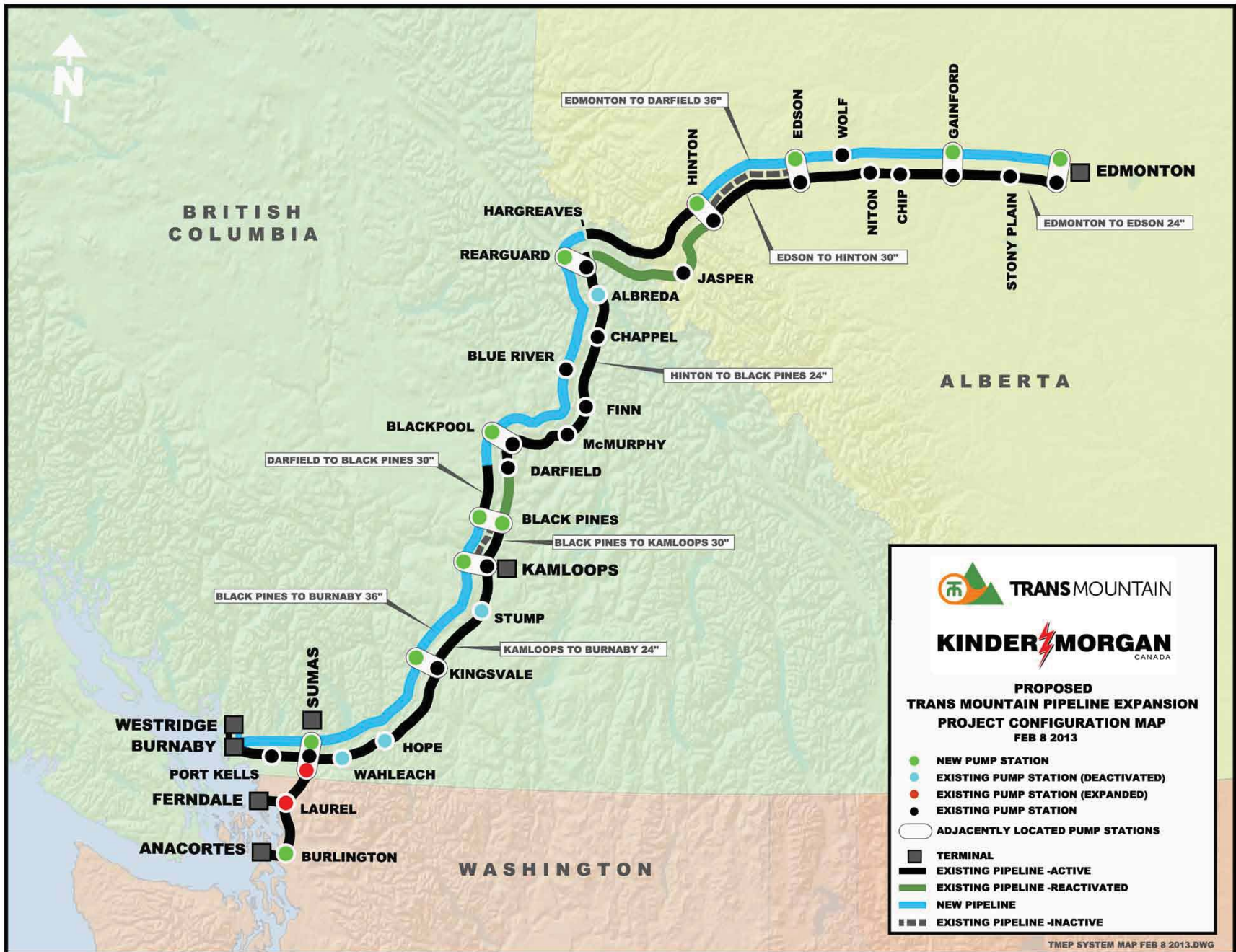


2017:

If the project is approved, proposed expanded Trans Mountain Pipeline to start operating.



PROPOSED TRANS MOUNTAIN PIPELINE EXPANSION MAP



Proposed Expansion

- Approximately 980 kilometres of new pipeline along the existing Trans Mountain Pipeline system between Strathcona County, Alberta (near Edmonton) and Burnaby, BC
- Increased nominal capacity from 300,000 barrels per day up to 890,000 barrels per day
- Customers have signed 15- and 20-year contracts with Trans Mountain for much of the extra capacity



Project Details

- Proposed dual-line operation
 - The existing line: refined products, synthetic crude oils, light crude oils
 - The proposed new line: heavier oils
- New 36-inch pipeline proposed
- Two new 30-inch delivery lines planned from the Burnaby Terminal to the Westridge Marine Terminal
- Existing pipelines to be reactivated:
 - Hinton, Alberta to Hargreaves, BC
 - Darfield, BC to Black Pines, BC
- Project cost: approximately \$5.4 billion



Numbers based on preliminary estimate, subject to change

PIPELINE SPECIFICATIONS



- Oil pipelines are made from steel with a diameter typically ranging from 4 to 48 inches
- Trans Mountain will use 36-inch pipe for most of the proposed expanded pipeline
- Trans Mountain will use pipe manufactured from high-grade steel to stringent Canadian Standards Association (CSA) and American Petroleum Institute (API) specifications in the proposed pipeline expansion
- CSA tightly regulates requirements for steel chemistry, material properties, manufacturing tolerances and quality control
- With a strong focus on inspection and maintenance, pipelines have an indefinite lifespan

Step by Step

Surveying and Staking: After finalizing a route, crews survey and stake the right-of-way and any temporary workspace needed for construction.

Clearing: Trees and vegetation are removed from the right-of-way.

Grading: Area is cleared and graded. The topsoil is removed and stockpiled for replacement and future reclamation.

Trenching: Excavators dig the trench to the required depth. Pipelines are buried in trenches that are generally a minimum of 0.9 metres deep, depending on sub-surface conditions.

Stringing: Individual lengths of pipe ranging from 12 to 24 metres long are laid out end-to-end along the right-of-way.

Bending: Individual joints of pipe are bent using a hydraulic bending machine for directional changes to fit the terrain.

Joining: Welders join the pipes together with either manual or automated welding processes. All welds are tested using high-tech methods such as X-ray or ultrasound.

Coating: The pipeline coating protects against corrosion. The pipeline is delivered to the right-of-way pre-coated. Field application coating is applied to welded joints.

Lowering: The welded pipeline is lowered into the trench with heavy lifting machines called side booms.

Valves and Fittings: Valves and other fittings are installed at intermediate locations as required by the Canadian Standards Association pipeline code. The valves are used once the line is operational to isolate the pipeline for maintenance or in the event of an emergency.

Backfilling: Soils are replaced in the order in which they were removed.

Pressure Testing: Pipelines are hydrostatically tested to 125 per cent of the anticipated operating pressure.

Cleanup: The pipeline right-of-way is reclaimed. Temporary facilities are removed. The land is re-contoured and re-seeded as part of restoration.



Transporting Energy Sources

- Pipelines transport oil (light and heavy crude) and natural gas over long distances, from producing regions of Canada to refineries and processing plants, where these energy sources are converted into useful fuels such as gasoline, diesel and commercial-grade natural gas
- Petroleum products include:
 - Fuels we use every day, such as gasoline, aviation fuel, diesel and heating oil
 - Solvents and lubricants
 - Raw materials for manufacturing other petrochemicals
 - Products used every day such as plastics, synthetic fabrics and electronics
- For more information on Canada's petroleum industry, visit the Canadian Association of Petroleum Producers (CAPP) website at: www.capp.ca
- The Trans Mountain Pipeline is part of Canada's 100,000-km underground pipeline network that transports almost all of Canada's daily crude oil and natural gas production
- For more information on Canada's pipeline industry and infrastructure, visit the Canadian Energy Pipeline Association (CEPA) website at: www.cepa.com



Our Commitment

- We will take every possible action to prevent a spill and have developed a number of programs to protect and inspect the Trans Mountain Pipeline
- No spill is acceptable, but we have plans to respond, clean up, remediate and learn from every incident should one occur
- In the event of a spill, we will examine all aspects of our operations and make modifications wherever possible to prevent a recurrence

Pipeline Safety

- Pipelines remain the safest and most efficient method for transporting petroleum products
- As long as pipelines are properly maintained, their lifespan is indefinite

Pipeline Protection

- Our pipeline integrity management includes regular inspection, maintenance and repair programs managed by a dedicated Technical Services group

- The pipeline has protective coatings and a cathodic protection system to prevent rust and corrosion
- Technology is used to detect changes in pipeline condition and wall thickness

Damage Prevention

- The pipeline is marked and signage along the line is maintained
- We conduct regular aerial and ground patrols of the pipeline to look for any irregularities or unauthorized activities along the pipeline corridor
- Permits are issued for any ground disturbance activities near the pipeline
- “One Call” program ensures the public or an employee can immediately and easily call for a response to a safety concern
- Education workshops and information mailouts help keep the public aware of the potential risk of activities near the pipeline corridor

PIPELINE MONITORING AND EMERGENCY RESPONSE

Monitoring

- Control Centre Operations staff operate and monitor the pipeline 24/7 year round from a Control Centre in Edmonton, Alberta
- The Supervisory Control and Data Acquisition (SCADA) system monitors the pressures and operating conditions of the pipeline
- Information is transferred from SCADA to a Leak Detection system in real time
- If pipeline flow or pressure changes, an alarm will alert the operator
- If necessary, Trans Mountain can shut the system down remotely using automated valves to stop the flow of product and isolate sections of the pipeline for investigation

Emergency Response

- Trans Mountain staff, combined with trained responders and contractors, provide 24/7 response management
- Trans Mountain is responsible for cleanup and remediation of incidents related to its operations along the pipeline corridor
- Trans Mountain carries liability insurance to provide coverage for all aspects of spill management, including compensation and remediation
- The Incident Command System (ICS) outlines clear emergency response roles and responsibilities, including use of local emergency responders and qualified clean-up contractors, so Trans Mountain can act quickly to protect its employees, the public and the environment
- Emergency response equipment is located at strategic locations along the pipeline



IDENTIFYING ROUTE OPTIONS

Routing Studies



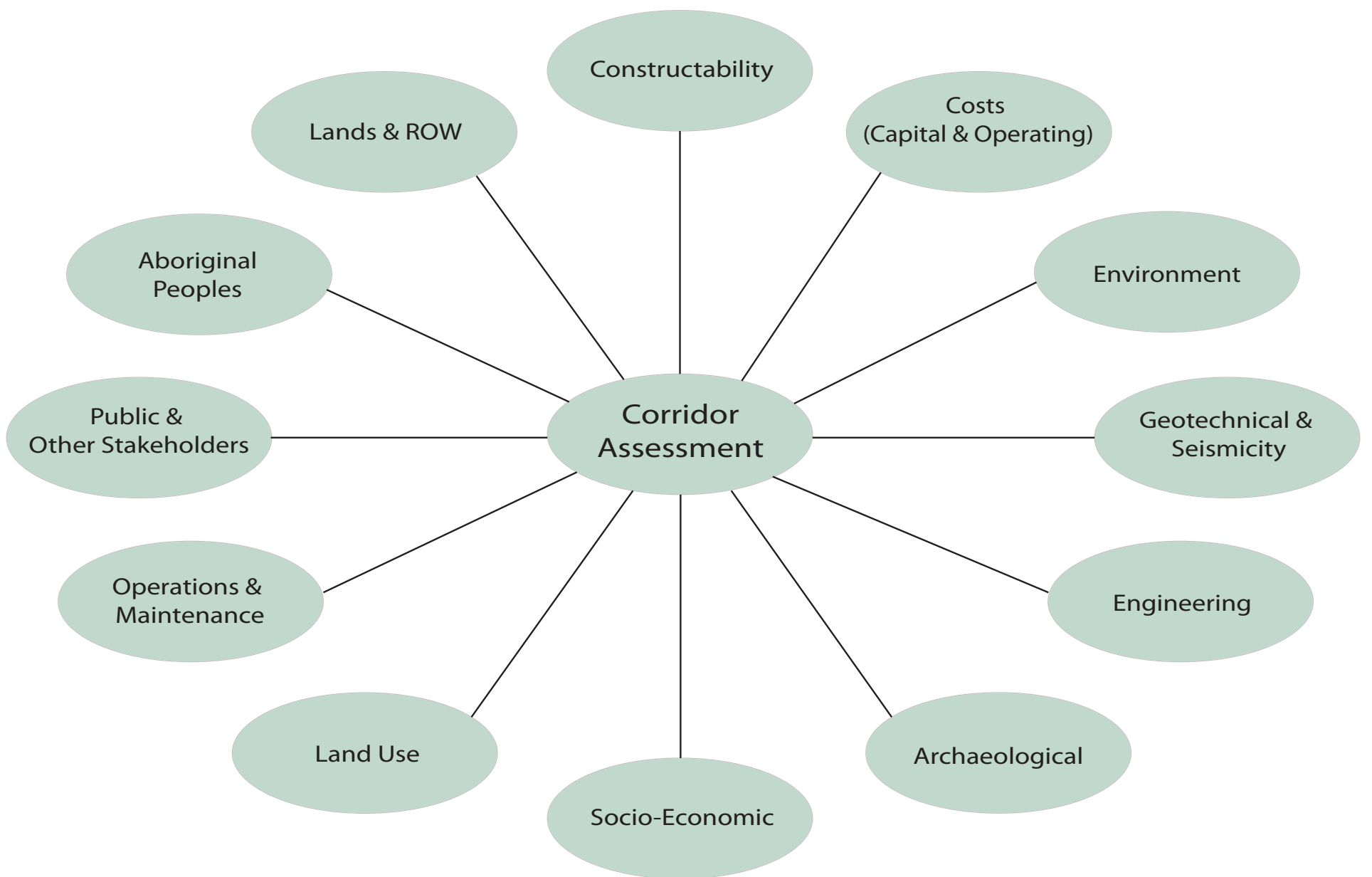
- The route will be determined through studies and consultation with Aboriginal Peoples, landowners and communities
- In locations where routing options are required, studies will be conducted within a 150m assessment corridor to identify an 18m operational right-of-way
- Routing studies will consider
 - Human Environment:
 - Land use: residences, commercial, recreation, parks
 - Natural Environment:
 - Sensitive areas
 - Water crossings
 - Wetlands and wildlife
 - Engineering:
 - Technical constraints/possible construction techniques
 - Geotechnical conditions
 - Pipeline length
 - Number and difficulty of crossings (highways, roads and other line crossings)
- Final, detailed routing will be determined during the design and construction planning stage

ROUTING OBJECTIVES

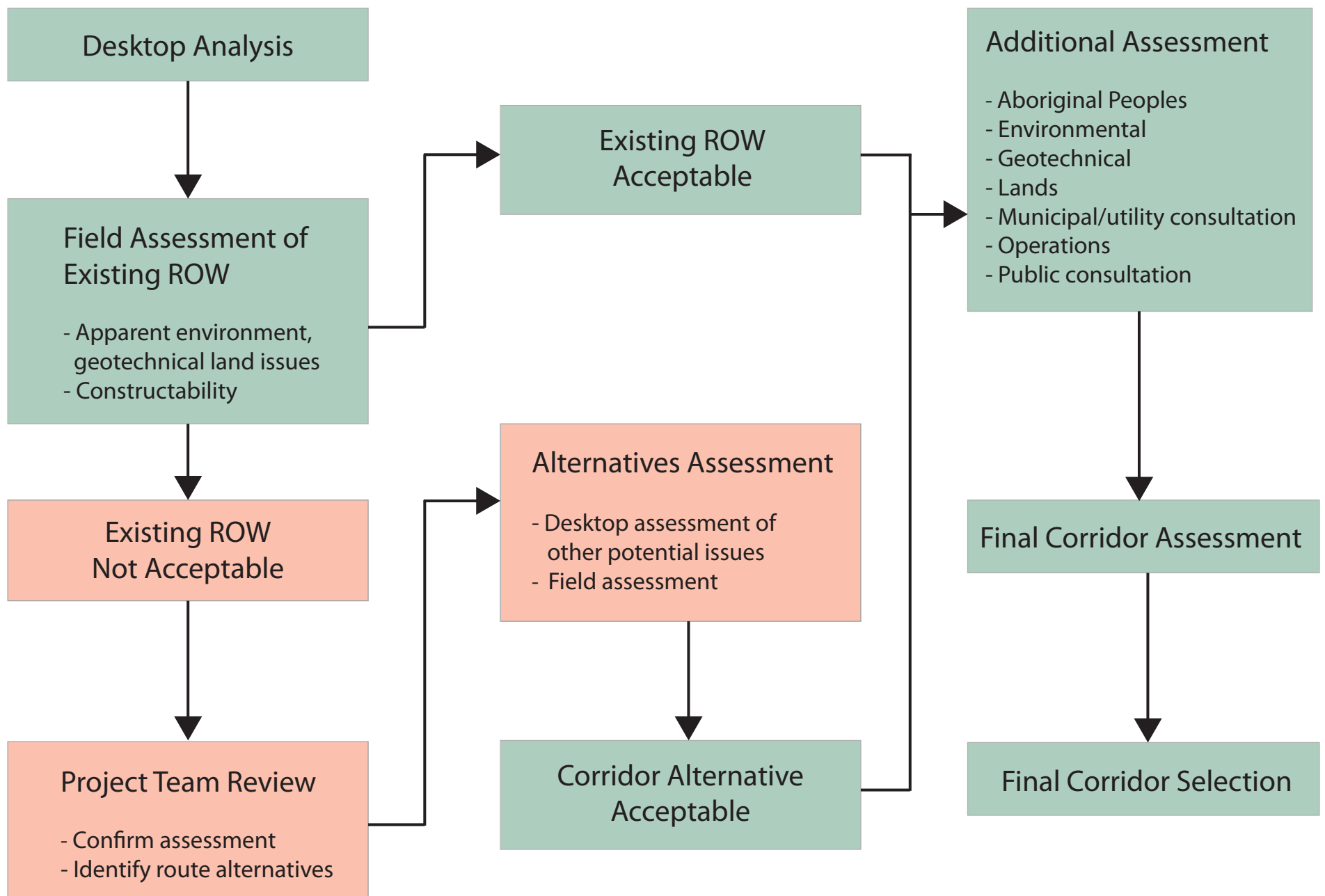


- Establish pipeline corridor within existing Trans Mountain Pipeline right-of-way (ROW) where feasible
- If pipeline cannot be located within existing Trans Mountain ROW, locate additional ROW immediately adjacent to existing ROW
- If pipeline cannot be located within or next to Trans Mountain ROW, minimize new linear disturbance by locating pipeline adjacent to existing linear developments (e.g. railways, roads, utility ROWs)
- Final, detailed routing will be determined during the design and construction planning stage
- If “greenfield” location is required, minimize impacts to environment, indigenous lands, present and future land use, and future operations and maintenance
- Provide a defined study corridor with alternative corridors where necessary
- Meet all requirements of the NEB, the Canadian Standards Association (CSA) and all applicable regulatory authorities

CORRIDOR ASSESSMENT ELEMENTS



CORRIDOR ASSESSMENT AND SELECTION PROCESS



HUMAN ACTIVITY AND LAND USE MODULE

Recreation and Guide-Outfitters

1. What kinds of activities occur in these areas?
2. Are there activity areas crossed by the study corridor?
3. What times of the year do these activities occur?
4. How could impacts be avoided, managed or offset?

Tourism

1. Are there areas of value to the tourism industry close to the study corridor?
2. Are there any key public areas visited by tourists (e.g. lookout points, key highways, campgrounds, etc.) that have a clear view of the study corridor or facilities?

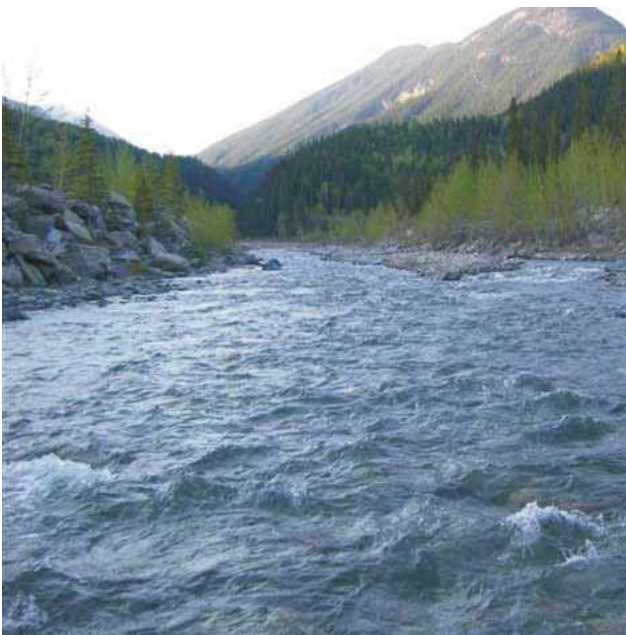
Neighbourhoods

1. What particular land uses are along the study corridor?
2. Will community access be disturbed by construction? Is there alternate access?



WATER MODULE

Study Topics	Anticipated Issues	What We Will Assess
Water Quality and Quantity	<ul style="list-style-type: none"> • Groundwater use requirements • Release of drilling mud into water supply • Impact of soil compaction and dewatering (if required) • Release of uncontrollable artesian flows • Groundwater quality or quantity changes that impact other stakeholders or the environment • Surface water quality and quantity 	<ul style="list-style-type: none"> • Groundwater quality and quantity • Surface water quality and quantity
Fish and Fish Habitat	<ul style="list-style-type: none"> • Loss or alteration of fish habitat • Increased access for fishers • Cumulative loss of fish habitat 	<ul style="list-style-type: none"> • Instream habitat • Riparian habitat • Fish mortality or injury • Species of special conservation concern
Wetlands	<ul style="list-style-type: none"> • Loss of wetlands and wetland habitat • Loss or change of wetland function or water quality • Effects of airborne emissions 	<ul style="list-style-type: none"> • Wetland habitat function



Study Topics	Anticipated Issues	What We Will Assess
Air Emissions	<ul style="list-style-type: none"> • Construction-related air contaminants • Increased operations-related emissions at storage tanks • Odours at storage tanks • Regional airshed quality 	<ul style="list-style-type: none"> • Construction emissions related to equipment, vehicles and timber burning • Smog-related products such as ozone • Nuisance odours at storage tanks • Emissions associated with pump stations and tanks
Greenhouse Gas Emissions	<ul style="list-style-type: none"> • Greenhouse gas (GHG) emissions during construction and operations 	<ul style="list-style-type: none"> • Methane (CH_4) carbon dioxide (CO_2) nitrous oxide (N_2O) (common GHG)
Noise	<ul style="list-style-type: none"> • Construction noise in urban areas • Increased operations noise at facilities and terminals 	<ul style="list-style-type: none"> • Change in sound levels • Blast vibrations, if blasting is required



ANCHOR LOOP EXPANSION 2008

Trans Mountain Anchor Loop Expansion 2008

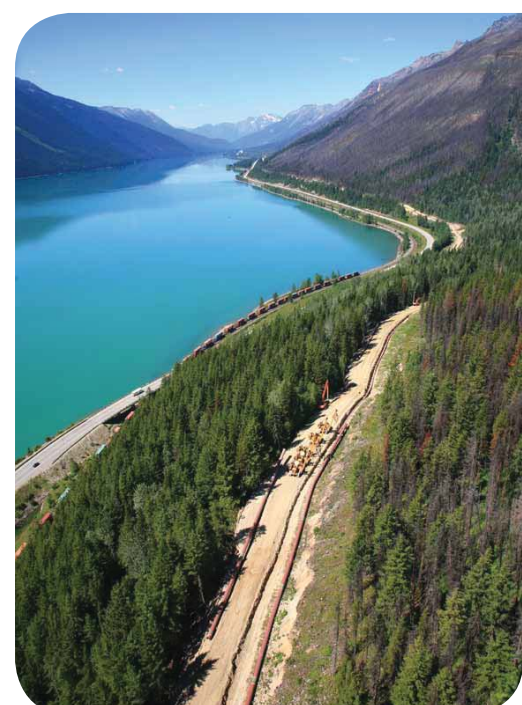
- Installation of a second pipeline along 158 kilometres of the existing Trans Mountain system between Hinton, Alberta and Hargreaves, BC
- Involved crossing Jasper National Park and Mount Robson Provincial Park – both designated part of the Canadian Rocky Mountains Parks a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site
- Construction completed in 2008, increasing the capacity of the pipeline system from 260,000 barrels per day (bpd) to 300,000
- In 2010, the Alberta Emerald Foundation presented Kinder Morgan Canada with an Emerald Award in recognition of “excellent environmental initiatives undertaken each year by large and small corporations, individuals, not-for-profit associations, community groups and governments”

Environmental Studies and Considerations

- Research and fieldwork conducted in support of the Environmental Assessment report exceeded normal industry practice for any similar project. Key project-specific considerations included:
 - Sensitive environmental conditions
 - Location of the project within a national and a provincial park
 - High ecological, recreational and symbolic values associated with land preservation represented by Jasper National Park and Mount Robson Provincial Park
 - Socio-economic impacts associated with locating a workforce within a national and provincial park
 - Aboriginal interests in the Jasper and Mount Robson areas

Legacy Benefits

- Detailed mapping of the parks
- More than 30 environmental and socio-economic technical reports including extensive wildlife species studies that enhanced the knowledge base for the parks, including new information about bird migrations
- Greenhouses to grow indigenous plants for the areas that were subsequently donated to the Hinton Community Garden
- Rebuilt roads and bridges
- Reclamation of non-project-related gravel pits and improvement of aquatic connectivity
- Trans Mountain Legacy Fund
 - Contributions to Jasper National Park and Mount Robson Provincial Park to support net benefit initiatives
 - A donation of \$2.2 million for ecological improvement projects identified through consensus
 - Ongoing support for projects that improve the ecological health of Jasper National Park and Mount Robson Provincial Park, as determined by the Fund Steering Committee



LAC DU BOIS GRASSLANDS PROTECTED AREA

Lac du Bois Grasslands Protected Area

The proposed corridor through the Lac du Bois Grasslands Protected Area is a provincial government and BC Parks matter that requires the submission of a Stage 1 (initial proposal) Request for a Boundary Adjustment to the minister responsible for the Park Act. Upon review, the minister may recommend a boundary adjustment to Cabinet and the Legislature at which time the Stage 2 (detailed proposal) Request for a Boundary Adjustment will be submitted.

Proposed Route

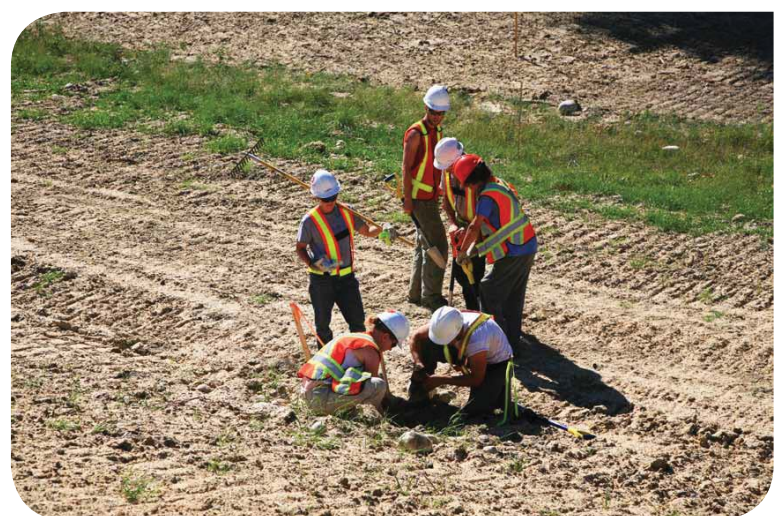
- Follow the existing Fibre-Optic Transmission System (FOTS) line from Jamieson Creek to existing right-of-way
- Approximately 7.9 km within protected area boundaries, remainder of route (approximately 8.6 km) is on private and Crown land
- No new linear disturbances anticipated (route will generally parallel FOTS line)

Key Considerations

- Restoration of grasslands within the proposed right-of-way and the surrounding environment
- Propose innovative mitigation strategies for environmental conservation in consultation with BC Parks
- Protection of ecosystem habitats
- Invasive weed control
- Vehicle access for construction and restoration
- Interruption to recreational or other human use

Construction and Restoration Activities

- Adherence to BC Parks regulations for all work within the protected area
- Use of native grassland seed to restore grassland
- Protection of native root systems
- Revegetation to limit sight lines where necessary along the right-of-way and at access points
- Recontouring of natural landscape
- Identification and protection of important habitats
- Weed control measures for vehicles and personnel
- Consideration of recreation use in construction planning
- Use of local partners and grasslands expertise
- Preparation of a restoration plan to identify additional measures and activities to maintain the ecological integrity of the protected area
- Five-year post-construction restoration monitoring or as directed by the regulatory agencies



Existing	Planned (additional)
30 km of 24" pipeline	30 km of 36" pipe
<p>Sumas Station</p> <p>2 Stations</p> <ul style="list-style-type: none"> • 2 X 2,000 HP pumping units for existing 24" line • 2 X 2,000 HP pumping units for existing 20" line to Puget Sound 	<p>Sumas Station (within existing site)</p> <p>1 Station</p> <ul style="list-style-type: none"> • 2 X 5,000 HP pumping units for new 36" line • 1 X 2,500 HP unit added to existing 20" line to Puget Sound
<p>Sumas Terminal</p> <ul style="list-style-type: none"> • 6 existing tanks – 650,000 bbl capacity total 	<p>Sumas Terminal (within existing site)</p> <ul style="list-style-type: none"> • 1 additional tank – 175,000 bbl capacity • 1 X 24" pipe connecting additional tank to valve manifold (all within existing footprint – no new lands or clearing required) <p>Sumas Terminal (adjacent to existing site)</p> <ul style="list-style-type: none"> • North fence line expansion (south of Keeping Road) – will require some tree and brush removal, and grading (screening from road will remain)
<p>Other Infrastructure</p> <ul style="list-style-type: none"> • Existing power lines and substation 	<p>Other Infrastructure</p> <ul style="list-style-type: none"> • No new power lines required • New substation at Sumas Station (existing site) • Upgrades to valve manifold (no new lands or clearing required)



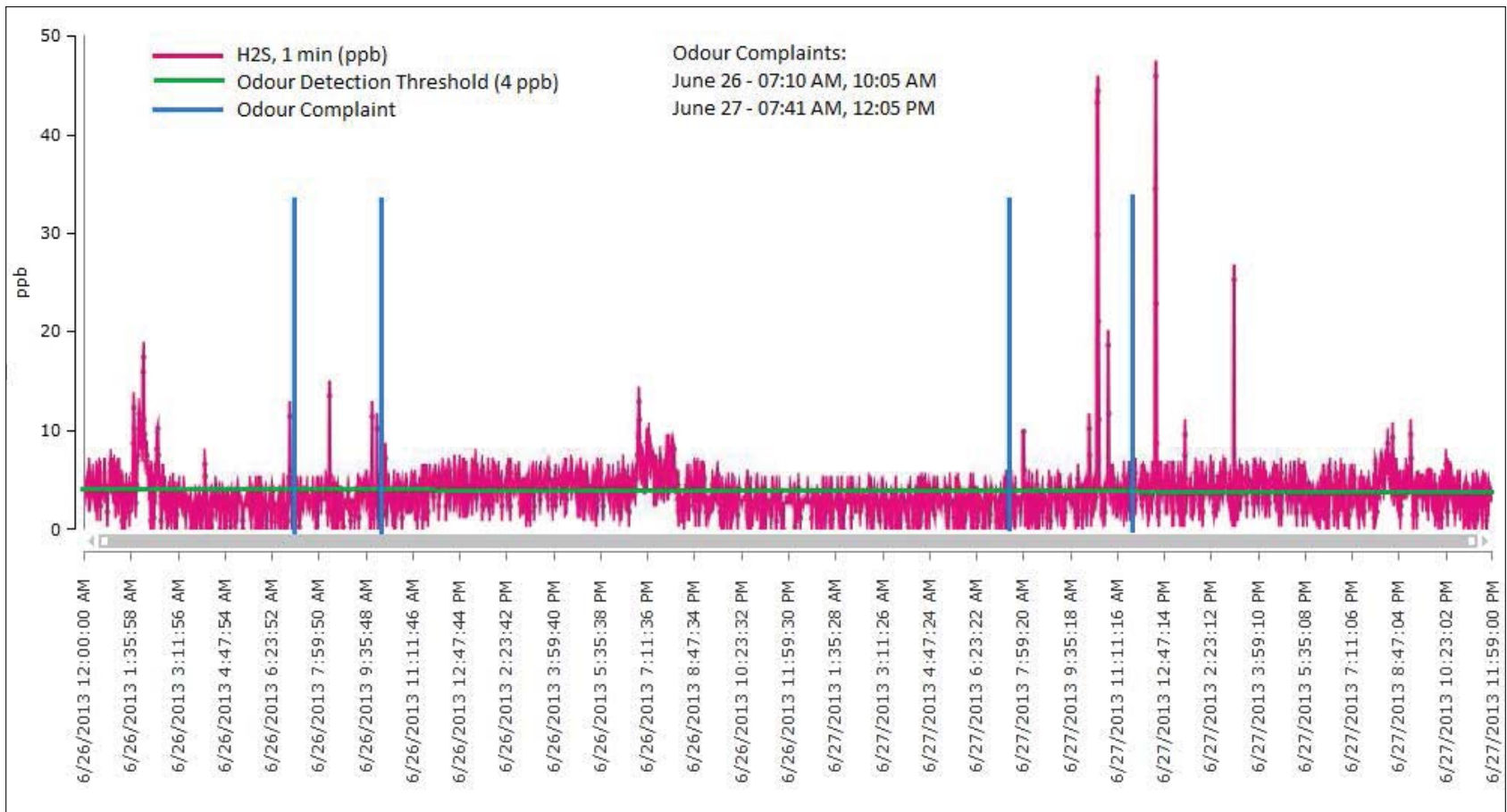
Sumas Terminal



Sumas Station

SUMAS MOUNTAIN AIR MONITORING

Sumas SAM Unit Historical Data for June 26-27, 2013



Enhanced Early Notification

Kinder Morgan Canada subscribes to a resident notification system. This service is free of charge but requires that residents sign up for the service. In the event of an emergency at the Sumas Terminal, residents will receive information by email, phone line (land or mobile) or text message based on the stated preference of the resident.

Air Quality

Air quality modelling was completed recently for both normal and abnormal (i.e., spill) operating conditions. The study used the real time air quality data collected during the January 2012 release.

This work will facilitate the enhancement of our air monitoring equipment and procedures and result in more efficient notification to staff in the event of a potential issue. This, in turn, will result in a more direct notification to residents if necessary.



Ambient Air Monitoring Equipment at Sumas Terminal



SUMAS MOUNTAIN ODOUR CONTROL

What can cause odours?

- Floating roof tanks – Evaporation of product residue along inner walls of tanks when roof lowered
- Domed roof tanks – Occasional vapours from tank during filling
- Rate of tank filling/emptying – Higher rates typically create more vapours due to turbulence during mixing
- Type of product contained in tanks – Products differ in constituents such as hydrogen sulfide (H₂S), volatile organic compounds (VOCs) and mercaptans
- Tank cleaning – Venting during cleaning of product residue on tank walls
- Product spills/releases – Evaporation of vapours to atmosphere

Odour Control Activities

As part of ongoing operations and maintenance work, the following practices are routinely used to prevent or mitigate odours:

- Industry standard floating roofs with double seals minimize potential odours by:
 - Reducing vapour space between the roof and tank walls
 - Scraping tank walls during emptying/filling to remove residual product thus reducing potential evaporation of vapours

- Use of mobile vapour scrubbers where possible during maintenance (i.e., tank cleaning)
- Minimizing flow rates when transferring products in and out of tanks
- Allocating odourous products to tanks farthest away from public

Odour Complaint Investigation and Response Program

The following revisions have been made to Kinder Morgan Canada's Odour Complaint Investigation and Response Program:

- All odour complaints directed to Control Centre so that each complaint is responded to according to the Control Centre's operating procedure (includes pipeline system pressure checks and potential alarms)
- Quantitative assessment of odours during site investigations using hand-held H₂S monitors
- Post-investigation discussion with Control Centre to determine follow-up actions if necessary (ensures complete closure of each odour complaint)



TRANSMOUNTAIN

SUMAS MOUNTAIN TERMINAL

Sumas Terminal release: January 24, 2012

- Release of crude oil from storage tank (90m³).
 - Cause: Unseasonably low temperatures resulted in freezing of water in the roof drain system and subsequent damage to this system which allowed oil to enter and escape out of the rain collection drain system.
 - Fully contained on our property within an impermeable membrane-lined containment area and all oil was recovered the same day as the release.
 - No injuries and no threat to the public, but significant odours.
 - Following any emergency, we conduct a thorough investigation and make changes to prevent future incidents.
- Cause: Unauthorized stockpiling of soil (fill) on a nearby private property (outside of the pipeline's prescribed 30-metre safety zone) caused the underlying peat bog soils to fail and shift laterally, which in turn caused the pipeline to buckle, resulting in the leak.
 - Oil from the pipeline release migrated into a small creek and moved downstream approximately 750 metres. A 14,300-m² area of wetland, stream and riparian habitat was affected by the leak and subsequent remediation.
 - In response to the spill, our Natural Hazards Management Program was expanded to incorporate the identification of soil locations that could be susceptible to lateral movement from adjacent loading.
 - Regular aerial patrols monitor the pipeline right-of-way and these patrols report details of any construction activities near the pipeline.
 - Added emphasis has also been placed on right-of-way clearing in fast-growing vegetated areas to help ensure ready access and reliable aerial observation of any potential problems.

Ward Road spill: July 15, 2005

- Leak of light crude oil from a 20" transfer pipeline connecting the Sumas Pump Station and the Sumas Terminal (210m³).

Spills are reported and available for viewing at transmountain.com/spill-history

EMPLOYMENT AND PROCUREMENT

From heavy equipment operators to environmental monitoring crews to land restoration teams, building the proposed 980 kilometres of new pipeline and associated facilities to complete the proposed Trans Mountain Expansion Project will offer a variety of jobs in BC and Alberta – both during the construction phase and during operations.

If the proposed expansion is approved, construction will take place in a phased approach between 2016 and 2018. The most active construction period is expected to be the spring through fall months of 2016 and 2017, though construction will extend through the winter months.

When construction of the project is at its peak, the anticipated workforce will reach up to 4,500 workers.

Other provinces and territories will also experience a positive jobs impact with indirect induced employment as a result of the pipeline construction project, such as providing materials and equipment including pipe for the project.

Our plans are to maximize local, regional and Aboriginal employment opportunities by working with communities, construction companies and industry associations along the pipeline corridor.

Employment Overview

- Opportunities for local/regional services, trades and other skills during all phases of the project
- Expanded operation will require more skilled workers for long-term operations

Sign up at transmountain.com to receive updates on project careers and vendor/supplier information.



EMPLOYMENT AND PROCUREMENT PHASES

Phases

Pre-application planning and permitting includes:

- Environmental and socio-economic assessment specialists
- Planning
- Communications and Stakeholder Engagement
- Engineering

Pre-construction includes:

- Pipeline and facility planning
- Engineering design

Construction includes:

- Clearing of right-of-way
 - Grading and ditching
 - Stringing
 - Welding
 - Environmental monitoring
 - Heavy equipment operators (bulldozers, excavators)
 - Health and safety officers (first aid)
 - Labourers
 - Surveyors and surveyor helpers
 - Specialized chainsaw operators
 - Blasting specialists
 - Fire watch
- Reclamation and restoration
- Post-construction monitoring
- Long-term operations





Diluted Bitumen in Pipelines

What is bitumen? Bitumen is a thick, molasses-type product that is found in regions around the world, but more locally in the oil sands regions of northern Alberta, Canada. Sometimes, it's found near the surface mixed in with sand and other debris, while in other instances, it can be found deep in the ground under several layers of rock.

How is bitumen extracted and what is diluted bitumen? There are two ways to extract bitumen. The first involves using large mining trucks and shovels to scrape the surface of the ground and collect the oil found in the sand. This is called surface mining. Once collected, the mined material is processed to remove the sand and other debris.

The second method involves injecting steam deep into the ground. The steam heats up the bitumen and forms a mixture of bitumen and water, which then flows to the surface in the same way conventional oil does. This is called in-situ production. Once on the surface, the water is separated from the bitumen.

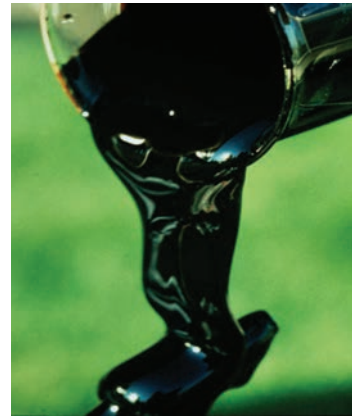


Figure 1: Image courtesy of Syncrude Canada Ltd.



Figure 2: Image courtesy of Syncrude Canada Ltd.

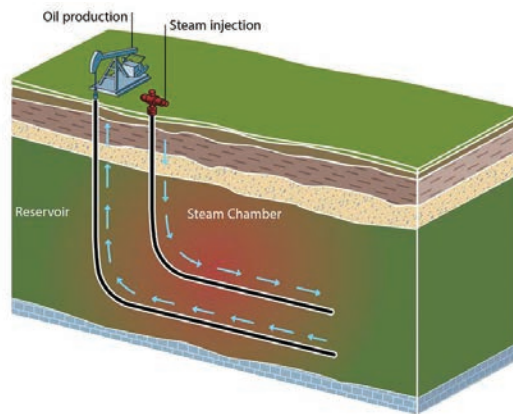
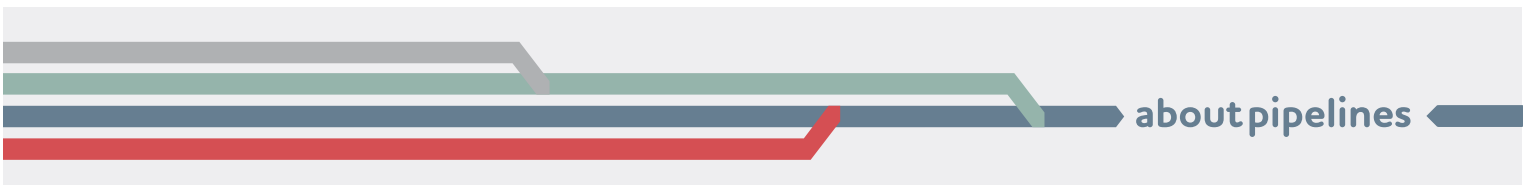


Figure 3: Image courtesy of the Centre for Energy

"For pipelines carrying diluted bitumen, the risk of corrosion is not any different than pipelines carrying conventional crude."

Ziad Saad
Vice President,
Safety & Sustainability
Canadian Energy Pipeline
Association

Following extraction, the bitumen can be processed locally into a suite of refined petroleum products including synthetic crude, which is similar to conventional light crude. Bitumen is too thick to flow in a pipeline at ground temperature, so it needs to be thinned with a very light petroleum product called diluent.



Diluent is typically either light crude, such as 'synthetic crude', or 'condensate', which is extracted from the ground along with natural gas. Synthetic crude and condensate on their own have been produced and transported by pipeline for decades.

Does diluted bitumen increase the risk of pipeline corrosion? No. Pipelines transporting diluted bitumen are not at any greater risk of corrosion than pipelines carrying other types of petroleum products, such as conventional crude. The only significant difference between diluted bitumen and conventional crude is that diluted bitumen carries diluent.¹ Neither the properties of diluent or bitumen carry any characteristics that would cause more corrosion.

There are two components in the diluted bitumen that have raised concern, namely acid and sulphur. These components exist in varying degrees in all crude types. If crude is heated to a temperature higher than 200 degrees Celsius, corrosion to pipelines transporting diluted bitumen may occur.² However, these pipelines don't operate anywhere near that temperature; they typically operate at much cooler temperatures. For more information on corrosion, please visit www.aboutpipelines.com.

How safe is it to transport diluted bitumen? Transporting diluted bitumen is as safe as transporting other types of crude oil. This is because there is virtually no difference between the two products. Our industry has been safely transporting diluted bitumen in pipelines for more than 30 years and conventional crude for more than 60 years.

What happens if there is a leak and diluted bitumen is spilled? Is it harder to clean up than conventional crude? No. Pipeline operators have developed and implemented emergency response plans and procedures tailored to the characteristics of the pipeline they operate, including the type of product it carries. However, in the event that diluted bitumen were to be spilled, the procedures for cleaning up the spill would be similar to cleaning up a conventional crude spill. Environmental and site-specific conditions will also determine the type of procedures and equipment used during the emergency. For more information on pipeline emergency response procedures, please visit www.aboutpipelines.com.

1 Alberta Innovates: Comparison of the Corrosivity of Dilbit and Conventional Crude, pg.iv

2 Alberta Innovates: Comparison of the Corrosivity of Dilbit and Conventional Crude, pg.iii

For more information on diluted bitumen in pipelines, please visit:

Canadian Energy Pipeline Association
www.aboutpipelines.com

Alberta Innovates
www.albertainnovates.ca

American Petroleum Institute:
Facts About Pipeline Safety and Canadian Crude
www.api.com

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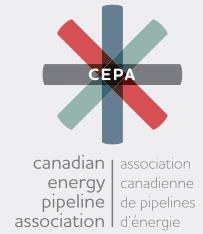
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Emergency Response

Pipelines are the safest and most reliable means of transporting large volumes of crude oil, natural gas and liquid petroleum products. Pipeline incidents are rare considering our member companies operate 110,000 kilometres of pipelines. In 2011, the transmission pipeline industry in Canada moved 1.2 billion barrels of liquid petroleum products and 5.3 trillion cubic feet of natural gas. Our most recent statistics show that 99.99% of liquid products are transported safely.

Despite being the safest way to transport oil and gas products over long distances, no pipeline is completely risk-free. Unfortunately incidents, from time-to-time, do occur and when this happens, pipeline operators are trained and required to manage these emergency situations. With an effective emergency response plan (ERP) in place, the chances of long-term impacts on the community and the environment are greatly reduced.

What is a pipeline emergency? A pipeline emergency is an unforeseen incident that could endanger the health, safety or welfare of the public and the environment.

What is an emergency response plan? An ERP outlines the necessary steps and decisions required to manage an emergency situation. It contains specific steps that the pipeline operator must take in order to control the incident.

Pipeline operators are expected to have ERPs in place by the regulator, whose role is to review and audit these plans. An ERP contains many types of information critical in managing an emergency situation. It includes manuals on how to proceed with the deployment of emergency personnel, evacuation plans, location of access points, communications procedures and protocols. In the case of large incidents, many pipeline operators use the Incident Command System (ICS), which is an organizational structure used for the command, control and coordination of an emergency response. ICS was originally developed in response to a series of wildfires in southern California in the 1970s.



Figure 2: Workers use vacuums to clean up oil



Figure 1: Workers undergo safety training

“Emergency Response Plans are critical to ongoing pipeline operations. They allow pipeline operators to respond effectively to any emergency that could impact the public and the environment.”

Ziad Saad
Vice-President,
Safety & Sustainability
Canadian Energy
Pipeline Association

What key factors need to be considered by the pipeline operator? Managing an emergency is a complex and critically important matter. Pipeline operators make many decisions to address an emergency. For example, in the case of a spill, some of the key factors include: proximity to residences, waterways and wildlife, protecting the aquatic habitat if the spill occurred in a waterway, the amount and type of hydrocarbon released and how to handle it, weather conditions, anticipated behavior of the hydrocarbon, resource and equipment requirements, the amount of time it will take to get key personnel on-site, site accessibility, containment sites and control points. These are just a few of the factors that pipeline operators must consider and the ERP must address.

What are the steps required to manage a pipeline incident on-site? While pipeline operators may have slightly different procedures, the most important aspect of responding to an emergency is determining how to safely conduct an emergency response while at the same time containing and reducing the risk to the public and the environment. These steps could include: protecting property, identifying and managing the site, evaluating the hazards and risks, selecting the appropriate protective clothing and equipment, managing information and resource coordination, implementing response objectives, decontaminating, and cleaning up the site.

How are emergency response plans reviewed and kept up-to-date?

Emergency response plans are developed, regularly reviewed and updated, as required, by the pipeline operator and submitted to the appropriate regulator. Pipeline operators conduct regular emergency response exercises, consult with agencies that are involved in emergency response procedures and inform everyone who may be associated with an emergency response activity of the practices and procedures to be followed. In addition, companies conduct outreach activities to inform nearby residents of what to do in the case of a pipeline emergency.



Figure 3: Workers use booms in safety training exercises

For more information on emergency response plans, please visit:

- Canadian Energy Pipeline Association – www.aboutpipelines.com
- National Energy Board – www.neb-one.gc.ca
- Energy Resources Conservation Board – www.ercb.ca
- Incident Command System Canada – www.icscanada.ca
- Pipeline Association for Public Awareness – www.pipelineawareness.org
- Individual pipeline company websites

“Emergency Response Plans provide useful roadmaps for first responders to work side-by-side with pipeline operators during an emergency.”

Ziad Saad
Vice-President,
Safety & Sustainability
Canadian Energy
Pipeline Association

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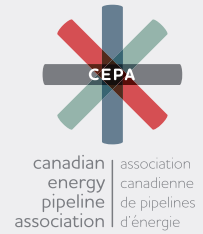
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Safe Pipeline Operations

Operating safe and reliable pipelines is critical to the pipeline industry. It is the fundamental premise behind everything that our member companies do. Pipeline operators undertake a wide range of activities in order to prevent incidents from occurring on their pipeline facilities.

What are the key aspects of operating a safe pipeline? There are several key aspects a pipeline operator can do to maintain the safety of their pipeline. Some of these are:

- Pipeline Integrity Management
- Corrosion Prevention
- Inspection
- Monitoring, Leak Detection and Isolation
- Damage Prevention

What is involved in Pipeline Integrity Management? Pipeline Integrity Management involves a series of activities, using a systematic, comprehensive approach, to manage the safety and integrity of pipeline systems. Pipeline integrity management is achieved through thoughtful design, prudent selection of materials,



Figure 2: Image courtesy of TransCanada PipeLines Ltd.

use of careful construction practices and the diligent operation of pipeline systems. During the operational life of a pipeline, operating companies strive to maintain pipeline integrity through the application of multiple practices to maintain safe, environmentally responsible, and reliable service from their systems.

What is Corrosion Prevention? Corrosion is a naturally occurring phenomenon that happens when metal reacts to the environment in which it exists. Pipeline operators try to prevent corrosion by applying coatings to the outside of their pipelines. This helps to isolate the steel of the pipeline from the underground environment and so inhibits the development of external corrosion. Additionally, cathodic protection is applied to pipeline systems to provide supplemental protection against the development of external corrosion at any location where the coated pipe surfaces may have been damaged. For more information on corrosion, please take a look at our fact sheet on the subject, which can be found at www.aboutpipelines.com.

What do we mean by Inspection? Every year, pipeline operators are involved in inspecting and re-inspecting elements of their pipeline systems. There are different ways to inspect a pipeline. One of these ways is through the use of 'smart' in-line inspection tools. These computerized tools travel inside the pipeline and have the ability to identify and locate pipeline anomalies.



Figure 3: Image courtesy of BJ Pipeline Inspection Services

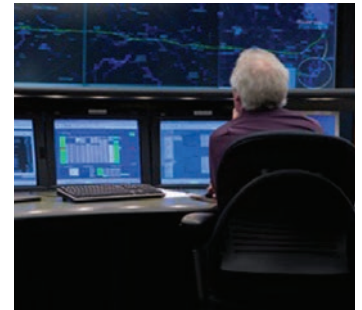


Figure 1: Image courtesy of Alliance Pipeline

These anomalies are then prioritized and assessed by qualified engineers and corrective actions may take place. Corrective actions could include digging up and repairing the piece of pipe or replacing sections of the pipe.

What is involved in Monitoring, Leak Detection and Isolation?

Monitoring, leak detection and isolation also play an important role in operating a safe pipeline. Pipeline operators are continuously monitoring the pipeline, 24 hours per day, 365 days per year, from their control centres. Every pipeline operator has a control centre, which is the hub of pipeline operations. These control centres use devices, such as Supervisory Control and Data Acquisition (SCADA) systems, to collect information from sensors installed along the pipeline route. This information is then transmitted back to the control centre. In the control room, highly qualified technicians, who have received extensive training in pipeline operations and emergency response, evaluate the information and determine if further action is required.



Figure 4: Image courtesy of Alliance Pipeline

The SCADA systems also allow the pipeline operators to remotely control pipeline flows by starting and stopping pumps and compressors, and opening and closing valves. If a significant leak occurs, automated leak detection systems, which continuously monitor pipeline flows, have the ability to alert the control centre technicians. The technician may be required to isolate sections of the pipeline with automated or manual block valves that are strategically located along the pipeline. Pipeline operators also use other leak detection methods such as aerial and ground patrols, as well as investigating concerns raised by the public.

What do we mean by Damage Prevention? The most common cause of damage to a buried pipeline is the uncontrolled excavation or undertaking of a digging project without the knowledge of where that pipeline is located. To prevent damaging the pipeline, it is critically important for pipeline operators, and those in communities through which pipelines pass, that are involved in underground work around pipelines to follow safe digging practices through accurate identifying, locating, and marking of buried utilities. The public can also play its part by contacting a provincial One Call centre or line locating service before doing any digging, especially with mechanical equipment. This will help prevent project delays, disruption of essential services, property damage, environmental contamination and serious injury.

Will following safe pipeline operations prevent incidents from occurring? Although they are the safest way to transport oil and natural gas products, pipelines are not completely risk-free. Pipeline integrity management programs and other preventative measures have been in place since the 1950s. They are used to reduce the risk associated with the operation of a pipeline as much as possible. In fact, our member companies, through CEPA, have initiated a program called CEPA Integrity First™. This program is designed to improve pipeline performance in the area of safety, environment and socio-economic matters. For more information on CEPA Integrity First™, please visit our website at www.aboutpipelines.com.

For more information on operating a safe pipeline, please visit:

Canadian Energy Pipeline Association
www.aboutpipelines.com

Canadian Common Ground Alliance
www.canadiancga.com

Integrity Management CSA Z662

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APPENDIX D

VOLUME 4A, SECTION 3.4, DIGITAL FILE ERRATA



Figure 3.4.12 Westridge Marine Terminal Historical Photograph

3.4.4.1.2 Utilization

Typically five tankers and three barges are loaded and one or two barges are unloaded each month. The number of loadings fluctuates based on market conditions. With TMEP, it is expected that the number of loadings will increase to the equivalent of up to 34 Aframax class tankers. The number of barge loadings and un-loadings is not expected to change.

Vessels calling at Westridge Marine Terminal currently account for about 3 per cent of the total traffic that moves through the Port of Vancouver, officially known as Port Metro Vancouver (PMV). With TMEP, this is expected to rise to about 14 per cent.

3.4.4.1.3 Second Narrows Requirements

The immersed depth (or draft) of loaded vessels transiting the Second Narrows is limited to 13.0 m, under the current PMV operating rules. This is expected to increase to 13.5 m in the near future. PMV also limits laden tanker transits to near slack water (low current) during daylight hours and requires a minimum of 10 per cent of the draft as the under-keel clearance (UKC) at the edges of a channel 2.85 times the beam of the vessel. The latter requirement results in the UKC at the vessel, if the vessel is in the centre of the channel, being much greater than 10 per cent of the draft.

The Second Narrows navigational restrictions and the tidal cycles limit the number of vessels that can load to a 13.0 m draft. A preliminary analysis shows that average drafts (for Aframax vessels) of between 11.6 m and 12.4 m will be required to utilize enough of the transit windows to achieve the required Westridge Marine Terminal capacity. For typical Aframax vessels, this draft range corresponds to a heavy oil capacity of approximately 87,400 m³ (550,000 bbl) and a

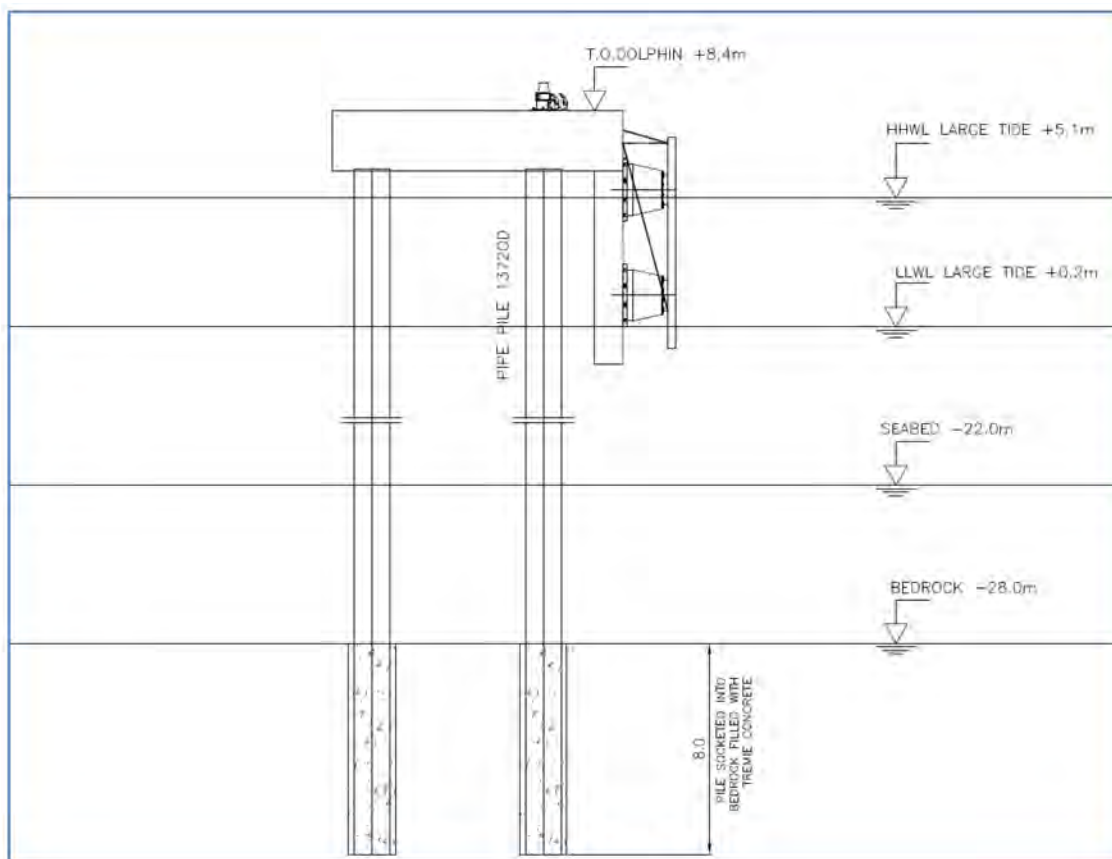


Figure 3.4.17 Typical Dolphin and Pile Foundation

3.4.4.3 Structural

Preliminary structural layout and design of the dock complex was based on a number of considerations and parameters as described in Sections 3.4.4.3.1 through 3.4.4.3.3. Final design of the dock complex will be based on further developed and refined considerations and parameters. Section 3.4.4.3.4 describes some proposed structural features of the dock complex.

3.4.4.3.1 Berthing and Mooring Study

A preliminary vessel berthing and mooring study was conducted to determine the maximum line forces that can be expected for the design vessels under foreseeable environmental conditions.

Fully-laden and ballasted states were considered as these will likely govern the design forces and will be somewhat conservative for partially-laden vessels. Forces from smaller vessels and barges will not govern the design, but an analysis was carried out to verify the mooring arrangement for these vessels.

Berthing force calculations were carried out based on the standard energy-based methods recommended by the Permanent International Association of Navigation Congresses, and a preliminary selection of fenders was made to estimate the berthing reaction forces on the structures.

A static mooring analysis was carried out using OPTIMOOR Mooring Analysis software. Assessment of dynamic effects will be done at a later stage. Based on previous experience with analyses for the Vancouver area, wave heights and periods within Burrard Inlet are too small to create dynamic motions in vessels of the design size.

3.4.4.3.2 Meteorological and Ocean Conditions

Tides and Water Levels

The site water level is dominated by semi-diurnal mixed tides propagating from the Pacific Ocean through the Strait of Georgia. It is characterized by two high water periods and two low water periods per day with inequality between consecutive high waters and low waters. Table 3.4.10 shows a summary of different tidal elevations derived from the Canadian Hydrographic Services.

TABLE 3.4.10

CHARACTERISTIC WATER LEVELS AND DATUM IN THE BURRARD INLET

Parameter	Vancouver Ch #3494 (m)	Deep Cove Ch #3494 (m)
EHHW (m CD)	5.6	n/a
HHWLT (m CD)	5.0	5.0
HHWMT (m CD)	4.4	4.3
MWL (m CD)	3.1	3.0
Chart Datum (CD)	0.0	0.0
LLWMT (m CD)	1.1	1.0
LLWLT (m CD)	-0.1	-0.1
ELLW (m CD)	-0.3	n/a

Notes: EHHW: Extreme Highest High Water (highest recorded)
 HHWLT: Higher High Water Large Tide
 HHWMT: Higher High Water Mean Tide
 MWL: Mean Water Level
 CD: Chart Datum, the plane of Lowest Normal Tides to which charts and water levels are referred
 LLWMT: Lower Low Water Mean Tide
 LLWLT: Lower Low Water Large Tide
 ELLW: Extreme Lowest Low Water (lowest recorded)
 For the Vancouver Harbour area, Geodetic Datum is 3.1 m above CD (BC Ministry of Environment 1995)
 n/a = not applicable

Apart from tide, water levels are also affected by episodes of storm surge and tsunamis. In their hazard analysis of historic records, BC Ministry of Health Services has reported two occurrences of storm surge affecting West Vancouver – the first one in 1967 and the second in 1982. The storm surge in both cases was estimated at 0.9 m. There is no specific data for the Westridge Marine Terminal; however, the storm surge effect is expected to be minor. The highest and lowest recorded water levels (extreme highest high water [EHHW] and extreme lowest low water [ELLW]) in Vancouver Harbour are 5.6 m and -0.3 m, respectively. The

difference of 0.6 m between EHHW and Higher High Water Large Tide is an indication of storm surge.

A review of publicly available information suggests that hazard from local tsunamis is ‘very low’ for the area. A landslide at the head of Indian Arm may be a possible source of a tsunami type event; however, there are no records of such an event ever occurring.

As in other coastal locations around the world, a rise in water level due to the effects of climatic change is expected. According to an assessment by DFO, by the year 2100, the Fraser River Delta could experience a mean relative sea level rise of 0.55 m with contributions of 0.29 m from global eustatic rise, 0.28 m from deltaic subsidence, and -0.02 m from glacial isostatic adjustment.

Wind

The Vancouver area is dominated by northwesterners in the summer and southeasterners in the winter with local winds varying in magnitude and direction as affected by the mountainous terrain.

In winter months, Indian Arm can experience a Squamish Wind or Arctic outflow.

In the absence of site-specific wind data, data obtained from the Halibut Bank buoy in the Strait of Georgia and some historical wind records maintained by PMV were used.

A summary of the available Halibut Bank wind data is presented in Table 3.4.11. The 1-year wind speed is inferred from empirical relationships. A weather station was recently installed at Westridge Marine Terminal. Data from this station will be available by early 2014 and will be used during the detailed engineering and design phase.

TABLE 3.4.11

**SUMMARY OF EXCEEDANCE AND RETURN PERIOD ALL-DIRECTION WIND SPEEDS
 (HALIBUT BANK)**

Description	Wind Speed (m/s)
50 th percentile exceedance	4.0
10 th percentile exceedance	8.0
1 th percentile exceedance	13.0
1-year return period	15.8
10-year return period	20.5
25-year return period	22.3
30-year return period	22.5
50-year return period	23.5
100-year return period	24.7

The National Building Code of Canada has prescribed wind pressures for different regions. For the Burnaby (Simon Fraser University) area, the prescribed 1 in 10 year, 1 in 30 year and 1 in 100 year wind pressures are 0.36 kPa, 0.44 kPa, and 0.53 kPa, respectively. These pressures translate to 23.6 m/s, 26.1 m/s, and 28.6 m/s, representing 3-second gusts.

Wave Activity

Westridge Marine Terminal is not exposed to swells propagating from the Pacific Ocean. Wave activity is dominated by local wind action and the available fetch. A spectral wave modeling technique was used to determine possible wave action. A total of 13 scenarios combining different wind speeds and directions were examined. The 1 in 100 year north-northeasterly wind generates the highest waves, characterized by a significant wave height of 0.72 m, a maximum wave height of 1.47 m, and a peak wave period of about three seconds.

The 50th, 10th, and 1st percentile significant wave heights measured by the Halibut Bank buoy are 0.13 m, 0.63 m, and 1.40 m, respectively.

Currents

A depth-averaged two-dimensional computer model was applied to predict currents at Westridge Marine Terminal. Simulations during a spring tide with a tidal range of about 4.0 m on January 2012 show that maximum shore-parallel depth-averaged flood and ebb currents of 0.47 m/s could develop. The corresponding surface current is estimated to be 0.52 m/s. An acoustic doppler current profiling instrument was recently deployed off Westridge Marine Terminal. The data is expected to be available in early 2014 and will be used to verify and calibrate existing models during the detailed engineering and design phase.

3.4.4.3.3 Vessel Characteristics

The existing berth at Westridge Marine Terminal has a water depth of 15 m, which is sufficient to handle vessels up to approximately 13.5 m draft. This draft corresponds to Aframax cargo sizes of between 95,390 m³ (600,000 bbl) and 111,290 m³ (700,000 bbl), depending on the beam of the vessel and the density of the oil. Fully-laden Aframax vessels (at a draft of about 15 m) can load up to about 119,200 m³ (750,000 bbl) of heavy oil. Given the Second Narrows restrictions, the new berths will only be designed to load vessels to 13.5 m draft.

The berths will be designed to moor vessels of various sizes up to Aframax class. Typical dimensions of these vessels are shown in Table 3.4.12 and Table 3.4.13. As noted, Panamax and Aframax class vessels will be restricted to 13.5 m, less than their maximum design drafts.

TABLE 3.4.12

OIL VESSEL PARAMETERS

Parameter	Drakes Bay Oil Barge	Handymax Class	Panamax Class	Aframax Class
Capacity - Volume (bbl)	100,000	300,000	495,000	750,000
Capacity - Tonnage (DWT)	17,300	50,000	75,000	117,000
Length Overall (m)	115.8	190	232	250
Beam (m)	23.2	32.2	32.2	44.0
Maximum Draft (m)	7.9	11	14	15.1

TABLE 3.4.13

JET FUEL VESSEL PARAMETERS

Parameter	Crowley 650	Handy Class	Handymax Class
Capacity (bbl)	178,000	120,000	300,000
Deadweight (DWT)	27,000	20,000	50,000
Length Overall (m)	179	150	190
Beam (m)	23	24	32
Maximum Draft (m)	8	10	11

3.4.4.3.4 Vessel Berths

Each berth will require the following major structural components:

- an access trestles with a road, walkway, and pipe racks;
- berthing and mooring structures connected with catwalks; and
- a loading platform with a gangway tower.

Access Trestles and Catwalks

Each access trestle will have a 4.9 m wide roadway and pipe racks on one or both sides. The roadway will be suitable for trucks, mobile cranes, and emergency vehicles. The roadways and pipe racks will likely each be supported by two structural steel plate girders. The roadways and pipe racks will be independent of each other. The trestle spans will be in the range of 40 m. The roadway surface will be created by a cast-in-place deck slab. See Figure 3.4.18.

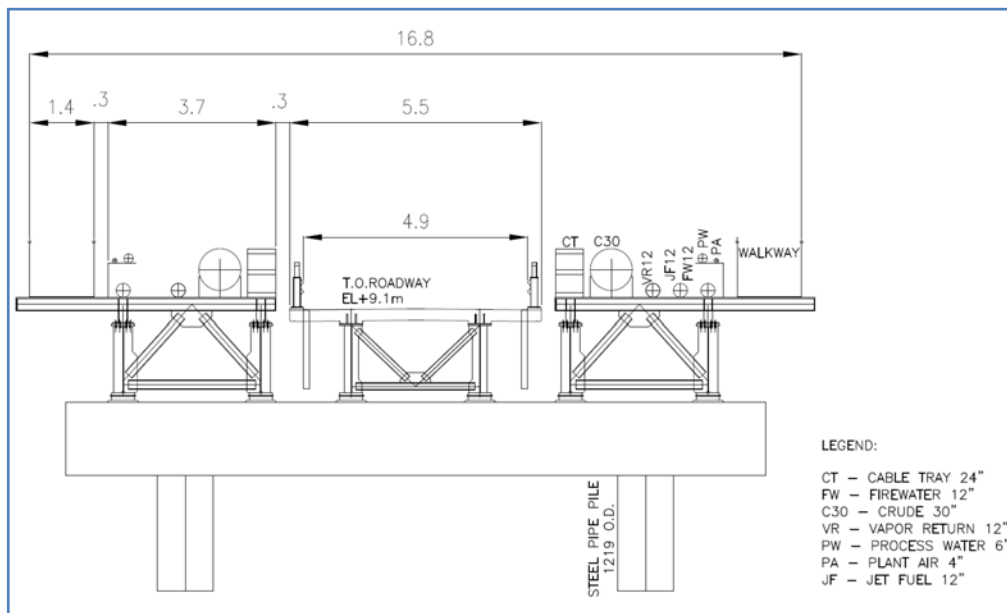


Figure 3.4.18 Typical Access Trestle Section

Breasting Dolphins

The primary functions of the breasting dolphins are to absorb the energy of the berthing vessel and to provide contact points and spring line mooring points for the moored vessel. Each breasting dolphin will support an independent fender system which consists of a fender panel supported by rubber energy absorbing elements located behind the panel. Each breasting dolphin will also support a quick release hook and an electric capstan. The breasting dolphin structures will be accessed via catwalks. Each breasting dolphin will be equipped with a ladder extending from the top of the dolphin to approximately 1.0 m below the lower low water level (large tide) to permit access from the water, if required.

Mooring Dolphins

The primary function of the mooring dolphins is to provide bow and stern line mooring points. Each mooring dolphin will be equipped with a quick release mooring hook and an electric capstan. The mooring dolphins are accessed via catwalks. Each dolphin will be equipped with a ladder extending from the top of the dolphin to 1.0 m below the lower low water level (large tide) to permit access from the water, if required.

Mooring Hooks

Breasting and mooring dolphins will be equipped with double quick release mooring hooks with the following features:

- one-man manual release in the proximity of the hook;
- electrical release via remote control from a central monitoring system;
- load monitoring capability instrumented to provide remote load readout for each hook from a central monitoring station; and
- an electric capstan for hauling mooring lines into position using lighter messenger lines.

Gangway Tower

Each berth will be provided with an articulated telescopic gangway tower for ship to dock access. All movements of the gangway will be self-supporting and self-actuating, not requiring assistance from other lifting or pulling equipment. In the stored position, the gangway will fold clear of the edge of the loading platform. The gangway will be designed to retract and clear the vessel during an emergency.

The gangway height will be adjustable for the full range of tides and vessel freeboards. The gangway will be equipped with a telescopic access ramp. The end of the gangway will have the ability to turn 90 degrees after clearing a vessel's rail to provide flexibility in accommodating vessels with different deck configurations.

The gangway tower will be located between the loading arms and the vessel wheelhouse, to facilitate evacuation.

The gangway tower will support an integrated stores crane and a fire-fighting monitor. A lay down area adjacent to the gangway tower will allow for truck loading and unloading. The crane will be capable of 360 degree rotation (Figure 3.4.19).

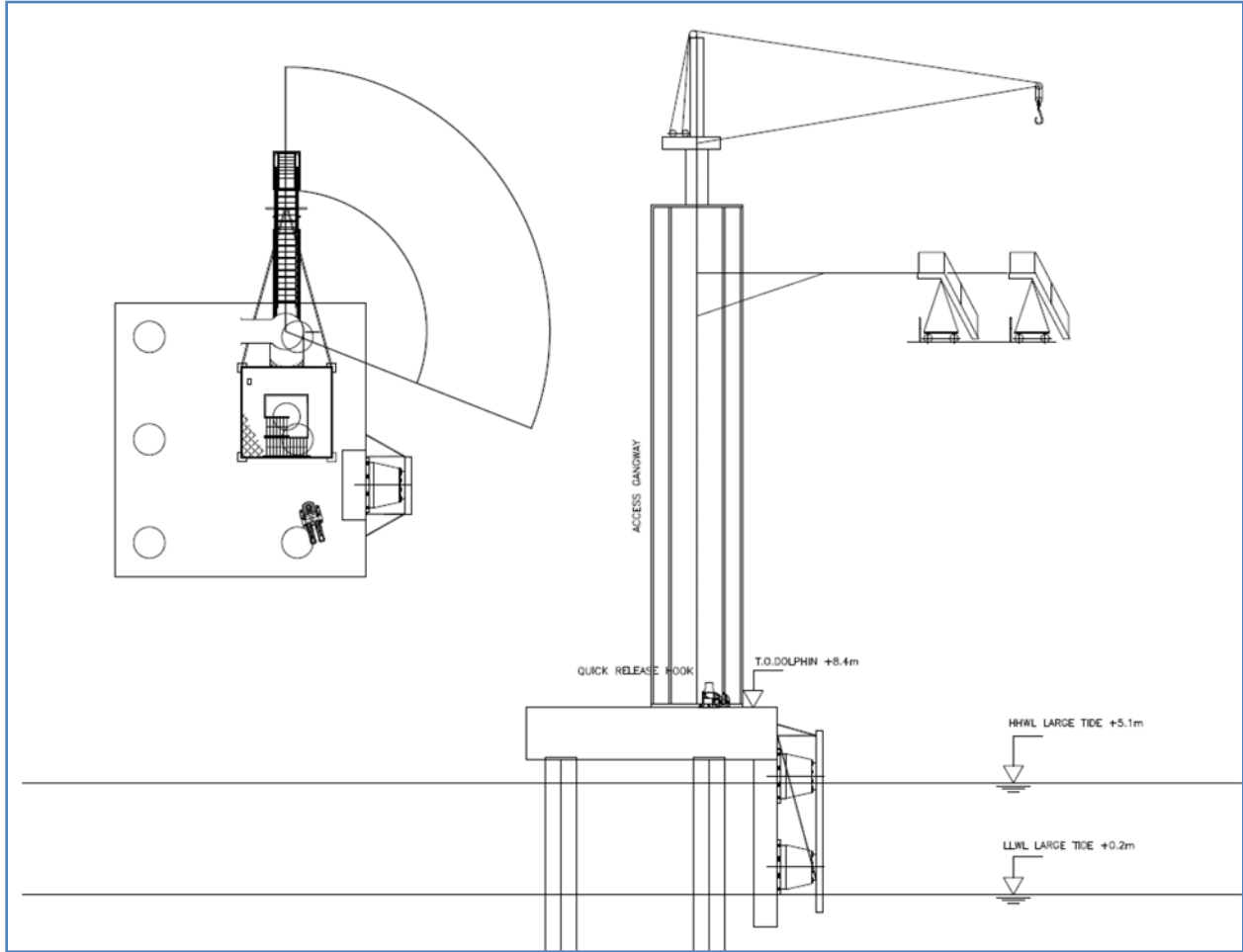


Figure 3.4.19 Typical Gangway Tower

3.4.4.4 Storage Tanks

Table 3.4.14 indicates the tanks that may be constructed at the Westridge Marine Terminal.

TABLE 3.4.14

TANKS UNDER CONSIDERATION FOR THE WESTRIDGE MARINE TERMINAL

Tank	Service	Type	Diameter		Capacity	
			(m)	(ft.)	(m ³)	(bbl)
XX1	Synthetic Crude (VRU)*	IFR	18.5	60	4,000	25,000
XX2	Synthetic Crude (VRU)*	IFR	18.5	60	4,000	25,000
XX3	Pipeline Surge Tank**	IFR	TBD	TBD	TBD	TBD

Notes: * Alternate VRU technologies are being considered, which may not require these tanks.

** The possible elimination of this tank is being investigated.

IFR = Internal Floating Roof

Tanks and their foundations will be designed in accordance with API 650 and the CCME guidelines. They will have steel pontoon or light-weight aluminum floating roofs with mechanical seals and fixed steel cone or dome roofs or fixed aluminum dome roofs.

Tanks will be provided with nozzles to allow for process connections, maintenance access and the future installation of propeller mixers and/or jet mixers. They will also be fitted with a TVAU for odour control. The final number and sizes of the nozzles and the specification for the TVAU will be determined during the detailed engineering and design phase.

Tanks will be externally coated with a zinc primer/urethane top-coat system. The exterior color will be determined with City of Burnaby and public input. The tank floor top and the interior of the lower 1 m of shell will be coated with epoxy.

Spacing between adjacent tanks will be in accordance with BCFC and NFPA 30, specifically no less than the sum of their respective diameters divided by four. Setbacks from property lines will be in accordance with NFPA 30 and Burnaby City requirements.

3.4.4.5 Buildings

See Table 3.4.15 for a preliminary list of various buildings to be constructed on the foreshore at the Westridge Marine Terminal.

TABLE 3.4.15

PROPOSED BUILDINGS FOR THE WESTRIDGE MARINE TERMINAL

Building Description	Quantity	Size (m)
Fire Pump House	1	12 x 10
Operator Control Building	1	18.3 x 4.2
Electrical Building (Main) Dock 2	1	18.3 x 4.2
Generator Building	1	5 x 2.5
VRU Pump Building	2	5 x 2.5

3.4.4.6 Mechanical

Noise levels will be at or below the location-specific permissible limits of the applicable legislation. Where necessary to meet these limits, pumps, blowers, and other noise emitting equipment will be placed in noise reduction enclosures or other noise reduction methods will be employed.

3.4.4.6.1 Vapour Recovery Units

Two VRUs will recover and recycle the majority of hydrocarbon vapours displaced from vessels during crude oil loading.

The existing dock utilizes a thermal oxidation unit (a type of VCU), which is highly effective at destroying volatile organic compounds and odorous compounds but consumes a considerable amount of propane feed gas during some stages of vessel loading. The significant increase in the amount of vapour to be handled as a result of TMEP makes the sole use of thermal

oxidation technology less desirable and the primary use of vapour recovery technology more appropriate.

The preliminary VRU technology selected includes an absorption vessel for removing odorous sulfur compounds and an activated carbon adsorption vessel for removing hydrocarbons heavier than ethane. Gases generated by vessels for cargo tank inerting, such as nitrogen and carbon dioxide, and the lighter hydrocarbon vapours, specifically methane and ethane, cannot be captured by the adsorption vessel and will be vented to atmosphere.

The VRU process requires regeneration of the activated carbon bed through the reversal of the flow through it. The preliminary process selected for the treatment and recycle of the hydrocarbon laden regeneration vapour stream is absorption into a synthetic crude oil stream supplied from a VRU tank. The enriched synthetic crude oil will be held in another VRU tank for eventual reinjection onto the vessel being loaded or onto a future vessel. This is the most common, commercially available technology for VRU systems. Since the absorption method requires two large tanks and a continuous supply of synthetic crude oil, various other options for the treatment and recycle of the regeneration stream are being considered, including liquefaction by compression or refrigeration, with the goal of reducing the complexity, the capital cost, and the operating cost of the system, while achieving equivalent or better levels of vapour recovery and recycle. The final technology selection and design of the VRUs will be completed during the detailed engineering and design phase.

3.4.4.6.2 Vapour Combustion Unit

One thermal oxidation type VCU, similar to that currently in service, will also be provided. Fuel for the VCU will be either propane or natural gas. The VCU will be used only when one of the VRUs is unavailable due to maintenance or repair (expected to be less than five per cent of the time) or when three vessels are simultaneously loading (also expected to be less than five per cent of the time). Given its low utilization (less than half of the utilization of the existing VCU), a much higher cost VRU is not considered necessary or appropriate for the third vapour handling unit.

3.4.4.6.3 Potable Water/Sewage System

A connection to the Burnaby City water and sewage system will be preferred. If such connections are not available, water and sewage will be trucked to and from the site and will be stored in tanks located near the new operation building. Potable water will be piped to each of the three berths.

3.4.4.6.4 Loading and Vapour Recovery Arms

To achieve the peak loading rate of 4,635 m³/hour (700,000 bbl/d) it is expected that each berth will require three 406 mm (NPS16) diameter loading arms. A spare loading arm may be provided at one or more berths for redundancy. Berth 1 will also be fitted with one 305 mm (NPS12) diameter jet fuel unloading arm.

Each berth will also be fitted with one 305 mm (NPS12) diameter vapour recovery arm.

The spacing between loading arms will be approximately 4.0 m.

3.4.4.7 Piping

Dock lines, tank lines, manifold, pump, meter, and interconnection piping will be above ground where practical, but may be below ground at certain road or other crossings. Dock lines and tank lines will be designed to be “pig-able”.

3.4.4.7.1 Design Pressure

The design pressure of the Westridge Marine Terminal process piping upstream of the last valve prior to the loading arms will be either 1,900 kPag (276 psig) consistent with a pressure rating of PN 20 (ANSI 150#), if pipeline pressure relief is provided, or 4,960 kPag (720 psig) consistent with a pressure rating of PN 50 (ANSI 300#), if pipeline pressure relief is not provided. The determination of the provision of pipeline relief will be made during the detailed engineering and design phase. The design pressure of the piping downstream of the last valve prior to the loading arms will be 1,900 kPag (276 psig), since vessels are protected by pressure relief systems. The design pressure of the vapour recovery system piping will be 1,900 kPag (276 psig) unless otherwise determined during the detailed engineering and design phase.

3.4.4.7.2 Design Flow Rates

Process piping will be designed for the peak loading rate of 4,635 m³/hour (700,000 bbl/d). The design flow rate is intended to allow an Aframax class vessel to load a cargo of 106,500 m³ (670,000 bbl) in 24 hours, allowing for one hour of ramp up and one hour of ramp down. A 44 m beam Aframax class vessel with a 106,500 m³ cargo of 900 kg/m³ density oil will have a draft of 13.5 m, the draft limit expected to be in force at the time the new Westridge Marine Terminal dock enters service.

3.4.4.7.3 Pipeline Pressure Relief

If the design pressure of the Westridge Marine Terminal process piping upstream of the last valve prior to the loading arms is selected as 1,900 kPag (276 psig) consistent with a pressure rating of PN 20 (ANSI 150#), full-flow pressure relief and a dedicated relief tank will be provided. The volume of the relief tank will be finalized during the detailed engineering and design phase.

3.4.4.7.4 Materials

Pipe, fittings, and flanges will meet the requirements of CSA Z245.1 Steel Pipe, CSA Z245.11 Steel Fittings, CSA Z245.12 Steel Flanges and the KMC 2000 series standards and specifications. Valves will meet the requirements of CSA Z245.15 Steel Valves and KMC Standard MP1300 Valve Selection and Specification and its associated standards and specifications. Material grades and wall thicknesses will be determined in accordance with the applicable standards and specifications identified in Tables 5.1.1 and 5.1.2 in Appendix D, including MP1110 Station and Terminal Piping Design. The operating pressure will not be greater than 80 per cent of the test pressure.

3.4.4.7.5 Welding and Fabrication

Welding and fabrication of piping will be in accordance with the applicable standards and specifications listed in Tables 5.1.1 and 5.1.2 in Appendix D.

3.4.4.7.6 Non-destructive Testing

Non-destructive testing of pipe welding will be in accordance with applicable standards and specifications listed in Tables 5.1.1 and 5.1.2 in Appendix D.

3.4.4.7.7 Hydrostatic Pressure Testing

All piping will be hydrostatically pressure tested in accordance with the applicable standards and specifications listed in Tables 5.1.1 and 5.1.2 in Appendix D, including MP4111 Station Hydrostatic Testing.

Piping spools constructed in fabrication shops will be hydrostatically pressure tested prior to delivery to site. Site fabricated pipe will be hydrostatically pressure tested at site.

3.4.4.8 Auxiliary Systems

3.4.4.8.1 Sump Tanks

Thermal relief valve discharge lines and selected drain lines associated with the process piping in the Westridge Marine Terminal receiving trap area, valve manifold, and metering area will be routed to one or more below grade sump tanks. The tanks will be sized to allow the drain-down of a significant portion of the process piping. Final sizing will be determined during the detailed engineering and design phase.

A lift pump and reinjection pump will be installed at each tank to allow re-injection of the sump contents back into the process piping. Pump-out to a tanker truck will also be possible through an above ground connection.

The sump tank design will include vents high enough to prevent spillage during equipment drain down.

Sump tanks will be constructed from fibre-glass (or a similar composite material) and will be of double-wall design. The interstitial space between the two shells will be monitored to assess the integrity of the tanks.

A storm water sump tank will be located below each loading platform containment area. Although the sump tanks are intended for storm water, their capacities will be equal to 30 seconds of the full flow from one loading arm in case of a leak. Each sump tank will have a separate sump pump which will direct the contents of the tanks to the foreshore collection tank(s). The sump tanks will be emptied prior to arrival of each new vessel.

3.4.4.8.2 Fire Protection Systems

A new fire-protection system will be provided at the Westridge Marine Terminal.

Fire-Water System

The fire-water system will have the following features:

- a new backflow preventer on the existing City of Burnaby fire water main;
- two new submersible pumps, taking water from Burrard Inlet; and
- fire mains constructed of high density polyethylene (HDPE) where underground.

Foam System

The foam system will have the following features:

- new centralized foam building complete with a foam concentrate storage tank and injection system;
- foam distribution system serving the new dock complex and shore infrastructure; and
- foam mains constructed of HDPE, where underground.

Storage tanks will be fitted with seal-area foam pourers permanently connected to the fire-water/foam supply. The foam supply to each tank will be activated by automated valves.

3.4.4.9 Nitrogen Purge System

A nitrogen gas generator or a nitrogen storage system will be provided to allow for the purging of the vapor recovery lines.

3.4.4.10 Electrical

The Westridge Marine Terminal will have enough increase in power consumption to require a service upgrade by BC Hydro. Approximately 3 MW of additional power will be required for the VRU system and ancillary devices.

Currently there is a single feed from BC Hydro to a small substation located west of Tank 201. BC Hydro will be performing a study to determine what reinforcements of their electrical system are required to handle the additional load.

A new 12.5 kV to 4,160 V, 3 MVA transformer will be required to service the existing and new loads.

New ESBs, distributed around the site, will be required to house switch-gear, MCCs, and control panels.

A standby generator will be installed to provide emergency power to all MOVs and designated emergency equipment during a power outage. A UPS will be installed to maintain communications and critical information during the transfer from utility power to generator power.

Consideration will be given to the space required on the docks for future shore power transformers and conversion equipment. The power supply upgrade to support the new dock and VRU infrastructure will not be large enough for shore power (which will require up to 20 MW capacity) and will need a further major upgrade should shore power be installed in the future.

Navigation marker lights will be designed in accordance with International Association of Lighthouse Authorities standards. Lights will be mounted on the outer east or west vertical face of the dolphin pile caps where they will be visible from seaward but not interfere with mooring line deployment. The location, color and intensity for these navigation lights will be confirmed with BCCP and Transport Canada.

Area lighting will be directional and targeted to the greatest extent practical to reduce extraneous lighting impact on the adjacent community.

3.4.4.11 Instrumentation

The general scope of the instrumentation will include:

- a radar gauging system on each storage tank, with high level and low level sensing and overflow protection capability;
- a redundant overflow protection system on each storage tank;
- a fire detection system on each storage tank;
- a leak detection system under each storage tank and in the interstitial space of the sump tank(s);
- a hydrocarbon detection system in each storage tank containment areas and selected other containment areas;
- piping pressure and temperature sensors and transmitters for measurement and protection,
- ultrasonic meters;
- densitometer(s), viscometer(s), and automatic sampler(s);
- bi-directional, positive displacement meter prover;
- waste oil sump level and control instrumentation; and
- berthing assistance instrumentation.

The characteristics and features of the instrumentation will be as per Section 3.4.1.10.1, as applicable, except that the tank fire detection system will be other than IR. IR detectors cannot be used on fixed-roof tanks.

3.4.4.11.1 Custody Transfer Metering System

A custody transfer metering system will be installed at the Westridge Marine Terminal.

The metering system will consist of six meter runs, two on each dock delivery line and two spare meter runs. The meters will be ultrasonic.

Measurement accuracy will meet or exceed *Canadian Weights and Measures Regulation Part IV* of +/- 0.25 per cent. The proving method will be a permanent bi-directional, positive displacement meter prover.

The custody transfer metering system will include instrumentation to provide continuous monitoring of fluid characteristics (including temperature, pressure, viscosity, and density), an automatic sampler, and flow computers.

3.4.4.11.2 Berthing Assistance System

A berthing assistance system will be installed on each berth at the Westridge Marine Terminal. The system will measure the speed of approach, distance to berth, and angle of approach for a vessel up to 200 m from the berth.

The berthing assistance system will include the following instruments:

- laser rate-of-approach docking sensors; and
- tide, wind, current, and visibility sensors.

Critical information will be indicated on display boards that can be seen from an approaching vessel's bridge and transmitted to control screens on shore and to the BCCP portable piloting units.

3.4.4.12 Protection Philosophy

3.4.4.12.1 Emergency Shutdown Systems

All equipment added for TMEP will be integrated into the existing Westridge Marine Terminal ESD system, which will be expanded and enhanced as necessary. Additional integration will be developed between the ESD systems at Burnaby and at Westridge Marine Terminal. A standby generator will ensure essential services and ESD functionality during power outages.

Tanker Loading

Emergency shut down buttons will be located near each loading arm and in the new operations building. The activation of any of these ESD buttons will safely stop loading operations and send an alarm to the PCC (or SCC). The ESD condition will cause the booster pumps located at Burnaby Terminal to shut down and may cause other automated devices to activate.

3.4.4.13 Control

The control system for the new facilities will be integrated with the existing Westridge Marine Terminal control system and will comply with existing control philosophies. The Westridge Marine Terminal, including all transitional (start, ramp-up, ramp down, and stop) vessel loading and unloading activities will be controlled and monitored from the new Westridge Marine Terminal control building. The majority of operational functions will also be able to be monitored from the PCC (or SCC) by CCOs using the SCADA system. Steady-state loading operations will be controlled by the CCOs.

New control panels housing remote I/O racks will be provided in each of the new ESBs. The UPS will provide power to the new remote I/O racks. Additional HMIs will be added as required. Upgrading and reconfiguration of the existing HMIs will be performed, as necessary, to incorporate status, analog information, and control of the additional tanks, piping, valves, alarms, equipment, process data, and trends. Where possible, tank and meter display screens will be the same as currently in use.

The metering system will be controlled by flow computers and a PLC, consistent with those currently in service.

Control and shutdown functions for the protection of equipment and systems will be installed at the equipment and will be independent of inputs from the control system. The existing Operating Limits and Protective Device Settings document will be updated to include settings and functionality for all new equipment.

3.4.4.13.1 Communications

The existing wired and fiber optic industrial network will be expanded to provide communications between PLCs and equipment. Communications to the PCC and SCC SCADA systems will be by leased land line. Back-up communications will be provided by satellite.

An additional communications link will be installed between Westridge Marine Terminal and Burnaby Terminal to allow instantaneous response to alarms originating at either location.

3.5 Facilities Design - Other Facilities

3.5.1 Sending and Receiving Traps

3.5.1.1 Overview

New trap facilities will be installed at three pump stations on Line 1 and seven terminal or pump station locations on Line 2. Trap facilities will be deactivated at two Line 1 pump stations. Table 3.5.1 indicates the locations of existing and new traps on all pipelines.

TABLE 3.5.1

NEW AND EXISTING SENDING AND RECEIVING TRAPS

Pump Station	Existing	New
Edmonton	Sending (1)	Sending (2)
Edson	Sending (1) and Receiving (1)	Sending (2) and Receiving (2)
Hinton	Remove Sending (2) Receiving (1)	Sending (1)
Rearguard	-	Sending (1) and Receiving (1) Sending (2) and Receiving (2)
Darfield	Remove Receiving (1) Sending (2)	Receiving (2)
Black Pines	-	Sending (1) and Receiving (1) Sending (2) and Receiving (2)
Kamloops	Sending (1) and Receiving (1)	Sending (2) and Receiving (2)
Sumas	Sending (1) and Receiving (1) Sending (24ST) Provision Only Sending (20ST) Provision Only Sending (24PS)	-
Sumas Terminal	Receiving (24ST) Receiving (20ST)	-
Burnaby Terminal	Receiving (1) Sending (24WMT)	Receiving (2) Sending (30-1WMT) Sending (30-2WMT)
Westridge Marine Terminal	-	Receiving (30-1WMT) Receiving (30-2WMT) Receiving (24WMT)
US Border	-	Sending (20PS) Receiving (24PS)

Notes: (1) Line 1
 (2) Line 2
 (20ST) NPS 20 Sumas Terminal
 (24ST) NPS 24 Sumas Terminal
 (20PS) NPS 20 US Puget Sound Line
 (24PS) NPS 24 US Puget Sound Line
 (24WMT) NPS 24 WMT Existing Delivery Line
 (30-1WMT) NPS 30 WMT New Delivery Line 1
 (30-2WMT) NPS 30 WMT New Delivery Line 2

Each trap system will include the following features:

- sending and/or receiving barrels, with door assembly;
- isolation and bypass valves piping;
- thermal relief and drain valve(s) and piping;
- containment below the door; and
- instrumentation.

Quick-opening door assemblies will be designed, fabricated, and tested in accordance with CSA Z662 and the American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* Section VIII, Division 1. The door design and operation will prohibit opening should any pressure exist within the sending or receiving traps.

All trap facilities with the exception of the border traps will be installed within the fenced area of pump stations and terminals.

The line size transition facility at Hargreaves, BC (Kilometre Post [KP] 468.0) will be decommissioned and removed.

Table 3.5.2 lists the approximate run distances between sending and receiving traps, after completion of TMEP.

TABLE 3.5.2

APPROXIMATE RUN DISTANCES BETWEEN SENDING AND RECEIVING TRAPS

Pipeline Segment	Pipeline OD (mm)	Run Distance* (km)
Line 1		
Edmonton to Edson, AB	609.6	229
Edson to Hinton, AB	762.0	89
Hinton, AB, to Rearguard, BC	609.6	159
Rearguard to Black Pines, BC	609.6	308
Black Pines to Kamloops, BC	762.0	38
Kamloops to Sumas, BC	609.6	259
Sumas to Burnaby, BC	609.6	65
Line 2		
Edmonton to Edson, AB	914.4	247
Edson, AB, to Rearguard, BC	914.4	251
Rearguard to Darfield, BC	914.4	271
Darfield to Black Pines, BC	762.0	43
Black Pines to Kamloops, BC	914.4	39
Kamloops to Burnaby, BC	914.4	329
Other		
Burnaby to Westridge Marine Terminal	609.6	4
Burnaby to Westridge Marine Terminal (2 lines)	762.0	4
Sumas to US Boarder (Puget Sound Line)	609.6	9

Note: *The run distances are unequal between the two pipelines because of routing differences.

The sending and receiving trap system layouts and designs will be integrated with the pump station systems layouts and designs. The details will be developed during the detailed engineering and design phase.

3.5.2 Main Line Block Valves (Locations and Infrastructure)

Line 1

Line 1 will have 24 main line block valves (MLBVs) located at the existing and new pump stations and at the existing terminals. Some of these sites will also have check valves and some MLBVs (*i.e.*, where there are traps) may be combinations of multiple valves. Table 3.5.3 gives the locations of the MLBVs.

TABLE 3.5.3

LINE 1 MLBV LOCATIONS

#	Facility	KP	Valve Type	Current Status
1	Edmonton Terminal	0.00	Automated MLBV	Existing
2	Stony Plain Pump Station	49.49	Automated MLBV	Existing
3	Gainford Pump Station	99.43	Automated MLBV	Existing
4	Chip Pump Station	147.04	Automated MLBV	Existing
5	Niton Pump Station	173.37	Automated MLBV	Existing
6	Edson Pump Station	228.75	Automated MLBV	Existing
7	Hinton Pump Station	317.76	Automated MLBV	Existing
8	Jasper Pump Station	369.53	Automated MLBV	Existing
9	Rearguard Pump Station	476.76	Automated MLBV	Existing
10	Albreda Pump Station	519.13	Automated MLBV	Existing
11	Chappel Pump Station	555.46	Automated MLBV	Existing
12	Finn Pump Station	612.49	Automated MLBV	Existing
13	McMurphy Pump Station	645.01	Automated MLBV	Existing
14	Blackpool Pump Station	710.02	Automated MLBV	Existing
15	Darfield Pump Station	741.98	Automated MLBV	Existing
16	Black Pines Pump Station	785.00	Automated MLBV	New
17	Kamloops Pump Station	822.96	Automated MLBV	Existing
18	Stump Pump Station	862.74	Automated MLBV	Existing
19	Kingsvale Pump Station	924.85	Automated MLBV	Existing
20	Hope Pump Station	1011.81	Automated MLBV	Existing
21	Wahleach Pump Station	1045.92	Automated MLBV	Existing
22	Sumas Pump Station	1082.01	Automated MLBV	Existing
23	Port Kells Pump Station	1124.33	Automated MLBV	Existing
24	Burnaby Terminal	1147.07	Automated MLBV	Existing

In addition to the MLBVs located at pump stations, there will be 64 RMLBVs and 8 check valves located along Line 1, of which 62 RMLBVs and 2 check valves exist. Table 5.1.10 in Appendix D gives the location of the existing RMLBVs and check valves.

It is anticipated that two RMLBVs and six check valves will be added to the Line 1 pipeline sections to be reactivated between Hinton, AB, and Hargreaves, BC, and between Darfield, BC, and Black Pines, BC. In addition, it is anticipated that four of the existing manual RMLBVs will be automated. Table 5.1.11 in Appendix D gives a preliminary list of the RMLBVs in the sections

to be reactivated. The numbers and locations will be finalized during the detailed engineering and design phase.

Line 2

There will be 12 MLBVs (11 with associated check valves) located at the new Line 2 pump stations and at the existing terminals. Table 3.5.4 lists the MLBV locations. Some of these MLBVs (*i.e.*, where there are traps) may be combinations of multiple valves. There will also be one MLBV at Burnaby Terminal (with an associated check valve) and one MLBV at Westridge Marine Terminal on each of the Burnaby to Westridge Marine Terminal pipelines.

TABLE 3.5.4

LINE 2 MLBV LOCATIONS

#	Facility Name	RK	Valve Type
1	Edmonton Terminal	0.000	Automated MLBV
2	Gainford Pump Station	117.4	Automated MLBV
3	Wolf Pump Station	206.1	Automated MLBV
4	Edson Pump Station	247.2	Automated MLBV
5	Hinton Pump Station	339.4	Automated MLBV
6	Rearguard Pump Station	498.3	Automated MLBV
7	Blue River Pump Station	614.6	Automated MLBV
8	Blackpool Pump Station	736.9	Automated MLBV
9	Black Pines Pump Station	811.8	Automated MLBV
10	Kamloops Pump Station	850.9	Automated MLBV
11	Kingsvale Pump Station	955.5	Automated MLBV
12	Burnaby Terminal	1179.8	Automated MLBV

In addition to the MLBVs located at the new pump stations and at the terminals, there will be approximately 72 RMLBVs and 21 check valves located along Line 2. Seventy-one of these RMLBVs will be automated. Some of the RMLBVs will be located at Line 1 pump station sites or deactivated pump station sites. Where possible, Line 2 RMLBVs that are not located at pump station sites will be co-located at existing Line 1 RMLBV sites to take advantage of common infrastructure. There will also be 1 RMLBV located on each of the Burnaby-Westridge pipelines. Table 5.1.12 in Appendix D gives a preliminary list of the RMLBVs. The numbers and locations will be finalized during the detailed engineering and design phase.

RMLBV Sites

All RMLBV sites will be located on Line 1 and Line 2 rights-of-way.

Each automated RMLBV site will have, as a minimum, the following components:

- a full-port, through conduit, slab gate valve, complete with bypass piping;
- a motor operator;
- pressure and temperature instrumentation;
- a power, control, and communications, cabinet;

- a UPS;
- a PLC;
- a communications system;
- a power supply; and
- security fencing.

Where utility power cannot be provided, an alternate power source will be provided. Various technologies are commercially available. The final power sources will be determined during the detailed design and engineering phase.

3.5.2.1 *Civil and Structural*

Once the valve assembly has been installed as part of pipeline construction activity, the general scope of civil work will include the following:

- rough grading;
- piles (likely screw piles) for the cabinet, and fence posts;
- fencing; and
- finish grading.

3.5.2.2 *Buildings/Cabinets*

The power, control, and communications cabinets will be pre-fabricated and pre-assembled, complete with the equipment they house, off-site.

3.5.2.3 *Electrical*

Where possible, a 480 or 575 VAC, 100 A three phase power service will be provided at each RMLBV site via overhead power lines. The power will be brought into the site from the service transformer on the last pole via an underground power cable routed to the electrical cabinet. The power cable will be connected to a power meter then to a distribution panel in the electrical cabinet.

Cabinets will be mounted outside of hazardous areas.

The PLC will be connected to the transducers via Teck 90 instrument cable and sealed where required by the Canadian Electrical Code.

3.5.2.4 *Control*

The control system for the new RMLBVs will be integrated with the existing mainline control system and will comply with existing control philosophies. The majority of operational functions will be able to be controlled from the PCC (or SCC) by CCOs using the SCADA system. The function of the SCADA system for RMLBV sites will be very similar to the function for a pump station. Additional details on the function of the SCADA system are included in Section 3.3.17 and in Volume 4C, Section 7.1.

New control panels housing remote I/O racks will be provided in each of the new cabinets. The UPS will provide power to the new remote I/O racks.

The Operating Limits and Protective Device Settings document will be updated to include settings and functionality for all new equipment.

3.5.2.4.1 Communications

Satellite communication will be installed at each RMLBV site and the PLC will report directly to the SCADA system. There will not be back-up communications systems at RMLBV sites.

3.5.3 Pressure Control Stations

Downstream of the Coquihalla summit in BC, one or more pressure control valves at one or more pressure control stations may be required on each pipeline to eliminate slack flow.

The pressure control station(s) will likely be at the existing Hope pump station but the location(s) and details will be finalized during the detailed engineering and design phase.

3.5.4 Sumas Terminal Line 2 Take-off

This facility will be located approximately 200 m from the Sumas Terminal. This take-off will connect Line 2 to the Sumas Terminal manifold and to the new Tank 100.

This take-off facility may have some of the following components:

- a main line block valve;
- a take-off valve;
- a check valve;
- a control valve;
- a densitometer;
- a power supply;
- a control and communications link; and
- a security fence.

The take-off will be able to deliver the full Line 2 flow to tankage or a slip stream off the main line. Operating parameters will be determined during the detailed engineering and design phase.

3.5.5 Power Supply Requirements

3.5.5.1 Alberta Power Supply Requirements

In Alberta, power infrastructure improvements will be required at Edmonton Terminal, Gainford Pump Station, and Edson Pump Station to support the Line 2 loads. Applications have been submitted to the AESO. Fortis Alberta and AltaLink have been tasked by the AESO to make a recommendation on the type of service (transmission or distribution) and infrastructure improvements required. The design and construction of all improvements, including substations,

interconnection (customer) power lines, and deep system infrastructure improvements will be managed by either of Fortis or AltaLink, as determine by the AESO.

New substations will be required at Edmonton Terminal and Edson Pump Station. A substation upgrade will be required at Gainford Pump Station.

Preliminary indications are that there are only small power line infrastructure upgrades required, but this will depend on the determination of the AESO. For power line additions or upgrades, Fortis or AltaLink will be responsible for public consultation, environmental studies, and other regulatory compliance requirements.

Fortis or AltaLink will maintain both the sub-stations and the power lines.

Table 3.5.5 indicates the preliminary scope of the Alberta power interconnection and substation requirements.

TABLE 3.5.5

ALBERTA POWER INTERCONNECTION AND SUBSTATION REQUIREMENTS

Location	Voltage (kV)	New Power Line Required?	New Power Line Length (km)	Sub-station* Changes	Notes
Edmonton	138	Y	100 m	N	Existing Substation remains in service, add new 25 MVA substation for new loads
Stony Plain	138	N	NA	NC	
Gainford	138	N	NA	U	New 25 MVA transformer within Company property
Chip Lake	138	N	NA	NC	
Niton	25	N	NA	NC	
Wolf Lake	25	N	NA	NC	
Edson	25 or 138	Y	40 or 4	N	Option 1 - 25 kV is being studied and would require an ~ 40 km power line. Option 2 - 138 kV is being studied and would require an ~4 km power line.
Hinton	138	N	NA	NC	
Jasper	25	N	NA	NC	

Notes: * NC - No Changes
 N - New
 U - Upgrade

3.5.5.2 British Columbia Power Requirements

In BC, it is anticipated that deep system power infrastructure improvements will be required in the North Thompson region to support the Line 2 loads. Applications have been submitted to BC Hydro who will determine the deep system infrastructure improvements required. The design and construction of sub-stations and interconnection (customer) power lines will be managed by Trans Mountain. The design and construction of deep system infrastructure improvements will be managed by BC Hydro.

New substations will be required at Black Pines, Kamloops, and Kingsvale pump stations, and at Burnaby and Westridge terminals. Substation upgrades will be required at Blackpool and Sumas Pump Stations.

A new 138 kV transmission power line, approximately 4 km in length, will be required to supply Black Pines Pump Station. A new 138 kV transmission power line, approximately 24 km in length, will be required to supply Kingsvale Pump Station. New 25 kV distribution power lines, approximately 11 km and 5 km in length, respectively, will be required to supply Burnaby and Westridge Marine Terminal.

New power lines will be wooden pole construction, either single pole with a cross arm or double wooden pole in an H configuration, designed to BC Hydro specifications.

Ownership of the power lines will transfer to BC Hydro after construction. BC Hydro will maintain the power lines. Trans Mountain will maintain the substations.

Table 3.5.6 indicates the preliminary scope of the BC power interconnection and substation requirements.

TABLE 3.5.6

BRITISH COLUMBIA POWER INTERCONNECTION AND SUBSTATION REQUIREMENTS

Location	Voltage (kV)	New Power Line Required?	New Power Line Length (km)	Sub-station* Changes	Notes
Rearguard	132	N	NA	NC	
Albreda	132	N	NA	NC	
Chappel	132	N	NA	NC	
Blue River	132	N	NA	NC	
Finn Creek	132	N	NA	NC	
McMurphy	132	N	NA	NC	
Black Pool	132	N	NA	U	New 25 MVA transformer within Company property
Darfield	132	N	NA	NC	
Black Pines	132	Y	4	N	New 15 MVA sub-station within existing Company property
Kamloops	132	N	NA	N	Existing 10 MVA substation remains in service. Add new 25 MVA sub-station within existing Company property
Stump Lake	132	N	NA	NC	
Kingsvale	132	Y	24	N	New 15 MVA sub-station within existing Company property
Hope	69	N	NA	NC	
Wahleach	69	N	NA	NC	
Sumas	69	N	NA	U	New 10 MVA transformer and breaker within existing substation
Sumas Terminal	12.5	N	NA	NC	
Port Kells	69	N	NA	NC	
Burnaby Terminal	12.5	Y	11	U	New 7.5 MVA sub-station within existing Company property, reconductor ~11 km power line
Westridge Marine Terminal	12.5	Y	5	U	New 7.5 MVA sub-station within existing Company property, reconductor ~5 km power line

Notes: * NC - No Changes
 N - New
 U - Upgrade

3.6 Reactivation of NPS 24 Segments (Hinton to Hargreaves and Darfield to Black Pines)

3.6.1 Background

Trans Mountain plans to reactivate two deactivated segments of the existing NPS 24 pipeline as part of TMEP. Reactivation will be undertaken in accordance with the NEB OPR and CSA Z662, Oil and Gas Pipeline Systems. The segments proposed for reactivation are:

- Hinton, AB to Hargreaves, BC – approximately 150 km in length, which was in continuous operation from 1953 to 2008; and
- Darfield, BC to Black Pines, BC – approximately 43 km in length, which was in continuous operation from 1953 to 2004.

3.6.1.1 Hinton to Hargreaves

The Hinton to Hargreaves segment was deactivated in 2008 under NEB Certificate OC-49 following completion of the TMX Anchor Loop Expansion Project (TMX-Anchor Loop). In anticipation of future growth, measures were taken to promote the long-term integrity of the deactivated segment to maintain the potential for its future reactivation.

3.6.1.2 Darfield to Black Pines

The Darfield to Black Pines NPS 24 pipeline segment was deactivated in 2004 under NEB Order XO-T099-05-2004 when the parallel NPS 30 segment was reactivated as part of the Capacity Upgrade Project. In anticipation of future growth, measures were taken to promote the long-term integrity of the deactivated segment to maintain the potential for its future reactivation.

The measures taken to ensure the long-term integrity of the deactivated pipeline segments included:

- removing the oil through the use of bi-directional pigs and a nitrogen purge;
- isolating the pipeline through the installation of weld caps;
- maintaining nitrogen in the pipeline (verified by pressure monitoring) to prevent internal corrosion;
- maintaining the cathodic protection (CP) system to prevent external corrosion;
- maintaining the Pipeline Protection Management System which includes One-Call and aerial patrol; and
- implementing the Trans Mountain Natural Hazards Program.

3.6.2 Regulatory Requirement

A preliminary engineering assessment has been completed as a first step in satisfying the requirements of the OPR for reactivation. The assessment details “the measures to be employed for the reactivation” and generally satisfies the intent of CSA Z662, Section 10.15.2 to “conduct an engineering assessment” and if the engineering assessment finds that the pipe is not suitable for service, to detail “the corrective measures necessary to make it suitable before

reactivating.” The preliminary engineering assessment will be updated to a final engineering assessment during the detailed engineering and design phase.

3.6.3 Engineering Assessment

3.6.3.1 Objective

The purpose of the preliminary engineering assessment is to document the integrity management status of the segments to be reactivated and the measures that Trans Mountain will employ to verify their integrity prior to reactivation.

3.6.3.2 Scope

The preliminary engineering assessment examines the integrity history and condition of the deactivated pipeline segments and identifies the measures required to ensure fitness for service. The general approach to reactivation includes inspection, repair, and hydrostatic testing, similar to the approach that was employed for the reactivation of the NPS 30 Darfield to Kamloops segment in 2004. Elements of the preliminary engineering assessment are discussed in the following sections.

3.6.3.3 Pipe Description

Construction of the NPS 24 pipeline was completed in 1953 using double submerged arc welded pipe manufactured by Kaiser Steel Corporation and Consolidated Western Steel and flash welded pipe manufactured by A.O. Smith. The pipeline was coated in the field with coal tar enamel. A breakdown of the pipe manufacturers for the deactivated segments is provided in the Tables 3.6.1 and 3.6.2.

TABLE 3.6.1

PIPE MANUFACTURERS – HINTON TO HARGREAVES

Hinton to Hargreaves							
Manufacturer	NPS	Specification	Grade	W.T. (mm)	Year	Seam Type	km of Pipe
A.O. Smith	24	API 5L	290	12.7	1953	FW	2.1
A.O. Smith	24	API 5L	359	7.9	1953	FW	20.1
Consolidated Western Steel	24	API 5L	318	12.7	1953	DSAW	0.2
Consolidated Western Steel	24	API 5L	359	7.9	1953	DSAW	102.0
Kaiser Steel Corp.	24	API 5L	318	12.7	1953	DSAW	0.9
Kaiser Steel Corp.	24	API 5L	359	7.9	1953	DSAW	17.8
Kaiser Steel Corp.	24	API 5L	359	6.4	1953	DSAW	7.6
Consolidated Western Steel	24	API 5L	359	7.9	1953	DSAW	33.8
Consolidated Western Steel	24	API 5L	359	8.7	1953	DSAW	3.6
Kaiser Steel Corp.	24	API 5L	359	7.9	1953	DSAW	5.5

3.6.3.4 Service

Upon completion of TMEP, the reactivated segments will form part of Line 1. The products transported will be similar to those which are currently transported in the TMPL system with the exception that very little heavy crude will be transported. Heavy crude will be largely transported

in Line 2. The reactivated segments are expected to operate at pressures and flow rates that are consistent with historical operating pressures and flow rates.

3.6.3.5 Hydrostatic Testing

The initial post-construction hydrostatic test for the Hinton to Hargreaves segment took place in 1953 (Figure 3.6.1). This segment was initially tested in three sections. The test pressures ranged from 83 to 91.5 per cent of the SMYS at the low points. No failures occurred as a result of these initial tests. Additional hydrostatic testing of the pipeline occurred in eight sections between 1964 through 1998 with a test pressure ranging between 88 and 101.8 per cent of the SMYS. Three failures occurred in the 1965 hydrostatic test to 100 per cent of the SMYS. No failures occurred in the other seven tests.

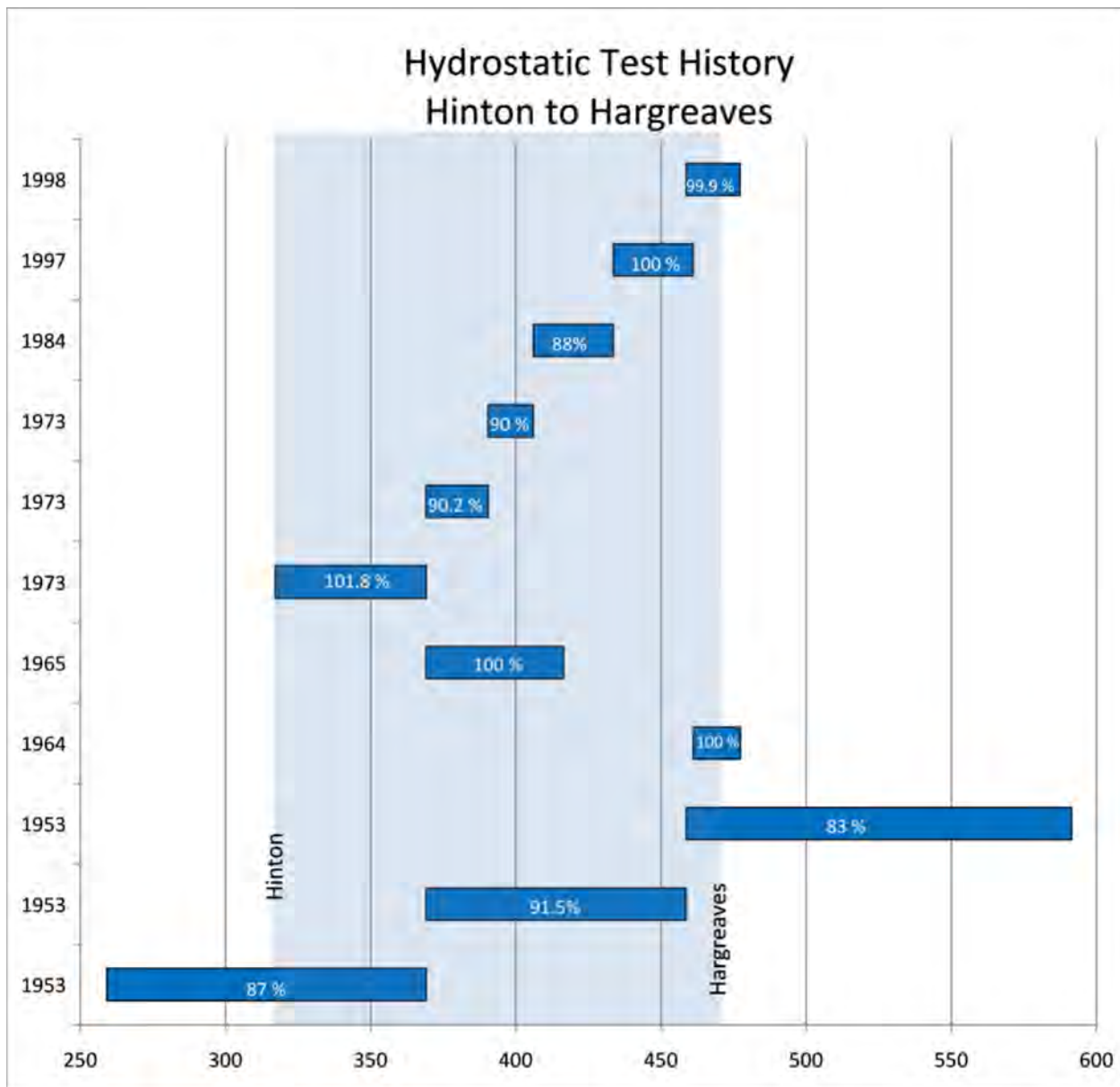


Figure 3.6.1 Hydrostatic Test History – Hinton to Hargreaves

The initial post-construction hydrostatic test for the Darfield to Black Pines segment took place in 1953 (see Figure 3.6.2). The pipeline was initially tested in one section. The test pressure was 83 per cent of the SMYS at the low point. The segment was retested in two sections in 1978. The test pressure achieved was 100 per cent of the SMYS at the low point of the two test sections. No failures occurred in either of the test sections.

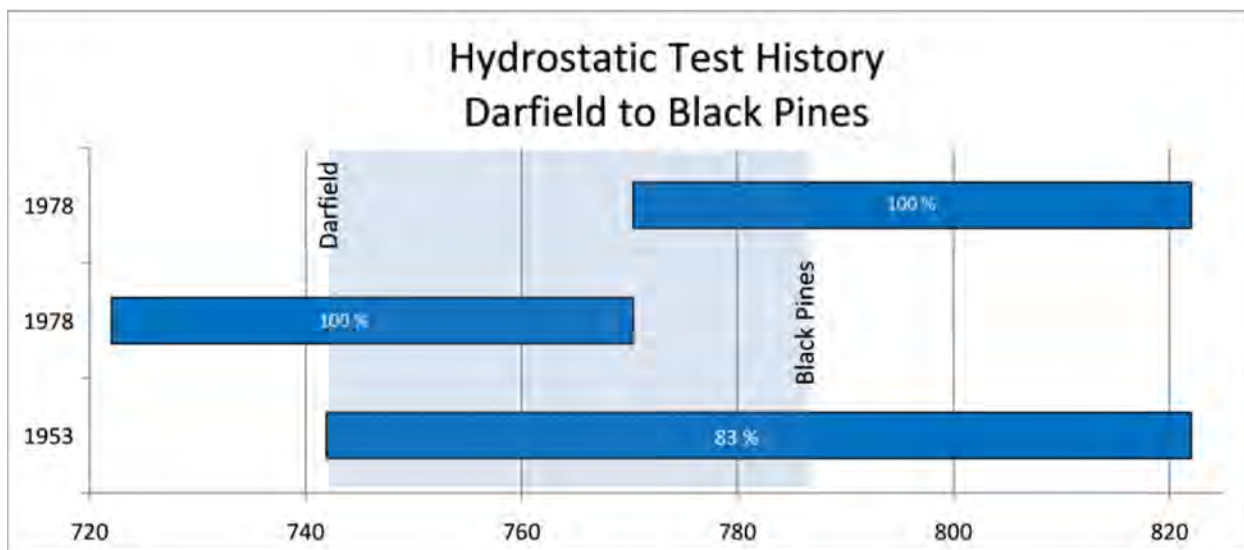


Figure 3.6.2 Hydrostatic Test History – Darfield to Black Pines

3.6.3.6 In-line Inspection

In-line Inspection (ILI) programs began on the TMPL system in the 1970s when ILI tools first became available. High resolution ILI tools became available in the 1990s. Since then, Trans Mountain has been inspecting the pipeline system using high resolution tools.

The Hinton to Hargreaves segment has been inspected with the following high resolution ILI tools:

- 1998 – Pipetronix WM Ultrasonic Metal Loss;
- 2001 – BJ GEOPIG (High Resolution Geometry);
- 2007 – BJ Vectra (High Resolution Metal Loss); and
- 2007 – GE UltraScan Crack Detection (USCD) (High Resolution Crack Detection).

The Darfield to Black Pines segment has been inspected with the following ILI tools:

- 1995 – Tuboscope MFL Metal Loss (Low Resolution Metal Loss); and
- 2003 – BJ GEOPIG (High Resolution Geometry).

Results of the ILIs are discussed in the following sections.

Prior to hydrostatic testing, Trans Mountain will complete ILIs of the deactivated segments using a high resolution metal loss tool, a high resolution axial flaw detection tool, and a high resolution geometry tool. These inspections will be completed by pushing the tools through the deactivated segments using nitrogen or compressed air. The tool configurations and methods of moving the tools will be determined during the detailed engineering and design phase.

Trans Mountain will also inspect the reactivated segments, within the first two years of operation, with a specialized high-resolution ultrasonic tool, to verify that no detrimental crack defects were initiated and/or grew as a result of the hydrostatic testing. Ultrasonic tools require the pipe to be liquid filled and cannot be run prior to reactivation.

3.6.3.7 *Corrosion*

The NPS 24 mainline, including the active segments and the currently inactive segments, has a very good performance history with respect to corrosion defects. To date there have been no documented spills that have been attributed to internal or external corrosion.

The good performance of the mainline can be attributed to good adhesion of the coal tar enamel coating, maintenance, monitoring and upgrading of the CP system, turbulent flow rates in the pipeline (that minimize the likelihood of water and sediment gathering on the internal surface of the pipe), and a batch lineup that includes products such as gasoline (which assist in keeping the inside of the pipe clean).

In addition, the deactivated sections were filled with nitrogen to provide an inert atmosphere.

3.6.3.7.1 External Corrosion

Following the 1998 Pipetronix and the 2001 GEOPIG ILIs, 179 pipeline excavations were completed along the Hinton to Hargreaves section of pipeline. Ninety-four per cent of the excavations indicated that the adhesion of the coating was good.

CP has been maintained since the pipeline segments were deactivated. To maintain effective CP of the pipeline system, Trans Mountain targets a minimum value of -850 mV off-potential. This is consistent with the National Association of Corrosion Engineers (NACE) recommended practices for protection of pipelines from external corrosion and with Canadian Energy Pipeline Association published recommendations for protection of the pipeline from initiation and growth of stress corrosion cracking.

Off-potentials along the Hinton to Hargreaves segments are generally good with test station readings showing that the minimum target of -850 mV is being maintained with the exception of a few locations. Test station readings in 2012 showed that low readings occurred between KP 370 and KP 380, between KP 407 and KP 408, and between KP 455 and KP 465. As part of Trans Mountain's CP maintenance program, Trans Mountain is reviewing the protection at these locations to determine whether adjustments or modifications to the CP system are required.

The 2007 BJ MFL ILI indicated that there were five joints of pipe that had anomalies and clusters that were predicted to have a rupture pressure of less than 1.0. A rupture pressure of 1.0 is the pressure at which the pipeline would be expected to fail at its SMYS. The inspection tool also identified 11 pipe joints that had external anomalies predicted to be deeper than 50 per cent of the pipe wall thickness. Some of these features are located within the anomalies and clusters that were reported to have a rupture pressure ratio of less than 1.0.

No excavations have been completed to further assess these anomalies as the segment was deactivated shortly after the inspection was completed. Prior to reactivation, a high resolution MFL metal loss ILI tool will be run and repairs will be completed to remove anomalies that would otherwise have the potential to fail during hydrostatic testing.

Off-potentials on the Darfield to Black Pines segment are good, with all test station readings showing that the minimum target of -850 mV is being maintained. No high resolution metal loss ILIs have been completed on this segment. Prior to reactivation, a high resolution MFL metal loss ILI tool will be run and repairs will be completed to remove anomalies that would otherwise have the potential to fail during hydrostatic testing.

3.6.3.7.2 Internal Corrosion

The deactivated sections have been purged with nitrogen and the integrity of the nitrogen blankets have been verified by pressure monitoring. Nitrogen provides an inert atmosphere that inhibits corrosion from occurring on the internal surface of the pipeline.

The 2007 BJ MFL ILI on the Hinton to Hargreaves segment indicated that there were no joints of pipe that had internal anomalies that were predicted to have a rupture pressure of less than 1.0. The ILI tool identified three pipe joints that had internal anomalies that were predicted to be deeper than 50 per cent of the pipe wall thickness.

No excavations have been completed to assess these anomalies as the segment was deactivated shortly after the inspection was completed.

No high resolution metal loss ILIs have been completed on the Darfield to Black Pines segment of the pipeline.

The plan for the detection and removal of internal corrosion defects will be the same as for external corrosion defects as described in 3.6.3.7.1.

3.6.3.8 Cracking

3.6.3.8.1 Seam and Body Cracking

A USCD tool was run in the Hinton to Hargreaves segment in 2007. The USCD report indicated that there were approximately 21 crack-like anomalies in the pipeline. Sixteen of these anomalies were predicted to be between 1 mm and 2 mm deep (approximately 12 to 25 per cent of the pipe wall thickness). The remaining five indications were predicted to be between 2 mm and 3 mm deep (approximately 25 to 40 per cent of the pipe wall thickness).

Four of the locations where 2 mm to 3 mm deep features were identified by the USCD tool were excavated and further assessed. No indications were found at two of these locations. The other two sites found linear indications that had depths of less than 10 per cent of the pipe wall thickness.

The USCD tool also identified one notch-like indication with a depth range of 2 mm to 3 mm. This feature was excavated and further assessed and was determined to be caused by grinder marks on both sides of the longitudinal weld.

One indeterminate feature was identified by the tool and was excavated and assessed. The feature was determined to be an irregular weld with a small, visible, pin hole.

Eighteen weld anomalies were also identified by the USCD tool. None of these features were field assessed.

No crack inspections have been completed on the Darfield to Black Pines segment.

Prior to reactivating the pipeline segments, Trans Mountain will run an axial flaw detection (AFD) ILI tool that is able to identify axially oriented features such as corrosion grooves, gouges and open cracks.

Trans Mountain will also inspect the reactivated segments, within the first two years of operation, with a specialized high-resolution ultrasonic tool, to verify that no detrimental crack defects were initiated and/or grew as a result of the hydrostatic testing.

3.6.3.8.2 Stress Corrosion Cracking

Stress Corrosion Cracking (SCC) is a form of cracking that can occur beneath coatings that have disbonded from the pipe surface where there is an absence of adequate CP or when the disbonded coating shields the pipe from the cathodic current. It is possible for SCC to occur on coal tar enamel coated pipelines. Trans Mountain has confirmed a few existences of SCC on the NPS 24 pipeline.

Trans Mountain has confirmed indications of SCC on the Hinton to Hargreaves segment at KP 407 and KP 407.3. No SCC has been found in the Darfield to Black Pines segment. Repairs consisted of cutting the affected pipe out of the pipeline and replacing it.

The SCC at KP 407 consisted of three colonies with a maximum crack length of 3 mm and a maximum depth of less than 10 per cent of the pipe wall thickness. The cracks were oriented longitudinally. The pipe was located in a muskeg area with moist soil conditions.

The SCC at KP 407.3 consisted of one colony with a maximum crack length of 5 mm and a maximum depth of less than 10 per cent of the pipe wall thickness. The cracks were oriented longitudinally. The pipe was located in a rock/clay/sand mix soil with wet soil conditions.

Both SCC features appear in a section of pipeline where the 2012 test station readings showed low off-potentials (below -850 mV). As noted, Trans Mountain is reviewing the CP in these areas to determine if adjustments or modifications are required.

A USCD tool was run in the Hinton to Blue River section of the pipeline (which includes the Hinton to Hargreaves segment) in 2007. One crack field anomaly was identified. The feature was predicted to be approximately 1 mm to 2 mm (12 to 25 per cent) of the pipe wall thickness. The feature has not been assessed in the field.

Prior to reactivating the pipeline segments, Trans Mountain will run an AFD ILI tool that is able to identify axially oriented features such as cracks.

Trans Mountain will also inspect the reactivated segments, within the first two years of operation, with a specialized high-resolution ultrasonic tool, to verify that no detrimental crack defects were initiated and/or grew as a result of the hydrostatic testing.

3.6.3.9 Dents

Dents may exist in pipelines as a result of the pipelines settling over rocks, from rock impingement due to soil movements (e.g., freeze/thaw cycles), or from third-party damage. A

high resolution GEOPIG ILI was completed in 2001 on the Hinton to Hargreaves segment and in 2003 on the Darfield to Black Pines segment.

The 2001 GEOPIG ILI identified 14 top side dents with a depth greater than 2 per cent of the pipe diameter. The largest top side dent identified was a 3 per cent dent. Bottom side dents were more frequent and are typical of construction through the rocky terrain of the mountains. One bottom side dent had a predicted depth of 6 per cent of the pipe diameter. Three bottom side dents had predicted depths of between 5 and 6 per cent. Four dents were identified with predicted depths between 4 and 5 per cent and 25 dents had predicted depths between 3 and 4 per cent.

Excavations were completed at 54 locations along the Hinton to Hargreaves segment. Dents were identified at 49 of the sites. At two of the sites, corrosion was found in the dents. In both cases, the dent/corrosion was not severe, the corrosion features were ground out, and the pipes were recoated. Gouges were found in dents at two locations. One was in a top side dent at approximately the one o'clock position and one was in a bottom side dent at approximately the six o'clock position. In both cases, the features were non-deleterious, the gouges were ground out and the pipes were recoated. Nine dents were found to contain scratches. Scratches are small surface level indications that do not have measurable depth. Eight of these defects were ground out and one was repaired with an epoxy filled sleeve. Four of these defects were located on the top side of the pipe and five were located on the bottom side of the pipe. The largest dent depth that was recorded as a result of the excavations was 2.15 per cent of the pipe diameter. This was likely due to rebounding of the dents once the indentors were removed rather than overestimation of the sizing of the features by the GEOPIG.

On the Darfield to Black Pines segment, nine dents with a predicted depth greater than 2 per cent of the pipe diameter were identified by the 2003 GEOPIG inspection. All of the dents were located on the bottom of the pipe. The largest dent identified was predicted to have a depth of 4.6 per cent. Two dents were predicted to have depths between 3 and 4 per cent. The remaining dents were all predicted to have depths between 2 and 3 per cent. No excavations were completed on the dents identified in the Darfield to Black Pines segment.

The low number and low severity of top side dents is an indicator that the public awareness program, the One-Call systems and aerial and ground monitoring programs are effective at limiting unauthorized activities around the pipeline. Also, there is relatively little construction activity that occurs in the vicinity of the Hinton to Hargreaves segment in Jasper National Park and Mount Robson Provincial Park.

Prior to reactivation, Trans Mountain will complete additional high resolution geometry ILIs in these segments to identify additional potential dent, wrinkle, or buckle defects that may exist. This will also allow overlapping of the previous GEOPIG inspections to detect any ground movements.

3.6.3.10 *Third-party Activity*

Trans Mountain has a public awareness program, signage along the rights-of-way, aerial patrols and ground patrols, and participates in the Alberta and BC One-Call systems. Trans Mountain has maintained these programs on the deactivated segments.

Trans Mountain's Public Awareness Program ensures that landowners adjacent to the rights-of-way, contractors using excavating equipment, emergency response agencies and the general public are made aware of the need to protect the operating pipeline from damage.

Signage is used to identify the pipeline rights-of-way at regular intervals and at all road and utility crossings. Besides serving to prevent damage to the pipelines from accidental interference, the signage includes an emergency contact number for the public to call if they spot unusual activity.

Right-of-way surveillance is conducted via aerial patrols. Aerial patrols help to prevent incidents by reporting unauthorized ground disturbance activities. The frequency of aerial patrol for the two segments to be reactivated is provided in Table 3.6.3.

TABLE 3.6.3
AERIAL PATROL FREQUENCY

TMPL Line/Segment	Summer (May to October)	Winter (November to April)
Edmonton to Barrier, BC	2/month (12)	1/month (6)

Field operations personnel also conduct day-to-day surveillance of the rights-of-way during the performance of their regular duties and report potential or existing encroachments.

3.6.3.11 Natural Hazards

The natural hazards program is designed to detect, monitor, and remediate sites which are deemed to present a risk of damage to or failure of the pipeline due to geotechnical or hydrotechnical hazards. Trans Mountain has conducted natural hazards monitoring on the pipeline system since the early days of operation; however, a formal program to assess and monitor natural hazards was implemented in 1998.

The program has identified nine areas for potential mitigation prior to reactivation of the Hinton to Hargreaves segment (Table 3.6.4). There are no areas of mitigation required in the Darfield to Black Pines segment. If additional natural hazard sites are identified prior to reactivation, these will be added to the list for potential mitigation.

TABLE 3.6.4
NATURAL HAZARDS MITIGATION PRIORITY LIST (HINTON TO HARGREAVES)

Priority	KP	Creek Name	Depth of Cover (m)	Comments
1	452.72	Unnamed Creek Debris Flow	0	Pipe is exposed for 5 m in 2012 and is partly suspended in the channel.
1	461.18	Fraser River 7	0	Pipe exposure was noted in 2013 but the exact length of the section is unknown
1	411.57	Rockingham Creek	0	1 m of exposed pipe discovered in 2013
2	360.18	Snaring River	0	Pipe is exposed for 10 m in 2012.
2	374.97	Cottonwood Creek	0	Pipe is exposed for 0.5 m since 2008.
2	389.91	Minaga Creek	0	Pipe is exposed for 2 m. Mitigated in 2001 but exposed again in 2008.
2	403.99	Miette 5	0	Pipe is exposed for 3 m in 2012.
3	341.66	Unnamed Creek	0	Depth of cover was 0.05 m in 2012, near exposure.
3	385.97	Muhigan Creek	0	Pipe is exposed for 2.9 m in 2012.

The nine areas identified are stream crossings where there is insufficient depth of cover or exposure. Mitigation measures will be developed in the detailed engineering and design phase. Options will include armouring of the crossings with additional fill or other protective measures (rock blanket, concrete matting) or replacement of the pipe in the crossings with added depth of cover. Where a pipe replacement option is necessary, trenchless, isolated open cut, and open cut methods will be considered after an assessment of the hydrological and aquatic conditions and other technical and environmental factors. The results of the assessments will be filed with the NEB prior to reactivation, if required.

In addition to the mitigation measures at the known priority sites, Trans Mountain will run a high resolution geometry ILI tool prior to reactivation. The geometry tool data will be integrated with the data from the GEOPIG inspections completed in 2001 and 2003 to identify pipe movements that may have been caused by slope instability, river scour, or other geological, geotechnical, or hydrologic phenomena.

3.6.3.12 *Consequence Reduction*

Trans Mountain is currently assessing consequence reduction options on the Hinton to Hargreaves and Darfield to Black Pines segments. These studies will be completed in conjunction with risk studies, environmental sensitivity studies, and the engagement of Parks Canada and BC Parks. The studies are expected to be complete in Q2, 2014 and will be included in an updated engineering assessment.

Consequence reduction will generally consist of automating some existing RMLBVs and/or installing new automated RMLBVs or check valves at locations that are most advantageous in reducing the impact of a pipeline rupture. The valve automation/placement studies assume a worst case rupture (*i.e.*, a complete break). The calculated escaped volume is based on the maximum flow rate of the pipeline, the time required for the leak detection system to generate an alarm, and the time required for the pipeline operator to shut down the pipeline and close the RMLBVs. See Section 3.5.2 for the proposed location of RMLBVs in the reactivation segments.

An ancillary benefit to additional RMLBVs will be pressure monitoring at more locations. Additional pressure monitoring is expected to improve leak detection capabilities.

3.6.4 *Risk Assessment*

Trans Mountain is currently undertaking a risk assessment for the reactivation segments. The risk assessment is expected to be complete in Q2 of 2014. The updated engineering assessment report will include the results of the risk assessment.

3.6.5 *Reactivation Steps*

The various steps to prepare for and achieve reactivation are discussed in the following sections. A preliminary schedule for these activities is included in Volume 4B, Section 3.2 along with the preliminary pipeline construction schedule.

3.6.5.1 *Initial In-Line Inspections and Repairs*

As discussed in the previous sections, Trans Mountain will run three ILI tools, along with an initial gauging tool in the segments to be reactivated, prior to hydrostatic testing. The tools will identify metal loss, mechanical damage, and axially oriented cracks.

Once the ILI results are received, Trans Mountain will do a number of digs to verify the tools' sizing accuracy and to assess any anomalies. Since the pipeline is inactive and has been purged with nitrogen, any required repairs will be completed as cut-outs (*i.e.*, replacements of the damaged sections of pipe with new pipe).

3.6.5.2 *Natural Hazards Mitigation*

After the initial ILI program, Trans Mountain will mitigate the stream crossing hazards already identified and any other hazards identified during ongoing assessments.

3.6.5.3 *Remote Main Line Block Valve Automation and Installation*

In conjunction with the natural hazards mitigation program, Trans Mountain will complete the automation of existing RMLBVs and the installation of new RMLBVs that are identified during the ongoing study work.

Existing access roads and power lines will be utilized to the extent possible and any new infrastructure required to automate existing RMLBVs or install additional RMLBVs will be vetted with local Aboriginal groups and stakeholders.

Remote main line block valves will also include pressure monitoring devices that will communicate with the SCADA/Leak Detection system.

3.6.5.4 *Additional Maintenance Activities*

In conjunction with the RMLBV automations and installations, the existing RMLBVs will be inspected and refurbished, if necessary. Existing pipeline fittings will also be inspected and replaced if necessary and unnecessary small bore valves and piping will be removed.

3.6.5.5 *Additional Construction Activities*

As part of previous deactivation work, and in order to isolate the deactivated pipeline segments from the active pipeline segments, some fittings and piping that connected the pipelines to pump stations were removed. Modifications to piping were also made at other locations to allow the active NPS 24 pipeline segments and the larger diameter loops to form a continuous pipeline system. To allow for ILI work to proceed, the following activities will be required:

- From Hinton to Hargreaves:
 - installation of a temporary sending trap at the former Hinton trap site;
 - installation of approximately 250 m of NPS 24 pipe between the station isolation valves at Jasper Pump Station;
 - installation of approximately 200 m of NPS 24 pipe at the former Yellowhead Pump Station site; and
 - installation of a temporary receiving trap at the Hargreaves trap site.
- From Darfield to Black Pines:
 - assessment and possible upgrade of the existing sending trap at Darfield Pump Station; and
 - installation of a temporary receiving trap at the Black Pines RMLBV site.

These temporary installations and modifications will be coordinated with the permanent modification work required at some of these sites as discussed in Sections 3.3 and 3.5.

3.6.5.6 *Hydrostatic Test*

The final step in the reactivation process will be hydrostatic testing of the pipeline segments to qualify them to at least their former MOPs. Where possible, portions of the segments will be tested to 100 per cent of the SMYS. Hydrostatic testing will be conducted in accordance with CSA Z662, Oil and Gas Pipeline System requirements and KMC Standard MP4121, Main Line Hydrostatic Testing. Hydrostatic testing will ensure that a 1.25 safety factor is established prior to the segments returning to operation. The operating conditions of the reactivated pipeline are expected to be similar to what they were prior to deactivation.

3.6.5.7 *Final In-Line Inspection*

As discussed in previous sections, Trans Mountain will conduct an ILI of the reactivated segments within the first two years of operation with a specialized high-resolution ultrasonic tool to verify that no detrimental crack defects were initiated and/or grew as a result of the hydrostatic testing. Any defects identified will be assessed and a repair program will be initiated, as necessary.

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APPENDIX E

VOLUME 8C, TERMPOL 3.5/3.12 TABLE OF CONTENTS ERRATA

TERMPOL 3.5 & 3.12 – ROUTE ANALYSIS & ANCHORAGE ELEMENTS

Trans Mountain Expansion Project

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November 26, 2013

Termopol 3.5 & 3.12 – Route Analysis & Anchorage Elements

TRANS MOUNTAIN EXPANSION PROJECT

November 26, 2013

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Revision	Purpose of Issue	Date	Author	Reviewed	Approved
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TABLE OF CONTENTS

1. OBJECTIVES	1
1.1 TERMPOL 3.5 ROUTE ANALYSIS, APPROACH CHARACTERISTICS AND NAVIGABILITY SURVEY	1
1.2 TERMPOL 3.12 CHANNEL, MANOEUVRING AND ANCHORAGE ELEMENTS	1
2. ROUTE ANALYSIS	2
2.1 SEGMENT COURSES	3
2.2 MRA RULES	4
2.2.1 Operational Periods	5
2.2.2 Minimum Channel Dimensions	5
2.2.3 Transit Speed	5
2.2.4 Other Requirements	6
2.3 SEGMENT 1: WESTRIDGE BERTH TO BERRY POINT (CHS CHART 3494)	6
2.4 SEGMENT 2: BERRY POINT TO 1.0NM WEST OF PROSPECT POINT (CHS CHART 3493 & 3494)	8
2.5 SEGMENT 3: ENGLISH BAY TO STRAIT OF GEORGIA, STURGEON BANK (CHS CHART 3463)	9
2.6 SEGMENT 4: STRAIT OF GEORGIA, STURGEON BANK TO 3.0NM NORTH OF EAST POINT (CHS CHART 3463)	11
2.7 SEGMENT 5: BOUNDARY PASS AND HARO STRAIT TO VICTORIA PILOT BOARDING STATION (CHS CHART 3461 & 3462)	12
2.8 SEGMENT 6: VICTORIA PILOT BOARDING STATION TO RACE ROCKS (CHS CHART 3461)	15
2.9 SEGMENT 7: RACE ROCKS, STRAIT OF JUAN DE FUCA TO PACIFIC OCEAN (CHS CHART 3602 & 3606)	16
3. GEOGRAPHIC AND GEOLOGICAL FACTORS	18
4. CLIMATIC AND OCEANOGRAPHIC FACTORS	19
4.1 BURRARD INLET	19
4.2 STRAIT OF GEORGIA	19
4.3 SAN JUAN AND GULF ISLANDS	19
4.4 JUAN DE FUCA STRAIT	20
5. NAVIGATION AIDS & VESSEL TRAFFIC SERVICES	21
5.1 EXISTING NAVIGATION AIDS	21
5.2 IMPROVEMENTS TO NAVIGATION AIDS	22
5.3 OTHER POTENTIAL NAVIGATION IMPROVEMENTS	24
6. NAVIGATIONAL HAZARDS	25
6.1 SEGMENT 1	25
6.2 SEGMENT 2	25
6.3 SEGMENT 3	26
6.4 SEGMENT 4	26
6.5 SEGMENT 5	26
6.6 SEGMENT 6	26
6.7 SEGMENT 7	26
7. PHYSICAL LIMITATIONS	27
7.1 BRIDGES	27
7.2 POWER TRANSMISSION LINES	27
7.3 SUBMERGED PIPE CROSSING	27
7.4 NARROW PASSAGES	27

7.5 SHALLOW WATER.....	28
8. TUG SERVICES	29
8.1 ESCORT TUG SERVICES	29
9. COASTAL COMMUNITIES	30
9.1 ADJACENT COASTAL COMMUNITIES.....	30
9.1.1 Greater Victoria Area Coastal Communities.....	30
9.1.2 Gulf Islands.....	31
9.1.3 Mainland	31
9.1.4 Other	31
9.2 PERIPHERAL COASTAL COMMUNITIES	32
9.3 UNITED STATES OF AMERICA COMMUNITIES	32
10. ANCHORAGE POSSIBILITIES.....	33
10.1 INDIAN ARM ANCHORAGE	33
10.2 INNER HARBOUR ANCHORAGE	33
10.3 SOUTH ENGLISH BAY ANCHORAGE	34
10.4 NORTH ENGLISH BAY ANCHORAGE	34
10.5 ROBERTS BANK ANCHORAGE	35
10.6 SAND HEADS ANCHORAGE.....	35
10.7 EMERGENCY ANCHORAGES	35
11. NAVIGATION SIMULATIONS.....	36
11.1 FAST TIME SIMULATIONS	36
11.2 REAL TIME SIMULATIONS.....	36
12. SUPPLEMENTAL INFORMATION	37
12.1 CANADA SHIPPING ACT – CHARTS AND NAUTICAL PUBLICATIONS REGULATIONS	37
12.2 CANADA SHIPPING ACT – NAVIGATION SAFETY REGULATIONS	37
12.3 CANADA SHIPPING ACT – STEERING APPLIANCES AND EQUIPMENT REGULATIONS.....	37
12.4 STANDARD FOR TRAINING, CERTIFICATION AND WATCHKEEPING (STCW)	37
12.5 CANADIAN PILOT REGULATIONS.....	38
12.6 VESSEL TRAFFIC SERVICES (VTS)	38
13. REFERENCES.....	39
APPENDIX A: EXISTING NAVIGATION AIDS.....	40
APPENDIX B: HARBOUR OPERATIONS MANUAL	41
APPENDIX C: FAST TIME SIMULATION.....	42
APPENDIX D: NOTICES TO INDUSTRY	43

LIST OF FIGURES

Figure 2-1: Vessel Traffic Route Segments	3
Figure 2-2: Segment 1 Vessel Route	7
Figure 2-3: Segment 2 Vessel Route	9
Figure 2-4: Segment 3 Vessel Route	10
Figure 2-5: Segment 4 Vessel Route	12
Figure 2-6: Segment 5 Vessel Route	14
Figure 2-7: Segment 6 Vessel Route	15
Figure 2-8: Segment 7 Vessel Route	17
Figure 5-1: Existing On Shore Navigation Aids.....	22
Figure 12-1: Canadian Coast Guard MCTS Zones	38

LIST OF TABLES

Table 2-1: Vessel Course (CMG)	4
Table 10-1: Indian Arm Anchorage	33
Table 10-2: Inner Harbour Anchorage	34
Table 10-3: South English Bay Anchorage	34
Table 10-4: North English Bay Anchorage	35
Table 10-5: Roberts Bank Anchorage	35
Table 10-6: Sand Heads Anchorage	35



1. OBJECTIVES

1.1 TERMPOL 3.5 ROUTE ANALYSIS, APPROACH CHARACTERISTICS AND NAVIGABILITY SURVEY

In accordance with the Termpol Review Process (TRP) Guidelines, TP743E 2001, Section 3.5, “the objectives of this survey are to assess ship and route safety, the adverse effects of ship accidents and, when applicable, public safety matters associated with the transportation of bulk oil, liquefied gas, chemicals, or other cargoes in ships that serve the marine terminal or transshipment site.” As the project deals with tanker shipping, the assessment shall be primarily focused on this one type of vessel.

1.2 TERMPOL 3.12 CHANNEL, MANOEUVRING AND ANCHORAGE ELEMENTS

As per TRP Section 3.12, “the objectives of this study are to determine the suitability of existing channels for the design ship(s) and to identify those areas of concern where navigation requires particular attention.”

Due to the significant overlap between the “route analysis” and the “channel and manoeuvre” areas, Termpol 3.5 & 3.12 is combined into one document for ease of reference and to avoid duplication.



2. ROUTE ANALYSIS

The existing Westridge Marine Terminal is an established commercial oil handling facility located in Burrard Inlet. It is situated on the southern shoreline of Burrard Inlet to the east of the Second Narrows and forms the marine end of the pipeline from Alberta via the Trans Mountain Burnaby Terminal from where the cargo is staged in tanks for loading onto tankers calling at Westridge.

Vessels transiting to and from the facility are required to navigate the Second Narrows, a naturally formed narrows separating North Vancouver from Vancouver to the south. The Narrows is spanned by two bridges, the Ironworkers Memorial Second Narrows Crossing (a highway bridge) and the CN Rail Bridge. The latter is a mechanical lift bridge with a central section that can be raised allowing the passage of marine traffic. Ocean-going oil tankers have been loading at Westridge since the 1950s.

Today, the Westridge facility is used primarily for the transfer of crude oil to foreign flagged ships and barges for export to markets in the Pacific Rim. Currently, in a typical month, five vessels are loaded at the terminal. The expanded system will be capable of serving 34 Aframax class vessels per month, with actual demand driven by market conditions. The maximum size of vessels (Aframax class) served at the terminal will not change as part of the Project. In addition to tanker traffic, the terminal typically loads two to three barges with oil per month and receives one or two barges of jet fuel per month for shipment on a separate pipeline system that serves Vancouver International Airport (YVR). This Barge activity is not expected to change as a result of the expansion.

The shipping routes to and from the Westridge facility to the open sea are well established and familiar to the BC Coast Pilots Ltd. (BCCP). The existing vessels used for exporting oil from Westridge are presently of the Panamax and Aframax class (60,000 DWT to 120,000 DWT) double hulled tankers.

Restrictions on tanker movements to and from the Westridge Marine Terminal are stated in the PMV's Harbour Operations Manual Second Narrows MRA Regulations. The maximum immersed depth (i.e., draft) for vessels transiting the Second Narrows is limited by PMV's MRA rules to 13.5 m. In practice the allowable draft is currently limited to 13.0 m by the PPA as part of a phased implementation of the MRA rules following their revision in 2010 (Pacific Pilotage Authority, 2010). It is reasonable to expect that the phased implementation will be complete by the time the Project comes into service and the 13.5 m limit will be in effect. In general laden tankers are only allowed to transit this area in daylight during slack water conditions. Tidal assistance is used to provide sufficient water depth and channel width for the larger laden tankers. Vessel draught during an individual transit of the Narrows is governed more by the available channel width at various draughts than it is by water depths. This is described in more detail in Termpol 3.6 and 3.7, Special Underkeel Clearance Survey and Transit Time and Delay Survey respectively.



Tankers loading and/or discharging at the Westridge terminal undergo a rigorous, vetting and inspection process prior to being accepted by Trans Mountain. The ongoing loading or discharge process is also monitored through an established superintendence process carried out by a Loading Master in the form of an experienced tanker officer. Part of the vetting process and superintendence is to establish that the ship and crew meet with strict equipment and performance requirements.

An overview of the vessel routes to and from the Westridge terminal is shown in Figure 2-1. For convenience this study divides the route into seven individual segments covering the area from the Westridge Terminal to the Pacific Ocean via the Port of Vancouver, English Bay, Strait of Georgia, Boundary Pass, Haro Strait, Victoria (Race Rocks) and the Juan de Fuca Strait to Swiftsure Bank, as shown.

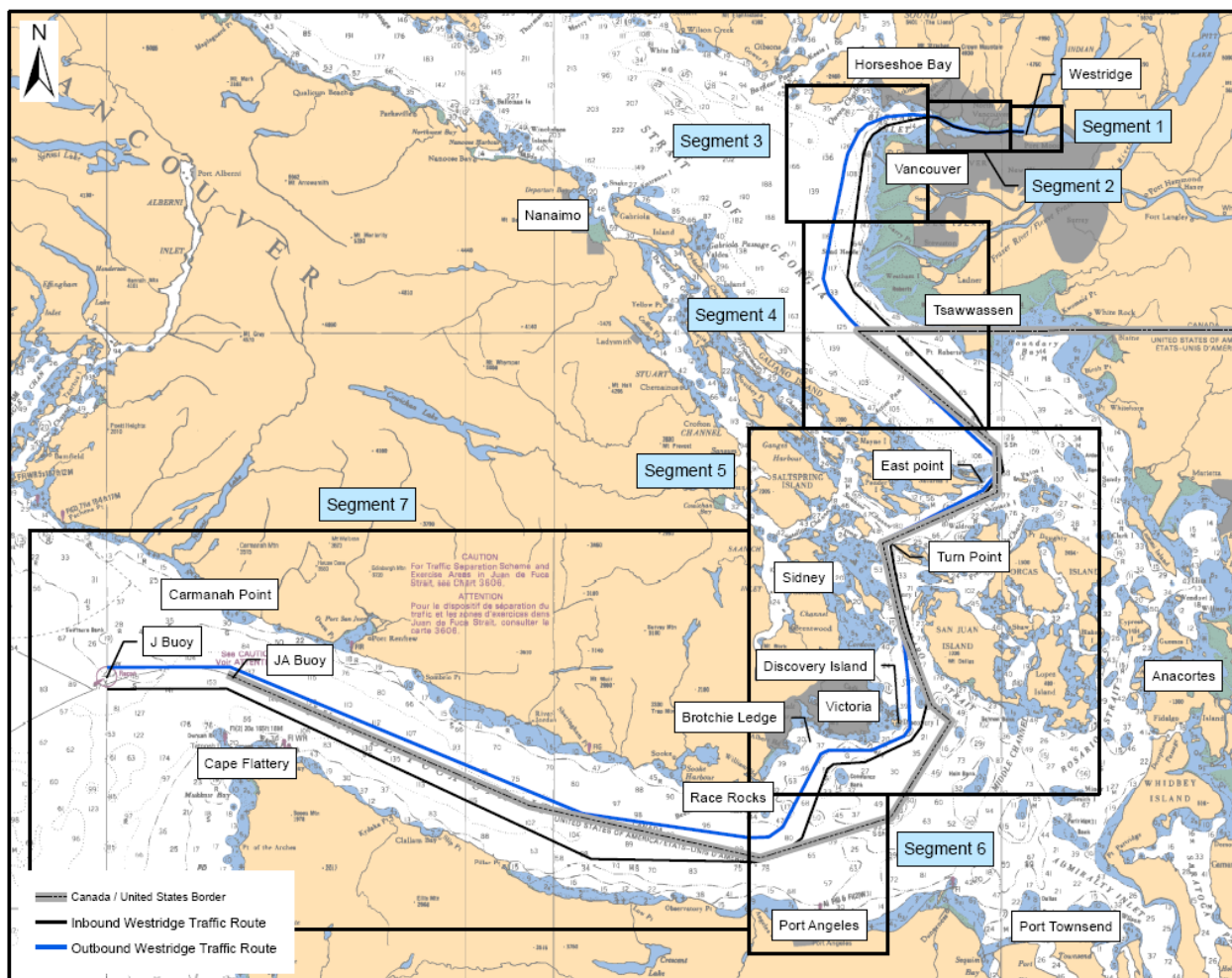


Figure 2-1: Vessel Traffic Route Segments

2.1 SEGMENT COURSES

The courses indicated in this report are intended to provide a general heading of the inbound /outbound tracks. These headings are considered illustrative only. During an actual transit, the pilot may call for somewhat different headings at any time to respond to many variables affecting the ship and the intended course, such as wind, currents, tidal influences, known shoals and other navigational hazards including other marine traffic both large and



small. Consequently, the pilot is obliged to make necessary cross track adjustments and in doing so, rather than restricted to a fixed course and track, navigates within a known corridor of safe transit.

Table 2-1: Vessel Course (CMG)

Segment	No.	Bearing	Distance	Description
1	1	276°/096° (T)	1.40 nm	Westridge Terminal to Berry Point
2	2	261°/081° (T)	0.80 nm	Berry Point to Abm. Chevron Refinery
	3	270°/090° (T)	0.75 nm	Chevron Refinery to Second Narrows
	4	276°/096° (T)	3.00 nm	Western Extent of the MRA Burnaby Shoal
	5	303°/125° (T)	1.70 nm	Burnaby Shoal to Abm. Prospect Point
	6	277°/097° (T)	1.00 nm	Abm. Prospect Point to Long. 123°10.0' West
3	7	266°/077° (T)	3.00 nm	Long. 123°10.0' West to Point Atkinson
	8	229°/036° (T)	3.70 nm	Point Atkinson to 'QA' Buoy
	9	192°/008° (T)	10.5 nm	'QA' Buoy to Sturgeon Bank
4	10	192°/008° (T)	10.5 nm	'QA' Buoy to Sturgeon Bank
	11	134°/314° (T)	22.0 nm	Sturgeon Bank to 3.0nm North of East Point, Saturna Island
5	12	221°/041° (T)	2.50 nm	Boundary Pass
	13	243°/063° (T)	10.2 nm	Boundary Pass
	14	165°/345° (T)	9.20 nm	Haro Strait
	15	179°/359° (T)	7.80 nm	Haro Strait
	16	243°/065° (T)	4.20 nm	Discovery Island to Trial Island
	17	270°/090° (T)	4.10 nm	Trial Island to Brotchie Ledge
6	18	211°/019° (T)	3.20 nm	Adjacent and to the East of Race Rocks
	19	278°/090° (T)	2.00 nm	South of Race Rocks
7	20	278°/090° (T)	10.7 nm	South of Race Rocks to Sherringham Point
	21	293°/115° (T)	34.7 nm	Sherringham Point to 'JA' Buoy directly South of Bonilla Point
	22	270°/090° (T)	10.4 nm	'JA' Buoy to 'J' Buoy (Swiftsure Bank)

2.2 MRA RULES

One of the critical portions of the route is the transit of the Second Narrows area. Because of the navigation complexities of the Second Narrows, Port Metro Vancouver has deemed this a Movement Restriction Area (MRA) governed by specific rules laid out by the Port. Although the MRA is physically located only within one of the seven route segments (specifically Segment 2), it provides the governing constraints affecting both maximum vessel sizes and their arrival / departure times. The complete MRA rules are included in Appendix B but the key rules affecting project vessels that have direct relevance to this study are summarized in the following sections. The PPA has published three Notices to Industry relating to tankers, two of which are specific to the MRA. These notices are included in Appendix D.

2.2.1 Operational Periods

Vessels with Length Overall plus Breadth (LOA + B) greater than 265 meters require two pilots and are subject to daylight passage of the MRA. Tanker vessels greater than 185 meters are restricted to daylight transit through the MRA when laden (in product). Because the type of vessel expected to call at Westridge Marine Terminal is primarily the Aframax tanker (approx. LOA 250 m x Beam 44 m), for the purpose of this assessment it is assumed that the majority of laden tankers may transit the narrows only during daylight hours at high tide slack, where slack is defined as those times that currents are less than 0.5 knot and daylight is defined by the civil twilight.

Empty tankers may transit with stemming currents (i.e. when the vessel's direction is opposite the current) less than 2 knots during times of good visibility; this threshold is reduced to 1 knot during periods of reduced visibility or at night. However, given the LOA of the Aframax tanker, this size of vessel is currently restricted in both empty and laden condition to transiting the Narrows during daylight hours only. The impact of these restrictions is further described in Termpol 3.7. The MRA requires that loaded tankers over 12.5 m mean draught be trimmed 15 cm by the stern for maximum steerage.

2.2.2 Minimum Channel Dimensions

During the transit, a minimum channel width of 2.85 times the beam (width) at 110% of the draft of the vessel is required. This width-to-beam ratio evolved from guidance provided by Transport Canada, the Permanent International Association for Navigation Congress (PIANC), the Canadian Coast Guard (CCG) and supplemented by navigation simulation studies and following practical input from the BC Coast Pilots. Following extensive full bridge simulation studies carried out at the Pacific Maritime Institute, a consensus was reached between Port Metro Vancouver, Pacific Pilotage Authority and Canadian Coast Guard in adopting the 2.85 width to beam rule. An important point to note is that the 2.85 ratio guidance does not directly recognize the benefit of using tethered tugs as mandated by the MRA rules which is an additional navigational safety factor.

The MRA requires that the minimum instantaneous channel depth during passage be no less than tanker draught plus 10% (See Termpol 3.6).

2.2.3 Transit Speed

The MRA requires that the maximum tanker speed through water is less than 6 knots.



2.2.4 Other Requirements

Besides requiring clear visibility, the MRA rules include a number of additional requirements for laden tankers that are only indirectly related to this channel design study such as:

- Two pilots are required;
- Clear narrows (no other traffic);
- Minimum three tugs are required (1 bow, 2 stern) with 30T/110 T bollard pull (bow/stern); and,
- Stern tugs must be tethered tractor tugs (see MRA rules for full tug matrix).

2.3 SEGMENT 1: WESTRIDGE BERTH TO BERRY POINT (CHS CHART 3494)

This Segment considers the area from the Westridge Terminal in Burnaby, BC to the Eastern extent of the Movement Restriction Area (MRA) in the Eastern Portion of Burrard Inlet.

On the outbound transit two (2) senior pilots with qualifications and experience as required by the BCCP & PPA, will be onboard. Each pilot is equipped with a Personal Pilotage Unit (PPU) that provides the pilots with independent input as regards the vessel's position, direction and speed of travel as well as rate of turn. An AIS (Automated Information System) feed is picked up from the vessel using a dedicated port, which the IMO has made a mandatory requirement for all large vessels. Both pilots are provided an orientation by the ship's bridge team and then become part of the team. All of the tanker's equipment would have been tested beforehand and the same confirmed to the pilots. Of the two pilots assigned to the vessel, only one shall have the con at any time and the other shall provide backup and consultation to the pilot having the con as well as continue to keep the vessel's bridge team informed and involved in the progress of the vessel. The pilots discuss the passage with the Master and the Bridge Team and also confirm that the main engines and steering system have been tested and are working satisfactorily. As well, it is confirmed that the engine room is manned and shall remain so for the entire duration of the transit; however the engines shall be operated directly from the tanker's bridge.

During the departure the tugs assist the tanker off and clear of the berth, and then take up the recommended escort positions with two (2) tethered tugs aft and one forward. The tugs will escort the tanker through the Second Narrows, Vancouver Harbour, First Narrows and English Bay where they will be released at the Pilot's discretion. Three (3) MRA qualified tugs will be tethered to the vessel (See Vancouver Harbour Operating Manual and the MRA Requirements).

Communication is maintained regularly with MCTS as the vessel leaves the berth and a 'Clear Narrows' is established through and by MCTS. A PMV Harbour Patrol boat assists in maintaining this condition during the tanker's passage through the port. The pilot having the con will request the rail bridge operated by Canadian National Railways to be raised thirty minutes prior to the vessel's arrival at that location.



On the Inbound transit one pilot, responsible for the Harbour transit and berthing, will board in English Bay and take over from the pilot bringing the tanker from the Pilot Boarding Station at Victoria. The required number of tugs (as required and identified in the MRA Tug Matrix) will meet the ballasted tanker in Vancouver Harbour and take up escort positions prior to arrival at the Western limit of the MRA and Second Narrows. On approach to the Westridge marine terminal the tugs will take up their assist positions as instructed by the pilot and will bring the tanker alongside. Mooring lines shall be passed with the aid of an additional smaller tug and the shore mooring crew shall receive the vessel’s lines and secure the fore and aft moorings. The vessel shall tighten up the mooring lines using her winches to complete securing the vessel to the berth. Alternatively, if no berth is readily available, the tanker may be taken to anchor in Indian Arm until the berth is ready.

Within Segment 1 and throughout the entire vessel route, vessels may encounter pleasure boat traffic, particularly on weekends and in summer months. In general pleasure craft keep out of the way of large vessels travelling within a restricted channel, and indeed are required to do so under the collision regulations. On occasion, small craft stray into the path of large vessels through inexperience or inattention. In most cases this is resolved by sounding the ship’s whistle multiple times which alerts the small vessel of potential danger and prompts them to alter course.

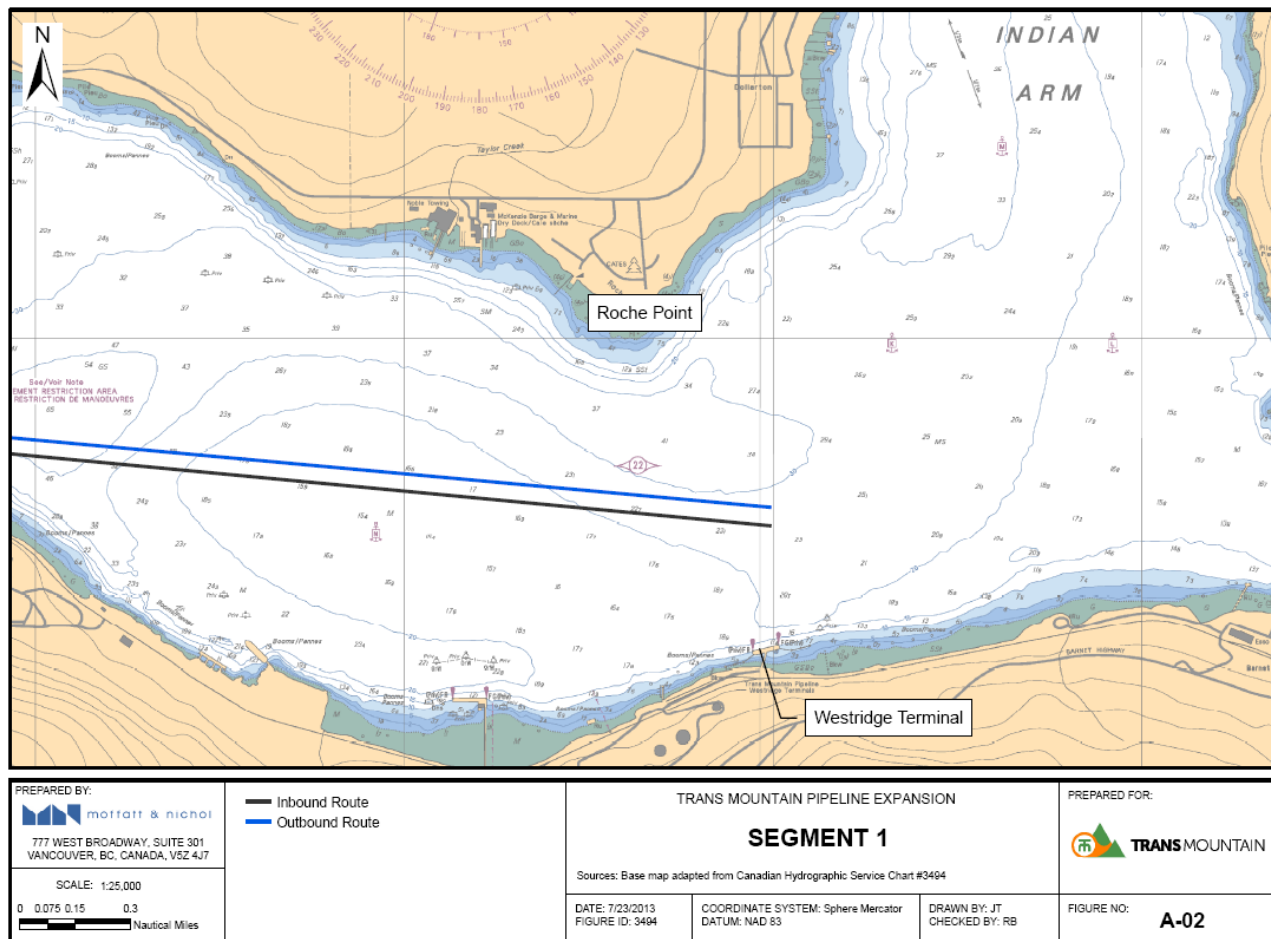


Figure 2-2: Segment 1 Vessel Route



2.4 SEGMENT 2: BERRY POINT TO 1.0NM WEST OF PROSPECT POINT (CHS CHART 3493 & 3494)

This Segment considers the area from the Eastern extent of the Movement Restriction Area (MRA) in the Port of Vancouver, to a N/S line of position approximately 1.0nm west of Prospect Point in Stanley Park.

The area includes the Second Narrows MRA area and main harbour of the Port of Vancouver and associated waterfront. Vessels transiting the MRA are subject to a number of rules as described earlier.

There are eight (8) anchorages within the inner harbour and depending on which are occupied at the time the pilot makes the necessary course changes. A cross-harbour passenger ferry (Seabus) operates regularly between the North and South shores and tugs, and barge tows are common users of these waters. However, the ferries are very familiar with traffic within the harbour and being highly manoeuvrable and manned by experienced officers generally give way to larger passing traffic; barge tows are also familiar with the transit of large vessel and remain clear of them. Laden outbound tankers are given priority of transit and the Clear Narrows mentioned earlier is enforced with the assistance of a harbour patrol boat. Consequently no particular conflicting issues have been noted.

On clearing the MRA outbound, the loaded tanker will avoid Neptune Bank taking into account any vessels at anchor or transiting the harbour either to, or from, other Vancouver Port dock areas.

Typically, there are few, if any, issues in transiting the Vancouver main harbour. Alignment for transiting the First Narrows is established as early as possible and occasionally a 'Slow Bell' is requested by MCTS should there be another vessel moored at the Vancouver Wharves berth immediately adjacent to and on the North side of the First Narrows, which may feel the effects of the passing tanker.

Communication is maintained regularly with MCTS as the vessel proceeds through the Harbour and subject to existing conditions and circumstances, vessels will strive to maintain the starboard side of the channel while navigating the First Narrows.

One of the main issues in transiting and clearing the First Narrows is interference caused by small pleasure craft fishing at the mouth of the Capilano River. A large ocean going vessel has limited manoeuvring room and has few options once committed to the transit, other than slowing down, the vessel is required to maintain course. The harbour patrol craft and/or one of the assisting tugs will assist the tanker in this matter.

The small vessels fishing in the area of the Capilano River mouth are obliged by law to avoid hindering a large vessel in a navigation channel and restricted in its ability to manoeuvre by its deep draught. An event of this nature could have serious consequences for the small craft should a collision or capsizing occur as a result of a near miss or contact with a large ocean going vessel such as a tanker.



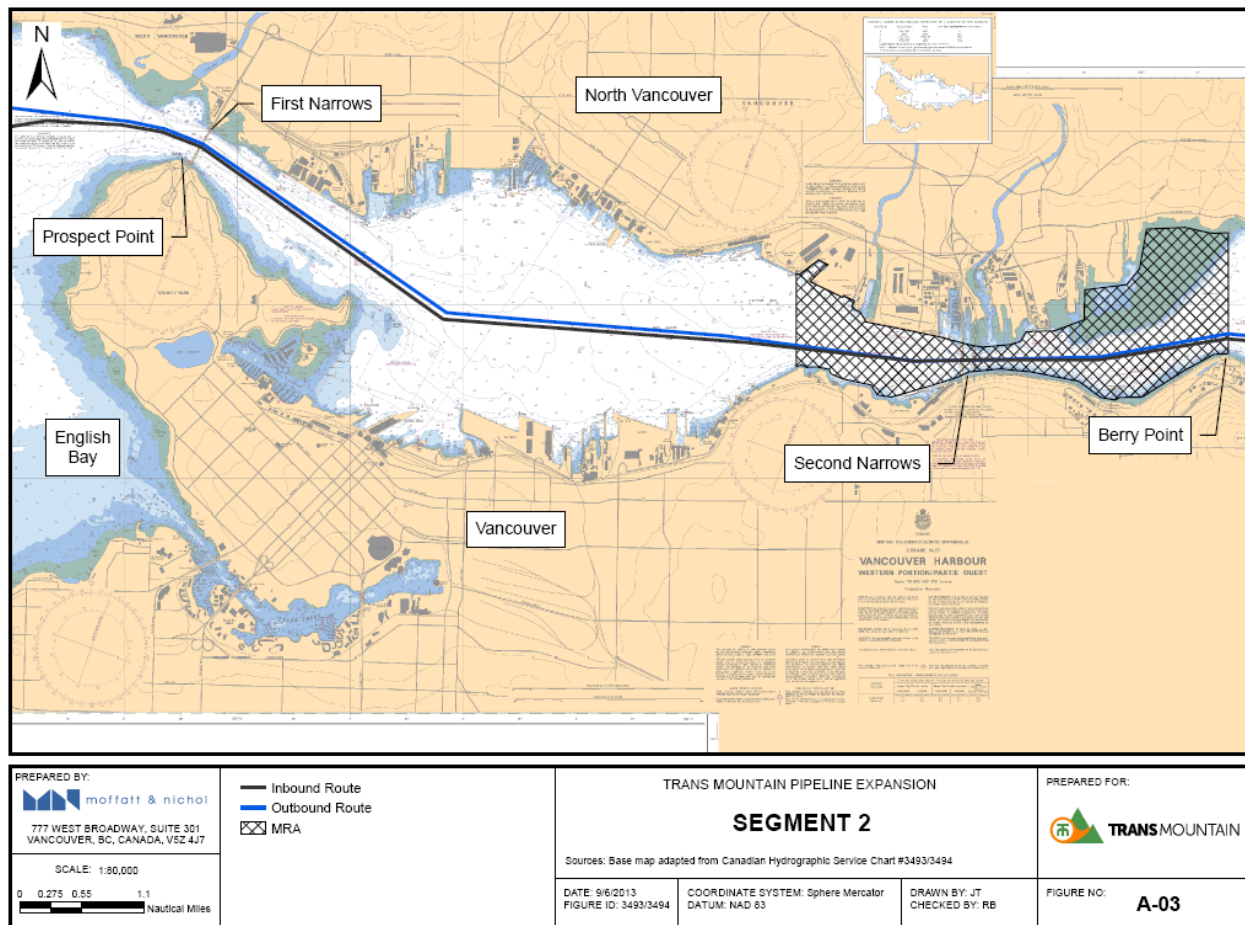


Figure 2-3: Segment 2 Vessel Route

2.5 SEGMENT 3: ENGLISH BAY TO STRAIT OF GEORGIA, STURGEON BANK (CHS CHART 3463)

This Segment considers the area from a North/South line approximately 1.0nm west of Prospect Point in Stanley Park to Lat. 49°10'.0N (Abeam of Sturgeon Bank, in the vicinity of the Fraser River Middle Arm). It should be noted that the seaward perimeter of the Port of Vancouver ends at a line drawn North/South from Point Atkinson to Point Grey.

Other than the areas identified the tanker now has greater freedom to manoeuvre than in the restricted waters of the main harbour and associated First & Second Narrows. At the pilot's discretion the tugs are released when no longer needed. Speed is progressively increased to the ship's manoeuvring rpm. The ships at anchor in English Bay, both North and South anchorages, are located in pre-selected and established locations, away from the transit lanes of through traffic. The pilots are familiar with the locations and consequently the anchored vessels are not likely to pose a problem to a vessel using the designated inbound/outbound Traffic Separation Scheme (TSS) routing. Pilots on board the other vessels within the marine network communicate with each other and with the MCTS, monitor their PPU's, AIS and radar and in that way, at any time, the routes and plans of the different vessels are shared amongst all the active pilots within the marine network; as such vessels arriving to or departing from the anchorages are not expected to present a problem even in restricted visibility.



Tug & Barge and/or slow moving log tows are more likely to pose a hindrance, particularly in areas where they are obliged to cross the TSS corridors i.e. when approaching or leaving the mouth of the North Arm of the Fraser River, particularly so in restricted visibility. The use of AIS, good communications with MCTS, participation in VTS and the prudent use of radar are essential in such circumstances. Precautionary areas have been established in the areas where major traffic lanes converge and vessels cross.

The pilot will maintain communications with Vancouver Traffic (MCTS) and will change to Victoria Traffic (MCTS) when approximately 6.0nm South of the North Arm of the Fraser River.

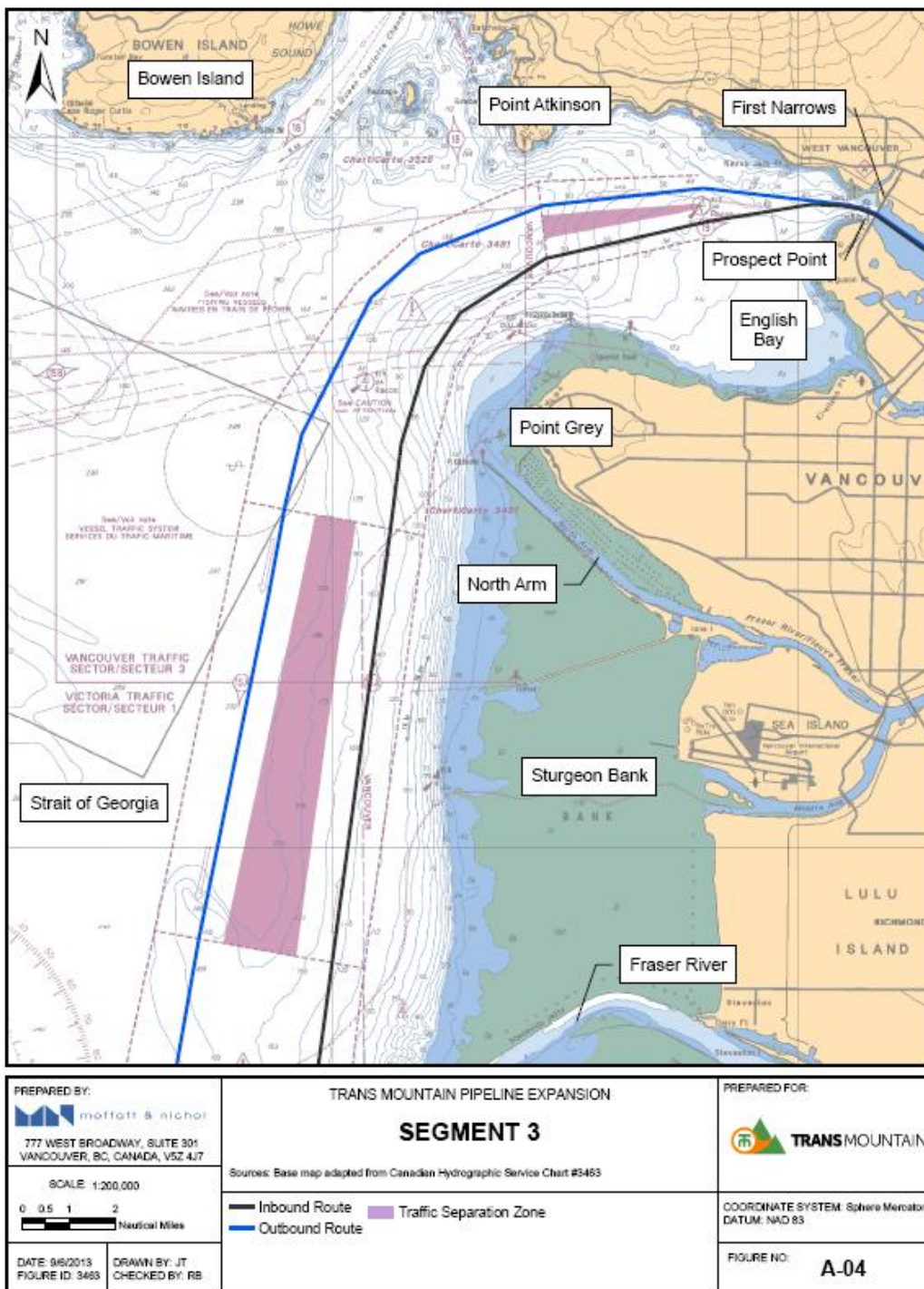


Figure 2-4: Segment 3 Vessel Route



2.6 SEGMENT 4: STRAIT OF GEORGIA, STURGEON BANK TO 3.0NM NORTH OF EAST POINT (CHS CHART 3463)

This Segment considers the area from approximately Lat. 49°10'.00 N (Abeam of Sturgeon Bank near the Fraser River Middle Arm) to 3.0 nm North of East Point, Saturna Island at the entrance to Boundary Pass.

The tanker is proceeding at manoeuvring speed in the order of 12.0 to 13.0 kts in relatively open waters but within the designated TSS corridors.

Once clear of English Bay and the mouth of the North Arm to the Fraser River the vessel is unlikely to meet with any conflicting marine traffic other than perhaps fishing vessels, tugs & barges, and recreational craft. However, these smaller vessels tend to stay well inshore and out of the way of large ocean going vessels.

There is a regular flow of ferry traffic crossing the Strait of Georgia. However, the ferries are very familiar with traffic in this area and being highly manoeuvrable and manned by experienced officers remain clear of the larger vessels. The appropriate collision rules apply in case of a crossing situation developing between a tanker and a ferry. Consequently this is not viewed as a concern.



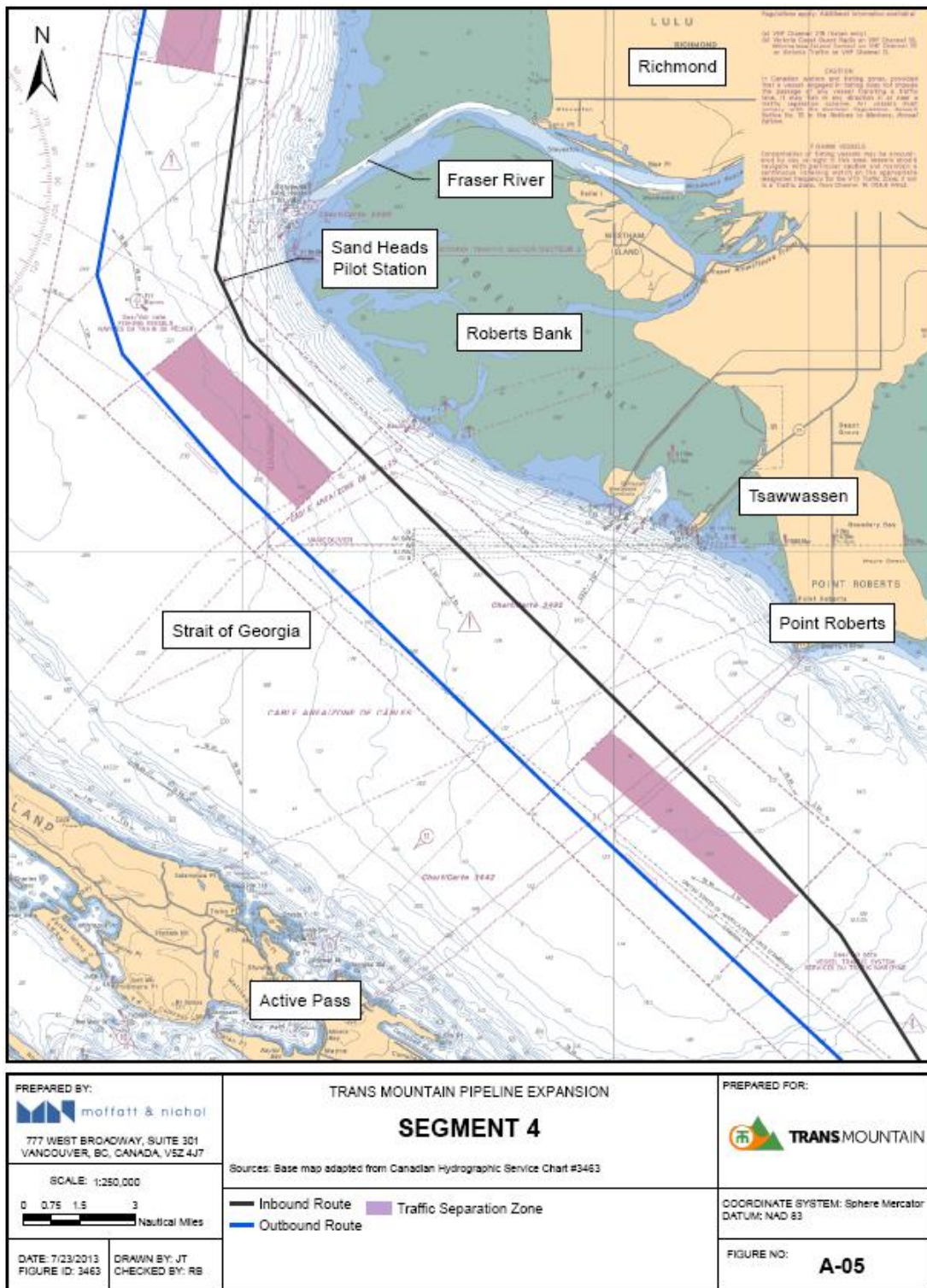


Figure 2-5: Segment 4 Vessel Route

2.7 SEGMENT 5: BOUNDARY PASS AND HARO STRAIT TO VICTORIA PILOT BOARDING STATION (CHS CHART 3461 & 3462)

Segment 5, covers the transit of Boundary Pass and Haro Strait and is, with the transit of Second Narrows, considered one of the more difficult and potentially hazardous segments of the overall passage from Westridge Terminal to the sea.



The tanker must adjust its transit speed through the Strait of Georgia so as to arrive at East point before encountering the flood tide.

The area, from approximately 3.0nm North of East Point, Saturna Island to a beam of Race Rocks, Victoria requires a number of significant alterations of course involving relatively tight turns implemented in restricted waters with a complex and strong tidal current regime.

The tanker will be tethered to a powerful escort tug (50 tonne Bollard Pull for a Panamax and 65 tonne Bollard Pull for an Aframax) when two (2) miles north of East Point, Saturna Island. The tanker's speed is reduced to approximately 10.0kts Speed Over Ground (SOG) for the transit through Boundary Pass & Haro Straits to the Pilot Boarding Station off Victoria. The tug is not required to assist the tanker in the turns under normal circumstances, but rather is there to provide an independent and immediate source of control should the tanker suffer mechanical problems with her steering and/or main engine. Details are available in the relevant Pacific Pilotage Authority Notice to Industry (Appendix D), which contains the rules for vessels carrying liquids in bulk.

If it becomes necessary for the tug to assist, it will employ a specialized towing method called 'Indirect' or 'Powered Indirect' towing in which the tug places its hull at an angle to the oncoming flow of water to create more drag and therefore greater tow line forces. The amount of force can be increased by using the tug's engines to establish and maintain a greater angle to the flow and consequently increasing the tow-line force still further. This method requires a specialized tug hull design incorporating an extended skeg, powerful engines and a high level of operator skill. The tug service providers undertake ongoing programs to train and upgrade the skills of their operators to ensure that tug assistance is provided in an effective manner.

The interaction with other marine traffic in this area is significantly more challenging because of the restricted manoeuvring room particularly at East Point, Turn Point, Discovery Island, and Race Rocks. Marine traffic in this area is well monitored by MCTS and frequent communication is maintained with all vessels in the area.

Caution must be exercised in the location of Beaumont Shoal and Discovery Island particularly with an ebb tide where large vessels could tend to set into the northbound TSS lane.

As the tanker approaches Brotchie Ledge the pilot orders the tug to untether but remain in close escort. After having made an appropriate lee the pilot requests the pilot launch to approach the tanker. The pilot then hands over con of the tanker to the vessel's master and both pilots disembark the tanker and depart on to the pilot launch. The vessel under the master's command and control resumes course and continues towards the western entrance of the Juan de Fuca Strait. The escort tug remains in attendance of the tanker till she has passed Race Rocks and then ceases escort operations and returns to her other duties.



Converging and crossing traffic off Brotchie Island near Victoria and off Race Rocks warrants particular attention to vessel coordination and collaboration between the MCTS, pilots, masters, and tugs.

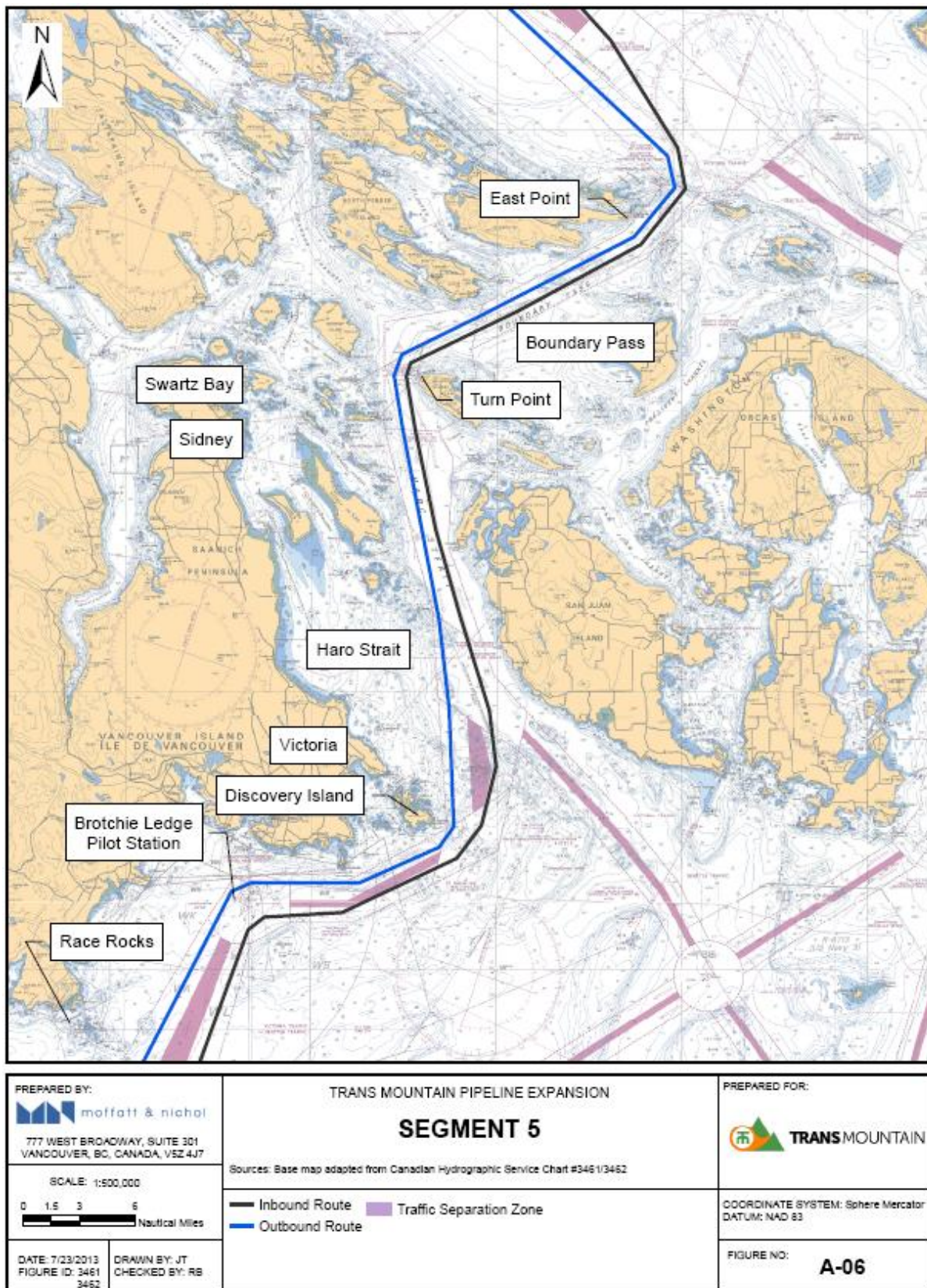


Figure 2-6: Segment 5 Vessel Route



2.8 SEGMENT 6: VICTORIA PILOT BOARDING STATION TO RACE ROCKS (CHS CHART 3461)

Segment 6, considers a relatively small area from South of the Victoria Pilot Boarding Station, on the Victoria / Seattle Traffic VTS zone, directly East of Race Rocks, to a position directly south of Christopher Point and West of the 'VF' Buoy off Race Rocks. Although it represents a small segment of the overall berth-to-sea transit, this area covers the confluence of three (3) TSS corridors and therefore subject to converging and crossing marine traffic of differing types and sizes (including Naval vessels).

Inbound and outbound vessels alike have to make a number of large alterations of course within a relatively small area in a short period of time, with some ships slowing down to either pick up or disembark the pilot. These manoeuvres add to the complex nature of traffic in this area and the need for vessels to maintain vigilance throughout their transit of this segment of the route. This area is also adjacent to the CFB Esquimalt Naval base and is an area frequently used for naval exercises and operations.

The southern portion of this area forms the entrance to the Juan de Fuca Strait and here the vessel travels out of the shelter of Vancouver Island and begin to have more exposure to conditions at sea compared with the rest of the route. During certain times of the year this area can experience periods of strong winds or reduced visibility. Therefore, in common with other segments of the route, continued caution needs to be exercised when navigating and manoeuvring in this segment of the overall transit.

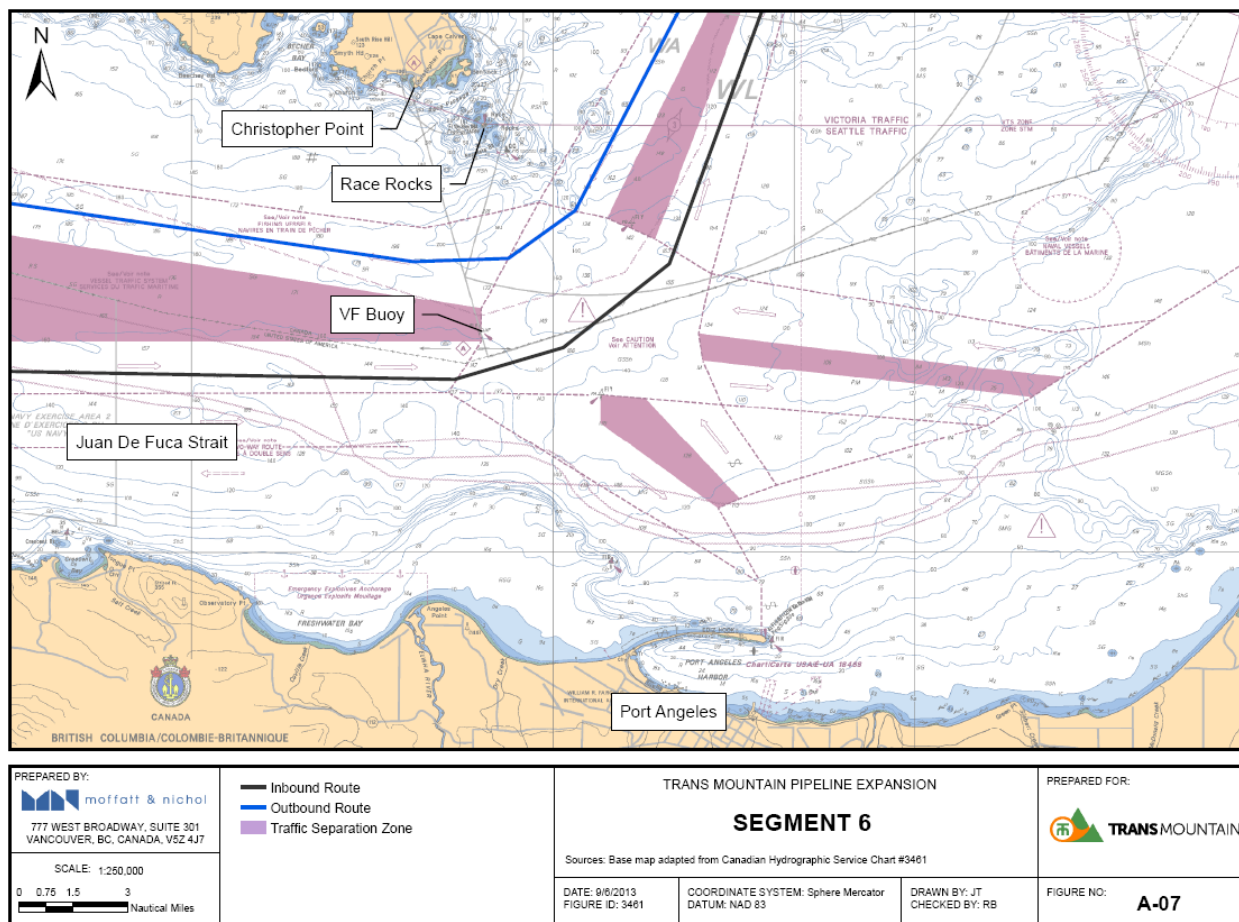


Figure 2-7: Segment 6 Vessel Route



2.9 SEGMENT 7: RACE ROCKS, STRAIT OF JUAN DE FUCA TO PACIFIC OCEAN (CHS CHART 3602 & 3606)

Segment 7, considers the Traffic Separation Scheme area from a position directly south of Christopher Point and West of the 'VF' Buoy adjacent to Race Rocks, to the 'J' Buoy off Swiftsure Bank.

By the time the vessel has passed Race Rocks the Pilot has disembarked and the escort tug has been released. The ship is now in relatively open waters and free to manoeuvre, but by requirement still recognizing the established TSS corridor, under the complete command of the ship's Master with the aid of the officers and crew. The speed of the ship will be gradually brought up to full service speed as dictated by the tanker's charter party, which is normally in the order of 12 to 14.0 knots. Although transiting within a TSS, the Master and Bridge Team will remain vigilant about encountering fishing vessels of all types, drift net, purse seine, etc. and in some regions of the segment, Naval vessels. It should be noted that these activities take place day and night. Inbound vessels are obliged to use the TSS corridor on the US side of the Juan de Fuca Strait and remain well separated and to the south of the outbound vessels.

This segment of the overall transit although considered coastal, is open to the environmental and surface effects of the Pacific Ocean i.e. winds, seas and swell. As the vessel approaches Swiftsure Bank there is the possibility of encountering inbound larger vessels approaching the TSS from the west. The bridge team shall apply the relevant collision regulations (as will all other vessels) and use radar and ARPA (automatic radar plotting aid) to ensure safe passage. Once past this area and into the open Pacific Ocean the tanker shall direct her course towards her destination. Trans Mountain proposes a requirement within their acceptance criteria that a vessel planning to depart Canada via the Juan de Fuca Straits shall agree that, upon exiting the Juan de Fuca Strait, it shall steer a course no more northerly than due West (270°), till the vessel is outside Canadian EEZ (Exclusive Economic Zone) (200 NM from coast of Canada). Tankers destined to ports to the south may either proceed towards their destination or else decide to continue west till outside the North American Emission Control Area.



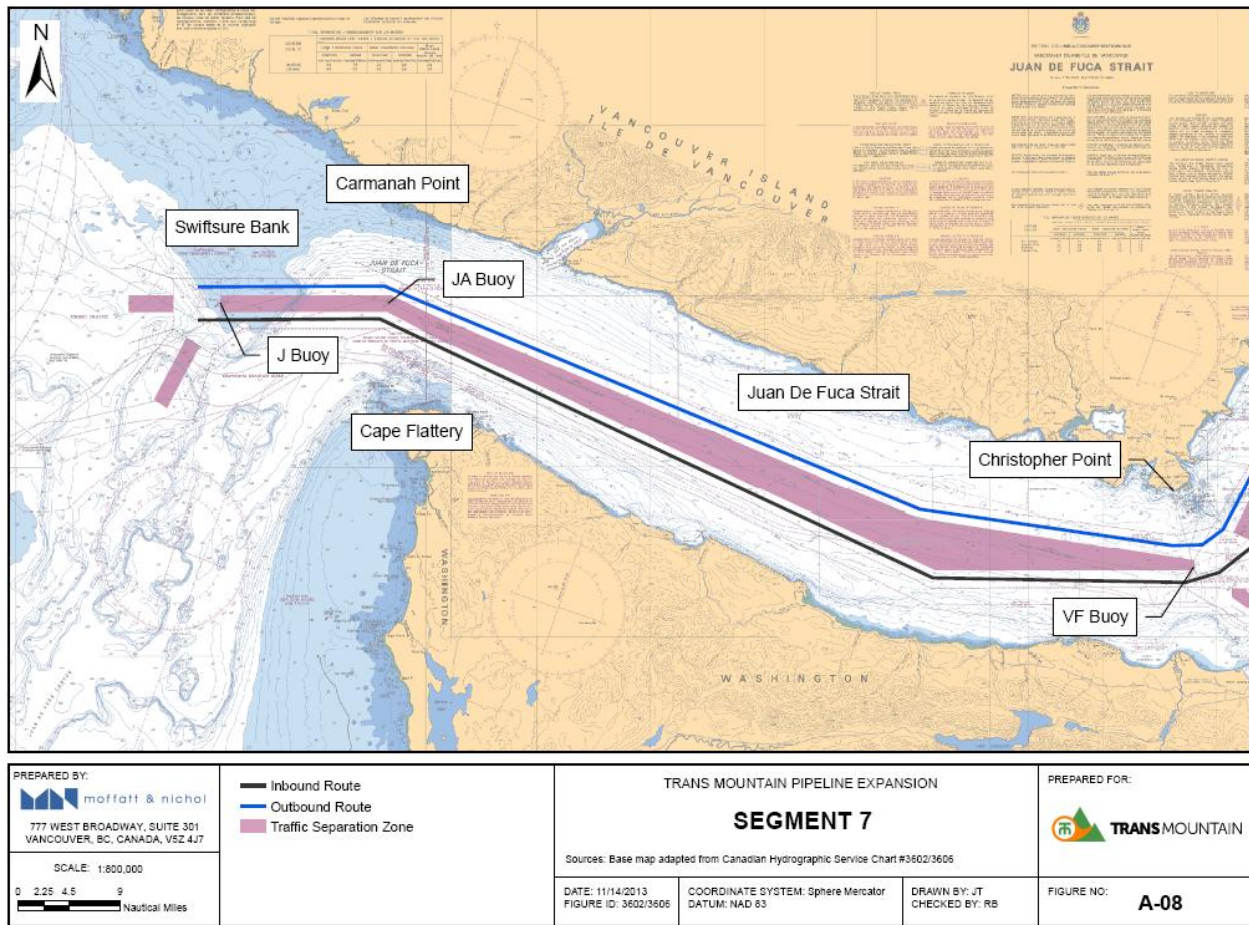


Figure 2-8: Segment 7 Vessel Route



3. GEOGRAPHIC AND GEOLOGICAL FACTORS

The southern coast of British Columbia has a wide range of geographic and geological formations. The proposed waterways have a variety of sandy to rocky shore lines and scattered with islands, coves, and inlets. The proposed route is deep and wide enough and currently providing safe transit for vessels similar to the project vessels to and from Vancouver harbour.



4. CLIMATIC AND OCEANOGRAPHIC FACTORS

The climate, meteorological, and oceanographic factors along the route are summarized below from the EBA report titled *Meteorological and Oceanographic Data Relevant to the Proposed Westridge Terminal Shipping Expansion* (EBA, 2013). The Sailing Directions (Fisheries and Oceans Canada, 2004) also contain summaries of weather statistics throughout the region, and the reader is referred to these other publications for details. In general, weather conditions within the waters described by this Termpol review are generally considered to be relatively mild. Weather-related effects are part of the routine navigation of large deep sea vessels and rarely (if ever) result in significant delays or alterations to vessel transits.

4.1 BURRARD INLET

Burrard Inlet is a glacier-carved fjord bounded by the North Shore Mountains to the North and Metro Vancouver to the South. The mountains along Burrard inlet have a significant effect on the direction and intensity of the wind. Local winds through Burrard inlet are primarily easterly in the winter and have a low intensity due to the topography of the area. The wider West side of the harbour and narrower East side of the harbour promote an east-west wind pattern. The surface current in the inlet are primarily influenced by the tide.

The mean water level in Vancouver harbour is 3.1 m above Chart Datum (CD) with higher high water (HHW) 5.0 m above CD and lower low water (LLW) 0.1 m below CD. Currents can be very strong in the harbour during flood and ebb tides and attain speeds of 3.0 m/s. The wave height is insignificant in the inner harbour due to the lack of fetch.

4.2 STRAIT OF GEORGIA

The Strait of Georgia is partially enclosed waterway orientated northwest-southeast. Located between Vancouver Island and the mainland of Canada, the Strait of Georgia is approximately 220 km long and 30 km wide. The predominant winds are from the southeast in winter and northwest in summer.

The mean water level at Sand Heads near the mouth of the Fraser River is 3.0 m above CD with HHW 4.9 m above CD and LLW at CD. The typical tide flow along the shore can reach a velocity of 0.5 to 0.75 m/s and at the mouth of the Fraser River the currents can reach 2.5 m/s. Significant wave heights do not exceed 2.7 m and maximum wave height was always less than 4.0 m.

4.3 SAN JUAN AND GULF ISLANDS

The San Juan and Gulf Islands are located at the junction between the Strait of Georgia and the Juan du Fuca Strait. The network of Islands shields and channels the wind, varying the intensity and direction of the wind through the different channels. The strongest winds in the region are southeasterlies occurring in the winter.



The mean water level at Tumbo Channel, close to Boundary Passage, is 2.6 m above CD with HHW 4.8 m above CD and LLW 0.1m above CD. Boundary Passage can experience currents up to 1.5 m/s on an ebb tide and 2.0 m/s on a flood tide. Haro Strait can experience currents up to 2.0 to 3.0 m/s on an ebb tide. Wind fetch in the San Juan and Gulf Islands is limited so waves are limited to vessel wakes; however along the southern part of Haro Strait can experienced wind induced waves from the Juan de Fuca Strait and the Salish Sea.

4.4 JUAN DE FUCA STRAIT

The Juan de Fuca Strait is bounded by Vancouver Island to the north and the United States of America to the south. Easterly winds are predominant during the winter and westerly winds are predominant during the summer.

At Race Rocks mean water level is 1.9 m above CD and HHW 3.6 m above CD and LLW 0.34 above CD. Currents can reach 0.75 to 1.3 m/s on ebb and flood tides. Currents combined with short period wind-generated waves and longer period swells from the Pacific Ocean can produce significant waves in this area.



5. NAVIGATION AIDS & VESSEL TRAFFIC SERVICES

Navigational aids are provided by the Canadian Coast Guard (CCG) and private industry to ensure safe transit of the waterways. The CCG's Aids to Navigation Program "provides devices or systems, external to a vessel, to help mariners determine position and course, to warn of dangers or obstructions, or to mark the location of preferred routes." (Canadian Coast Guard, 2012) These devices or systems include visual, aural, and radar aids, (e.g. buoys, beacons, lights, radar reflectors, racons, etc.) as well as differential global positioning system. The CCG periodically undertakes a "Level of Service" review of the aids to navigation (ATON, or nav aids) to assess the adequacy of nav aids and determine whether modifications or improvements are warranted.

The Marine Communications and Traffic Services (MCTS) is a program within the CCG, which communicates with vessel transiting given waterways through Vessel Traffic Services (VTS). The role of MCTS is to provide initial response to ships in distress situations, reduce the probability of ships being involved in collisions, groundings, and strikings, and to be a cornerstone in the marine information collection and dissemination infrastructure. (Canadian Coast Guard, 2012) The southern coast of British Columbia has three MCTS zones for vessel transiting from the Pacific Ocean to the Vancouver Harbour. These zones include Tofino, Victoria, and Vancouver. The vessels are also required to communicate with the Puget Sound VTS for transiting the Juan De Fuca Strait base on the Canada/United States Co-cooperative Vessel Traffic System (CVTS) Agreement. Refer to TRP Study 3.2, Origin, Destination & Marine Traffic Volume Survey, for additional details about the MCTS and CVTS programs.

5.1 EXISTING NAVIGATION AIDS

Aids to Navigation are defined as "devices or systems, external to a vessel, which are provided to assist mariners in determining position and course, to warn of dangers or obstructions or to advise of the location of the best or preferred route" (Canadian Coast Guard, 2012). The existing fixed navigational aids together and floating aids to navigation along the proposed route are shown in Figure 5-1. A detailed list of their locations as well as a short description of the type of aid can be found in Appendix A.

Canadian Coast Guard Aids to Navigation is any aid to navigation owned by the Canadian Coast Guard. This may include any aid owned by another government authority that is subject to an agreement between the Canadian Coast Guard and that other government authority provided that the Canadian Coast Guard retains operational and maintenance responsibilities. The Canadian Coast Guard and some other government aids to navigation are distinguishable from private buoys by their distinctive numbering-lettering system. On navigation charts, private aids are also denoted with the abbreviation "Priv".

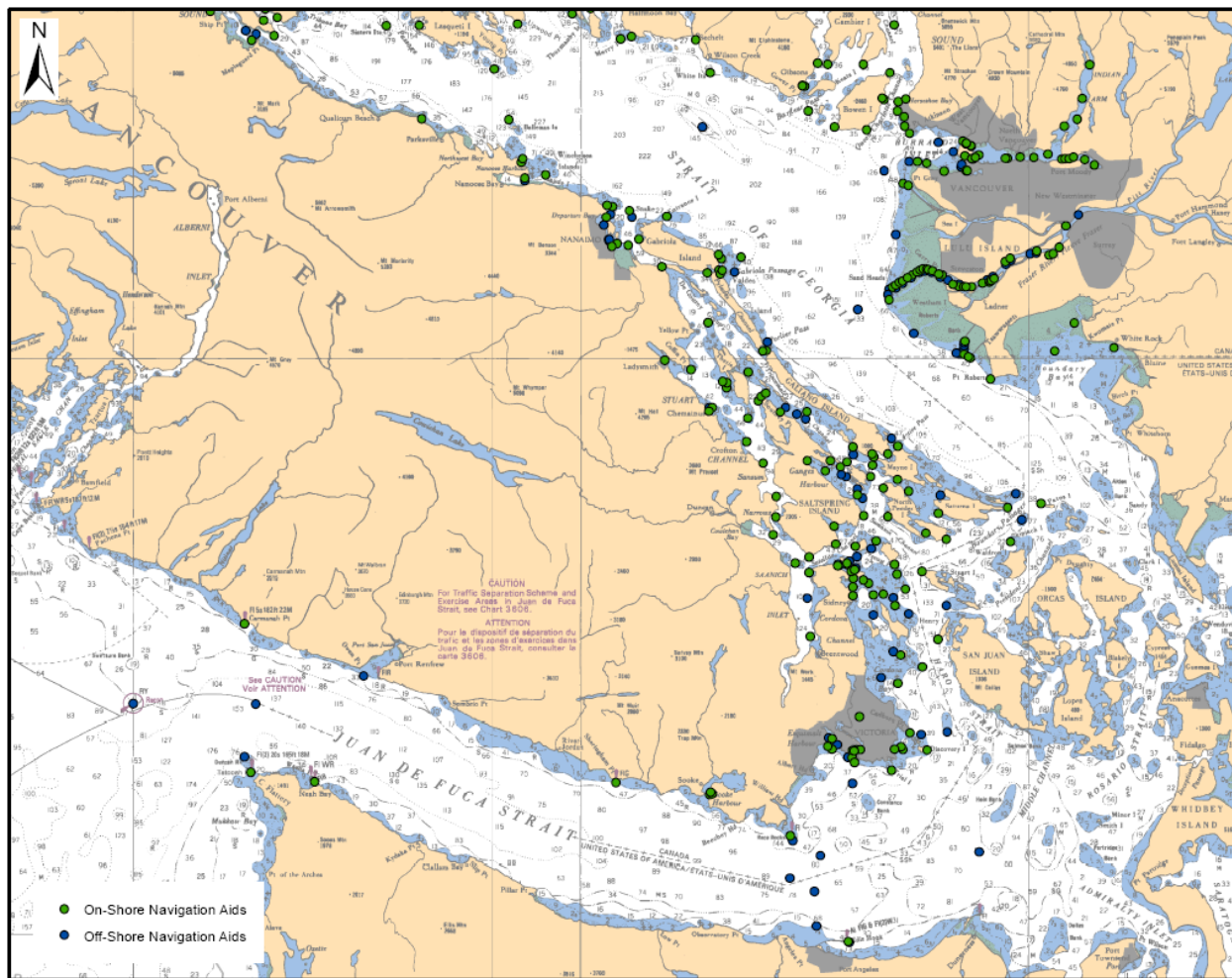


Figure 5-1: Existing On Shore Navigation Aids

5.2 IMPROVEMENTS TO NAVIGATION AIDS

The expansion of Westridge terminal will cause an increase in vessel traffic, primarily tanker traffic, in the various waterways to and from Vancouver Harbour and the Pacific Ocean. As noted above, the CCG is responsible for identifying any necessary improvements in the navaid system. Even though the existing system of navaid is considered safe at current levels of vessel traffic, it is possible that future levels of traffic, not project-related, may warrant improvements.

During the HAZID process carried out for the Risk Assessment (Termpol Study 3.15), the status of navaid and VTS were discussed with industry stakeholders, including the CCG. A summary of the opportunities mentioned at the HAZID is provided below for the information of the Termpol review committee. This is not meant to prejudice the support of CCG or any other participants for these potential improvements. This is also not intended to take the place of a Level of Service review or suggest that these improvements are required to ensure that adequate levels of navigational safety are maintained. The suggested areas for the various segments along the route are outlined below. They are not essential requirements, but items that could benefit all users.

General

1. Signals of the existing GPS/DGPS system may be affected by intentional/illegal interference, especially in urban areas. The status of the system is monitored by, amongst others, the pilots through their PPU's. In such circumstances, all vessels under guidance of a pilot would be able to either continue passage or bring the vessel to a safe anchorage. Small vessels that may be more reliant of GPS for position monitoring and navigation could be vulnerable.
2. Encourage the fitting and adoption of AIS by those smaller vessels that are currently not required to do so but possess the ability to carry AIS.
3. Encourage the fitting of radar reflectors on small vessels to make them more prominently discernible by radar, ship and shore.

As suggested by Pilots

4. Establish a navigational sector light on Berry Point.
5. Introduce an additional navigational aid to better mark the extent of Beaumont Shoal.
6. Consider the introduction of a Light and Aid to Navigation on Admiralty Point, Belcarra.
7. Provide a reliable, real time Tide & Current Gauge at the Second Narrows. The data should be transmittable to the Pilots PPU and/or other electronic devices.
8. Provide a reliable, real time Tide & Current Gauge at the First Narrows. The data should be transmittable to the Pilots PPU and/or other electronic devices.
9. Consider the introduction of Range Lights located strategically close to the shore in West Vancouver to provide a safe guide and transit to outbound vessels.
10. Introduce an Ocean Data Acquisition System (ODAS) or 'Smart' buoy for monitoring weather and environmental conditions in the southern Strait of Georgia similar to the one at Halibut Bank with the capability of transmitting the information to Pilots PPU's on a real time basis.



5.3 OTHER POTENTIAL NAVIGATION IMPROVEMENTS

As part of the preparing a Risk Assessment (Termpol Study 3.15), a number of potential means to improve navigation safety in the marine network were discussed with various marine stakeholders and some of those are listed below. They are not essential requirements, but items that could benefit all users.

1. Extend the requirement for Tug Escort for laden tankers throughout the entire transit from Vancouver including the Strait of Juan de Fuca.
2. Introduce a moving safety/security zone around the tanker.
3. Extend pilotage of laden tankers to a location west of Race Rocks.
4. Extend tethered tug escort of laden tankers to a location west of Race Rocks, weather permitting.
5. Consider applying similar rules and restrictions associated with meeting traffic at Turn Point to East Point and Discovery Island as well.
6. The BCCP and Tug Masters should continue to train and improve pilotage and tug escort techniques and skills through the use of locally available Full Mission Ship Simulators. Such ongoing training and practice should include advanced use of the PPU, docking/undocking manoeuvres, and familiarity with Second Narrows as well as emergency scenarios that may occur in restricted waters.
7. Implement an effective method of monitoring and controlling small craft using the Narrows, 'TA' buoy west of Roberts Bank, East Point, and the mouth of the Capilano River when larger traffic is scheduled to transit. For example, this may be implemented through the use of the Harbour Master's or Police launch.
8. Additional scheduling at Boundary Pass, East Point and Race Rocks for all transiting vessels. Consider a priority system for loaded tankers.
9. PMV to consider adjusting the location of Inner Harbour anchorages and implement a two-way navigation channel in the vicinity of the Westridge Marine Terminal to improve navigational clearances between the terminal, anchored vessels, and passing vessels.



6. NAVIGATIONAL HAZARDS

There are some well-known navigational hazards along the proposed route for deep draught vessels. Generally these hazards are located well outside the normal transit corridors and would only become a danger if a vessel strayed outside of the defined navigation channel. Straying outside the normal corridors is considered highly improbable because of the restrictions and controls already in place for tankers, e.g. pilots and escort tugs.

The following identifies navigational hazards or places where the vessel manoeuvring is complex along the proposed route.

6.1 SEGMENT 1

- Maple Flats has a gravel bottom, to the north of the channel marked by two (2) beacons & lights.
- Rip/Rap covering Pipeline Crossing at 11.9m CD. Immediately east of the Seymour river as marked on the chart CHS 3494.
- Rock Shoals @ 5.0m immediately to the north of navigable channel, in way of the Seymour River.
- Fast shelving, Rock & Shell shoreline @ 3.8m CD to the south in and along, the entire southern shoreline to the south.
- CN Railway Bridge abutments @ 137.0m width.
- Height restriction under the CN Bridge @ 42.0m maximum Air Draught (AD) Increased AD must be applied for prior to the vessels arrival. (See PMV Harbour Operations Manual).

6.2 SEGMENT 2

- Neptune Bank. 14.6m CD, bottom 'Sand' & 'Sand and Shells' immediately South of Neptune Terminals, which includes anchorage 'Y'.
- Katrine Bank 15.8/15.9m CD, immediately SW of Neptune Bank as marked on the chart CHS 3493, which includes anchorages 'C' & 'E'.
- Inner Harbour anchorages, when occupied.
- Other marine traffic including arriving and departing traffic to Neptune Terminals, Vanterm Container Docks, the cross-harbour 'Seabus' ferry and local Tug & Barge traffic.
- Parthia Shoals immediately North and adjacent to Stanley Park,
- Vancouver Wharves immediately east of Calamity Point, in the First Narrows.
- Height restriction under the Lions Gate road bridge @ 61.0m maximum Air Draught. (This is not an issue for the tankers under consideration.)
- Small fishing and pleasure boats congesting the mouth and adjacent waters of the First Narrows immediately south of the Capilano River mouth. These small vessels frequently cause conflicting situations with the safe passage of large ocean going vessels when they obstruct the approach and departure channel.



6.3 SEGMENT 3

- Outer Harbour anchorages, when occupied.
- Other marine traffic including arriving and departing traffic to the Port of Vancouver, and local Tug & Barge, Log Tow traffic.
- Small fishing and pleasure craft including sailing yachts. These small vessels frequently cause conflicting situations with the safe passage of large ocean going vessels when they obstruct or cross the specified TSS routes.
- Tugs & barges, Log Tows, approaching or departing the North Arm of the Fraser River.

6.4 SEGMENT 4

- No shoal areas within the TSS corridors.
- Strait of Georgia Cable Crossing adjacent to Roberts Bank.

6.5 SEGMENT 5

- Shoals off and around East Point marked by Buoy 'U59'.
- Shoals North of Skipjack Island marked by 'DB' Buoy.
- Confines of Turn Point. Many Tidal Rips.
- Cooper Reef.
- Shoals off Mandarte Island, North of Halibut Island. Marked by Buoy 'UT'.
- Unit Rocks and Kelp Reefs off D'Arcy Isl. Marked by a Light.
- Beaumont Shoal marked by 'VD' Buoy.
- Rock Shoals off Sea Bird Point, Discovery Island. Marked by Light. Tidal Rips.
- Strong, complex, tidal current regime throughout Boundary Pass & Haro Strait.
- Constance Bank. Tidal Rips.

6.6 SEGMENT 6

- Converging traffic heading for the Pilot Station South of Brotchie Is.
- Crossing traffic in and/or outbound, to/from, the Port of Victoria.
- Naval vessels in and/or outbound to/from Esquimalt Harbour Naval base.
- Naval Operations.

6.7 SEGMENT 7

- Fishing vessels (Drift nets, Purse Seine nets) likely concentrated in the area and may be encountered throughout the Juan de Fuca Strait from April to November.
- Naval vessels / Naval Operations.
- Scientific Moorings off Sherringham Point.



7. PHYSICAL LIMITATIONS

This section focuses on physical limitations along the route, such as bridges, power transmission lines, narrow passages, and shallow water.

7.1 BRIDGES

There are three bridges along the proposed route, Lions Gate Bridge, Ironworkers Memorial Bridge, and Second Narrows (CN Rail) Bridge. Lions Gate Bridge is a pedestrian and vehicle bridge located at First Narrows, Ironworkers Memorial Bridge is a pedestrian and vehicle bridge located at Second Narrows and Second Narrows Bridge is a vertical lift railway bridge located just east of the Ironworkers Memorial Bridge at Second Narrows. The Second Narrows Bridge abutments governs the width of the channel and has a clear spacing of 137.0 m the Ironworkers Memorial Bridge governs the air draught at 42.0 m. The Lions Gate Bridge neither governs the width or air draught (61.0 m) of the channel.

7.2 POWER TRANSMISSION LINES

There is one set of overhead power transmission lines crossing the route at Second Narrows, just east of the Second Narrows Bridge. The vertical clearance under the power lines is 65m at high tide, which is greater than the governing clearance under the Ironworkers Memorial Bridge and therefore does not affect navigation. Underwater powerlines cross the shipping route in places but are not a factor in safe navigation. These areas are well marked on the navigation charts and anchoring in areas where subsea cables are present is prohibited.

7.3 SUBMERGED PIPE CROSSING

There are submarine pipelines just east of Second Narrows Bridge. This area is well marked on the navigation charts and anchoring in this area is prohibited.

7.4 NARROW PASSAGES

The route is currently being used by the proposed tankers so the waterways are considered as sufficiently deep, wide and adequate to accommodate Aframax class tankers. In accordance with the Channel Manoeuvring and Anchorage Guidelines presented in Appendix 2 of the TRP Guidelines, "In two-way channels where the design ship's maximum breadth is not a primary consideration, the minimum channel width should be at least seven times the design ships breadth." An Aframax class vessel has a beam of about 44 m, so this equates to a minimum two-way channel width of say 350 m. All waterways along the route satisfy this requirement, other than the Second Narrows railway bridge.



The following are approximate available channel widths for various locations along the route. The actual navigable channel width to any particular vessel will depend on her draught during transit. More information is available in Termpol 3.6:

- Vancouver Inner Harbour, Second Narrows – 137 m.
- Vancouver Harbour, First Narrows – 450 m;
- Burrard Inlet, Point Atkinson to Spanish Bank – 6.5 km;
- Strait of Georgia, Mayne Island to Point Roberts – 24.5 km;
- Boundary Passage, Saturna Island (East Point) to Patos Island – 7.5 km;
- Haro Strait, Stuart Island (Turn Point) to Gooch Island – 4.5 km; and
- Juan de Fuca, Race Rocks to Angeles Point - 22.5 km.

This review shows that an Aframax class vessel will meet the specified requirement for two-way marine traffic in all waterways except through Second Narrows as defined by the TRP Guidelines. The Second Narrows is defined as a Movement Restriction Area (MRA) by Port Metro Vancouver. The MRA has specific navigation and transiting restrictions to ensure safety as described in Section 2.2 of this study.

7.5 SHALLOW WATER

In accordance with the Channel, Manoeuvring and Anchorage Guidelines presented in Appendix 2 of the TRP Guidelines, it is stated that “every ship when manoeuvring should have an under keel clearance not less than 15 percent (15%) of the deepest draught”. The proposed Aframax class vessel draught is restricted to 13.5 m from the Second Narrows MRA zone. This equates to an under keel clearance of 2.0 m, and thus a water depth of 15.5 m is required for static draught.

Dynamic draught under keel clearances is calculated in Termpol Study 3.6, Special Underkeel Clearance Survey. The study concluded that a maximum dynamic draught of 14.0m should be considered for the shallow portions of the route. Applying an underkeel clearance of 15% (i.e. 2.1m), a minimum water depth of 16.1m is required. Minimum depth for safe transit is exceeded for the entire length of the proposed route except in First and Second Narrows where tidal assistance is required and additional controls are placed on the vessel’s movement through port regulations and the application of seamanship best practices, knowledge and experience by the pilots and vessel’s master.



8. TUG SERVICES

Tug can provide a variety of services ranging from escorting, tethering, assisting in berthing and un-berthing, safety and security, spill contingency, firefighting, etc. For purpose of this study, only tug services required to assist tankers navigating through Vancouver Harbour, Boundary Passage, and Haro Strait are considered.

8.1 ESCORT TUG SERVICES

Escort tug services are required for ballasted vessels transiting the MRA in Vancouver harbour, and loaded vessel transiting Vancouver harbour, Boundary Passage, and Haro Strait. Requirements for tug escorts in Vancouver Harbour are defined in the Second Narrows MRA Procedures. Boundary Passage and Haro Strait tug requirements are outlined in a Notice to Industry by the Pacific Pilotage Authority. (Pacific Pilotage Authority, 2013) Additional tug escort has been identified and is proposed by Trans Mountain in Termpol 3.1 be in place to assist the increased number of tankers that are expected in future.



9. COASTAL COMMUNITIES

There are a number of coastal communities located along the proposed route. The following provides information about these communities. Populations of the different communities are from Statistics Canada 2011 census data (Statistics Canada, 2011).

9.1 ADJACENT COASTAL COMMUNITIES

9.1.1 Greater Victoria Area Coastal Communities

Greater Victoria is comprised of the following coastal communities: Saanich, Victoria, Oak Bay, Esquimalt, Colwood, Central Saanich, Sooke, Sidney, North Saanich, View Royal, and Metchosin.

- Saanich – The District of Saanich is located just north of Victoria. Saanich has a population of approximately 110,000 people.
- Victoria - The Capital of British Columbia, Victoria is located on the southern tip of Vancouver Island, West of the Salish Sea and at the east end of the Juan de Fuca Strait. The City of Victoria has 80,000 residents within the metropolitan area and 345,000 in the Greater Victoria area. Victoria has thriving industries in tourism, education, and technology.
- Oak Bay – The District of Oak Bay is located just east of Victoria. Oak Bay is home to over 18,000 people.
- Esquimalt – The District of Esquimalt is located just west of Victoria. Esquimalt has approximately 16,000 residents and is home to the Canadian Forces Base Esquimalt, the largest employer of the community.
- Colwood – The City of Colwood is located west of Victoria. Colwood has a population of just over 16,000 people.
- Sooke – The District of Sooke is located west of Victoria. Sooke has a population of approximately 12,000.
- Sidney - The Town of Sidney is located on the southern tip of Vancouver Island, at the northern end of the Saanich Peninsula. Sidney has a population of 11,000 people, who primarily work in the industrial fields such as construction, manufacturing, and warehousing.
- View Royal – The Town of View Royal is located just west of Victoria. View Royal has approximately 9,400 residents.
- Metchosin – The District of Metchosin is located at the southern most point on Victoria Island and has a population of almost 5,000 people.



9.1.2 Gulf Islands

The islands are located along the southern east coast of the Vancouver Island. There are a total of 14 major islands within the archipelago, 8 of which are directly adjacent to the proposed route. The following islands are directly adjacent to the proposed route: Gabriola Island, Valdes Island, Galiano Island, Mayne Island, Saturna Island, South Pender Island, Moresby Island, and Sidney Island.

9.1.3 Mainland

- Delta – Corporation of Delta is located south of Vancouver, east of the Strait of Georgia. It has a population of approximately 100,000 residents.
- Richmond – City of Richmond is located south of Vancouver, east of the Strait of Georgia, and has approximately 190,000 residents.
- Vancouver – City of Vancouver is located north of Richmond and is just south of Burrard Inlet, next to the Vancouver Harbour. Vancouver is home to approximately 600,000 people.
- West Vancouver – District of West Vancouver is located north of Vancouver and west of North Vancouver. West Vancouver also borders the Burrard inlet and is home to 43,000 people.
- North Vancouver – District and City of North Vancouver is just located east of West Vancouver and is north of Burrard inlet. District of North Vancouver has a population of 85,000 people and City of North Vancouver has a population of 48,000 people.
- Burnaby – City of Burnaby is located east of Vancouver, just south of Burrard inlet. Burnaby has a population of 225,000 people.
- Belcarra – Village of Belcarra is located on the north east side of Burrard Inlet and is home to less than 650 people.

9.1.4 Other

- Bowen Island – Bowen Island is located just north of the entrance to Burrard Inlet. Bowen Island is home to less than 3,400 people.
- Port Renfrew – Port Renfrew is located on the west coast along southern Vancouver Island. Port Renfrew has a population of approximately 150 people and the primary industry is tourism.



9.2 PERIPHERAL COASTAL COMMUNITIES

Peripheral coastal communities are places that are not directly bordering the waterways where the proposed vessels will be transiting but are along the coast so could be impacted by the additional traffic. The following is a list of peripheral coastal communities:

- Nanaimo
- Ladysmith
- Chemainus
- Duncan
- Mill Bay
- Sidney
- Friday Harbor
- White Rock

9.3 UNITED STATES OF AMERICA COMMUNITIES

While the scope of the Termpol studies is intended to focus on waters under Canadian jurisdiction, it is noted that portions of the route are located in or adjacent to the US Territorial waters bordering on the southern Strait of Georgia, Boundary Pass, Haro Strait, and Juan de Fuca Strait. There are a number of US communities and population centers in Washington State adjacent to those portions of the route, including Point Roberts, Blaine, Birch Bay, the San Juan Islands, Sequim, Port Angeles, and Neah Bay.



10. ANCHORAGE POSSIBILITIES

The Termpol Review Process recommends the following requirements for anchorage locations in Appendix 2 of the TRP guidelines:

- Anchorages and emergency containment should be located as close as possible to the channels they serve;
- The sea bottom provide a good holding area;
- The water depth should be greater than the maximum draught plus 15% and not more than 100 m; and,
- The radius of each anchorage should be greater than one half nautical mile or 925 m.

Only those anchorages of relevance to Panamax or Aframax tankers have been listed below. These are all located within the jurisdiction and managed by Port Metro Vancouver.

10.1 INDIAN ARM ANCHORAGE

In the Indian Arm, just north of the Westridge terminal and east of the Second Narrows there are four anchorages available. These Indian Arm Anchorages are provided by Port Metro Vancouver for vessels waiting to berth east of Second Narrows or awaiting west bound transit of Second Narrows.

Table 10-1: Indian Arm Anchorage

Anchorage	Latitude (° ' ")	Longitude (° ' ")	Max LOA (metres)	Depth at centre of anchorage	Minimum depth within anchorage area
K	49 17 51 N	122 56 52 W	260	30	23.5
L	49 17 55 N	122 56 07 W	260	18	15.7
M	49 18 23 N	122 56 17 W	260	26	19.9
N	49 17 39 N	122 58 04 W	260	15.6	15.3

10.2 INNER HARBOUR ANCHORAGE

Between the First and Second Narrows Port Metro Vancouver provides seven (7) designated inner harbour anchorages. These anchorages are for vessels requiring to bunker, crew change, transit Second Narrows or any other reasonable purpose.

Table 10-2: Inner Harbour Anchorage

Anchorage	Latitude (° ' ")	Longitude (° ' ")	Max LOA (metres)	Depth at centre of anchorage	Minimum depth within anchorage area
A	49 18 11 N	123 05 26 W	300	35	24
B	49 18 06 N	123 04 46 W	260	23	19.4
C	49 18 01 N	123 04 11 W	260	21	16.2
D	49 17 39 N	123 05 03 W	300	35	29.8
E	49 17 44 N	123 03 55 W	230	16	15.7
X	49 18 17 N	123 06 05 W	185	20	17
Y	49 18 01 N	123 03 35 W	260	16	14.8
W	49 17 43 N	123 05 54 W	300	55	30

10.3 SOUTH ENGLISH BAY ANCHORAGE

In English Bay Port Metro Vancouver has established 17 south anchorages for vessels transiting to and from Vancouver Harbour. English Bay is located just west of First Narrows in the Burrard Inlet.

Table 10-3: South English Bay Anchorage

Anchorage	Latitude (° ' ")	Longitude (° ' ")	Max LOA (metres)	Depth at centre of anchorage	Minimum depth within anchorage area
1	49 17 57 N	123 14 19 W	400	60	48
2	49 17 33 N	123 13 53 W	260	37	14
3	49 18 04 N	123 13 33 W	400	45	37
4	49 17 39 N	123 13 11 W	260	37	28
5	49 17 15 N	123 12 42 W	230	21	12
6	49 18 12 N	123 12 48 W	400	40	30
7	49 17 47 N	123 12 25 W	260	27	23
8	49 17 22 N	123 11 59 W	230	19	16
9	49 16 56 N	123 11 33 W	190	12.3	10
10	49 18 19 N	123 12 03 W	400	30	24
11	49 17 54 N	123 11 38 W	260	25	19
12	49 17 29 N	123 11 14 W	230	18	14
13	49 17 05 N	123 10 49 W	190	11.8	10
14	49 18 25 N	123 11 19 W	400	24	21
15	49 18 01 N	123 10 53 W	260	19	17
U	49 17 45 N	123 15 13 W	400	47	28
Z	49 17 09 N	123 10 00 W	100	10.3	9

10.4 NORTH ENGLISH BAY ANCHORAGE

There are a further three (3) anchorages on the north side of English Bay, also allocated by Port Metro Vancouver. English Bay is located just west of First Narrows in the Burrard Inlet.



Table 10-4: North English Bay Anchorage

Anchorage	Latitude (° ' ")	Longitude (° ' ")	Max LOA (metres)	Depth at centre of anchorage	Minimum depth within anchorage area
16	49 19 57 N	123 13 08 W	260	40	20
17	49 19 56 N	123 13 54 W	260	52	32
18	49 19 55 N	123 14 39 W	260	55	32

10.5 ROBERTS BANK ANCHORAGE

There is a short term anchorage located in the Strait of Georgia, just west of Roberts Bank.

Table 10-5: Roberts Bank Anchorage

Anchorage	Latitude (° ' ")	Longitude (° ' ")	Max LOA (metres)	Depth at centre of anchorage	Minimum depth within anchorage area
R	49 00 46 N	123 12 14 W	320	70	58

10.6 SAND HEADS ANCHORAGE

There is a short term anchorage located in the Strait of Georgia, near Sand Heads.

Table 10-6: Sand Heads Anchorage

Anchorage	Latitude (° ' ")	Longitude (° ' ")	Max LOA (metres)	Depth at centre of anchorage	Minimum depth within anchorage area
S	49 07 45 N	123 18 29 W	320	70	55

10.7 EMERGENCY ANCHORAGES

The route the tanker follows provides ample opportunity for the vessel to safely anchor if required to do so, however it is not expected that the tanker would do so except if required during an emergency situation. In that case there are certain commonly used outer anchorage locations where a tanker may be safely anchored for short periods of time, e.g. Plumper Sound, Constance Bank. The sea bottom in the sea area off the Southwest coast of Vancouver Island, e.g. locations near the Port Renfrew area, is rocky in nature and a vessel may not be able to best utilize anchors there, especially during inclement weather conditions. The availability of current escort tugs and any enhanced tug escort as may be provided to future Project-related tankers should assist further in keeping the tanker safe.



11. NAVIGATION SIMULATIONS

Fast time simulation has been carried out to determine the suitability of the terminal location and orientation, and during the more detailed engineering phase real time simulations will be performed. Since the proposed route is already being used by Aframax class tankers the simulations will only focus on the area surrounding the Westridge terminal, east of the Second Narrows.

11.1 FAST TIME SIMULATIONS

Fast time simulations are the initial steps in modeling the manoeuvrability of the vessels. Simulations have been performed using the proposed dock design with the design vessels (see Termpol 3.9, Ship Specifications, for more detail) in ballasted and loaded conditions. The fast time simulations, which also involved discussions with the PPA and BCCP, determined that the governing factors on the manoeuvrability of the vessel, factors such as vessel size, loaded or ballasted, speed, channel dimensions, wind speed, currents, use of tugs, etc. are adequate. No issues have been found as a result of the fast time simulation work carried out; a copy of the report is found in Appendix C.

11.2 REAL TIME SIMULATIONS

Real time simulations will be carried after completion of detailed design. These will be planned in consultation with PMV, PPA and BCCP to:

1. Confirm the navigability of vessels from Second Narrows Movement Restriction Area and/or anchorage location in Indian Arm to Westridge terminal;
2. Confirm navigability of berthing and un-berthing vessel at all berths, determine operational criteria including emergency and abort scenarios;
3. Determine if further limitations to vessel movement need to be considered as a result of limiting environmental conditions during navigation, including wind, waves, current, fog, blowing snow, etc;
4. Confirm minimum speeds for navigation;
5. Confirm the operational requirements of tugs (size, type, speed, bollard pull); and,
6. Confirm the adequacy of the existing navigational aids and recommend necessary upgrades.



12. SUPPLEMENTAL INFORMATION

The proposed design vessels and vessel currently transiting the various waterways are governed by the Canada Shipping Act and required to adhere to the policies of Transport Canada, the Canadian Coast Guard and the Pacific Pilotage Authority. The regulations that pertain to this project are summarized below for reference.

12.1 CANADA SHIPPING ACT – CHARTS AND NAUTICAL PUBLICATIONS REGULATIONS

According to the *Charts and Nautical Publications Regulations* the design vessels are required to carry the appropriate charts and nautical publications. All vessel entering vessels entering Canadian jurisdiction waters are also required to carry the annual edition of the *Canadian Notices to Mariners*, published by the Canadian Coast Guard.

All vessels calling on the proposed marine terminal will comply with these regulations.

12.2 CANADA SHIPPING ACT – NAVIGATION SAFETY REGULATIONS

The design vessels are required to comply with the *Navigation Safety Regulations* under the Canada Shipping Act / Arctic Waters Pollution Prevention Act. The Navigation Safety Regulations (SOR/2005-134) are divided into five (5) parts:

- Part 1 – General information pertaining to safety, compliance, prohibition, installation, testing and maintenance of equipment, standards, etc;
- Part 2 – Equipment requirements for ships constructed before July 1, 2002;
- Part 3 – Equipment requirements for ships constructed on or after July 1, 2002;
- Part 4 – Additional Equipment Requirements; and,
- Part 5 – Other requirements such as search and rescue, ships' personnel, operating limitations, manoeuvring information, etc.

12.3 CANADA SHIPPING ACT – STEERING APPLIANCES AND EQUIPMENT REGULATIONS

The proposed design vessels are required to adhere to the Steering Appliances and Equipment Regulations (SOR/83-810). These regulations outline requirements for steering equipment, use, operation, testing and drills.

12.4 STANDARD FOR TRAINING, CERTIFICATION AND WATCHKEEPING (STCW)

The Standard for Training, Certification and Watchkeeping (STCW) regulates the operations and training of the required equipment outlined in the Steering Appliances and Equipment Regulations. All vessels calling at the proposed marine terminal will be required to comply with these regulations.



12.5 CANADIAN PILOT REGULATIONS

All vessels calling at the proposed marine terminal are required to comply with the Pacific Pilotage Authority (PPA) regulations in the compulsory pilotage areas.

12.6 VESSEL TRAFFIC SERVICES (VTS)

The portion of the routes through the Juan de Fuca Strait, Haro Strait, Boundary Pass, and the Southern Strait of Georgia straddle the Canada/US international border, and vessels transiting the area participate in Vessel Traffic System (VTS) programs operated by both countries. Figure 12-1 shows the different VTS areas for Vancouver, Victoria, Tofino, and Puget Sound.

In 1979 the Canadian Coast Guard and the United States Coast Guard established the Co-operative Vessel Traffic System (CVTS) for the waterways along the international boundary. (United States Coast Guard, 2008). Depending on which section of the CVTS the vessels are operating in, they will communicate with VTS operators in Tofino, Victoria, or Puget Sound according to which VTS office has jurisdiction over that area. The Canadian section of the VTS is provided by the Marine Communications and Traffic Services (MCTS). Refer to Termpol Study 3.2, Origin, Destination and Marine Traffic Volume Survey, for more details on the services provided by MCTS.

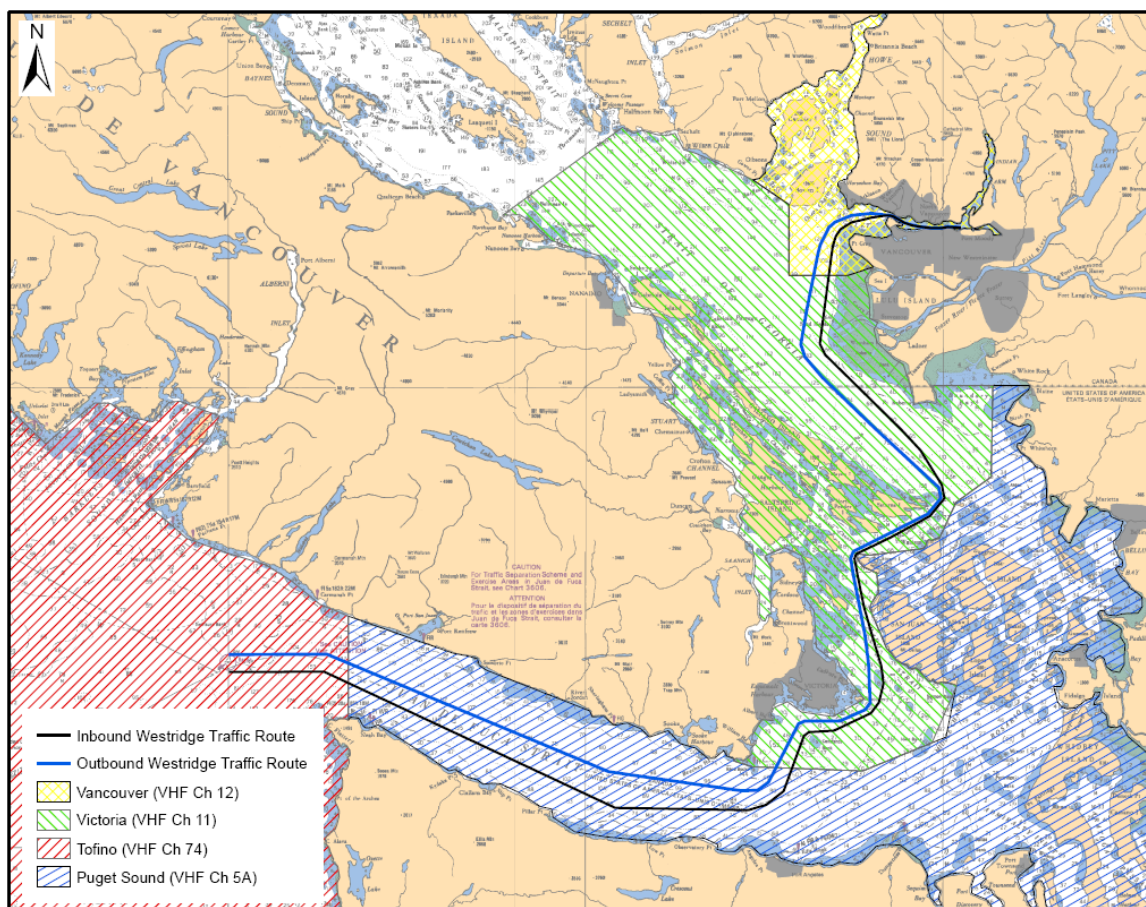


Figure 12-1: Canadian Coast Guard MCTS Zones

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APPENDIX F

VOLUME 8C, TERMPOL 3.11 SIGNING PAGE

TERMPOL 3.11 – CARGO TRANSFER AND TRANSSHIPMENT SYSTEMS

Trans Mountain Expansion Project

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November 26, 2013

Termopol 3.11 – Cargo Transfer and Transshipment Systems

TRANS MOUNTAIN EXPANSION PROJECT

November 26, 2013

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TABLE OF CONTENTS

1. OBJECTIVES	1
2. GENERAL DESIGN OF ATTENDING VESSELS	2
2.1. THE TANKER TYPES AND SIZES.....	2
2.2. TANKER AND BARGE SPECIFICATIONS	2
3. VESSEL CARGO SYSTEM	5
3.1. PIPING AND PUMPING SYSTEM.....	5
3.1.1 <i>Cargo Manifolds</i>	7
3.2. VENTING SYSTEM.....	7
3.2.1 <i>Inert Gas System (IGS)</i>	8
3.2.2 <i>Vapour Emissions Control System (VECS)</i>	8
3.2.3 <i>Vapour Manifold</i>	9
3.3. LOADING COMPUTER.....	9
3.4. SERVICE CRANE	9
3.5. POLLUTION PREVENTION	10
3.6. MAXIMUM LOADING & DISCHARGE RATES	10
3.7. FIRE PREVENTION AND FIRE FIGHTING SYSTEM	11
3.8. BALLAST	12
4. TERMINAL CARGO SYSTEM	13
4.1. SYSTEM OVERVIEW	13
4.2. PIPING	14
4.2.1 <i>Pipeline Pressure Relief</i>	14
4.2.2 <i>Loading and Vapour Recovery Arms</i>	15
4.3. VAPOUR EMISSIONS AND CONTROL SYSTEM (VECS)	15
4.3.1 <i>Vapour Combustion Units</i>	15
4.4. GANGWAY TOWER.....	15
4.5. POLLUTION PREVENTION	16
4.5.1 <i>Sump Tanks</i>	16
4.6. FIRE PROTECTION SYSTEMS.....	17
4.7. ELECTRICAL SYSTEMS	17
4.8. INSTRUMENTATION AND SAFETY SYSTEMS	17
4.9. CUSTODY TRANSFER AND METERING SYSTEM	18
4.10. EMERGENCY SHUTDOWN SYSTEMS.....	18
4.11. COMMUNICATIONS	19
4.12. JET FUEL SYSTEM	19
5. SAFE OPERATIONS	20
5.1. VESSEL STAFF.....	20
5.2. TERMINAL STAFF.....	20

5.2.1 Loading Master20

5.3. CONTROL OF OIL TRANSFER OPERATIONS21

5.3.1 Vessel.....21

5.3.2 Terminal22

 (a) Alarms.....22

 (b) Monitoring at the Berth.....22

 (c) VECS.....22

5.4. SAFE ACCESS TO & FROM VESSEL.....22

5.5. COMMUNICATIONS23

5.6. GENERAL PROCEDURE OF CONNECTING TO VESSEL’S MANIFOLD23

 5.6.1 Ship/Shore Manifold/Loading Arm Connection.....23

 5.6.2 Ship/Shore Insulating Discontinuity24

 5.6.3 Loading Arm Operating Envelope.....25

5.7. UNDERTAKING CARGO TRANSFER.....25

 5.7.1 Commencing Cargo Transfer26

 5.7.2 During Cargo Transfer27

 5.7.3 Completion of Cargo Transfer27

6. REFERENCES 29



LIST OF FIGURES

Figure 2-1: Vessel Sizes4

LIST OF TABLES

Table 2-1 ATB & ITB Oil Barges (Articulated/Integrated Tug & Barge)2
Table 2-2 Product Carriers (Typically for the Import of Jet Fuels)3
Table 2-3 Panamax Tankers3
Table 2-4 Aframax Tankers3



1. OBJECTIVES

In accordance with the Tempol Review Process (TRP) Guidelines, TP743E 2001, the objective of this study is to assess the suitability of the proposed marine terminal arrangement for transferring product from shore to ship (for oil products) and barge to shore (for jet fuel products).

The proposed terminal will be located on the south shore of Burrard Inlet in Burnaby, BC. The new facility will be designed to accommodate the safe transfer of imported, jet fuels and the export of various grades of crude oil.

The report will provide general descriptions, specifications and associated plans in support of the Tempol assessment as follows:

- Design vessel transfer and cargo containment systems.
- The marine onshore components and equipment of the petroleum transfer systems

2. GENERAL DESIGN OF ATTENDING VESSELS

2.1. THE TANKER TYPES AND SIZES

The Westridge Marine Terminal is an existing oil handling facility and has been operating safely for the past sixty years. Without exception all the tankers and oil barges calling Westridge Marine Terminal are class certified, double hulled and meet with all IMO, Classification, MARPOL and all other applicable operational/safety requirements, and shall continue to be so. As a result of the project it is anticipated that there will an increase in the number of tankers calling at the terminal with no change to the number of barges being handled. The project tankers will typically load oil and although it is anticipated that most tankers will load only one grade of oil, it is possible that occasionally more than one grade shall be loaded to a single tanker. This can be easily handled within the project tanker's segregation, which for the majority of tankers typically consists of three groups of cargo oil tanks with two-valve separation between the groups. Descriptions of the types of anticipated project tankers can be found in Termpol 3.9.

The marine oil handling facility currently also handles jet fuel, which is normally received via barges. This activity is expected to continue in future as well and the types of vessels used to transport such a product to the terminal is not expected to change as part of the project.

It is therefore a requirement for the dock complex to have the ability to safely handle vessels across a spectrum of sizes, capacity and design and also handle a number of different grades of petroleum cargo.

2.2. TANKER AND BARGE SPECIFICATIONS

Typical specifications for the vessels and barges expected to call at the Westridge Marine Terminal are shown in the tables below.

Table 2-1 ATB & ITB Oil Barges (Articulated/Integrated Tug & Barge)

Vessel Description	
Deadweight Tonnage (DWT)	10,000 – 20,000
Length Over All (LOA) (m)	156
Beam (m)	23.8
Draught (m)	8.3
Pumping System	
Pump Type	Typical 2 – 3 main pumps (diesel electric)
Pump capacity (m³/hr)	1500 each
Manifolds	3 x 8" to 10" ¹

¹ Vessel flanges, terminal loading arms, and oil pipeline sizes are traditionally designated using their US customary units (i.e. inches) and this convention is retained here.

Table 2-2 Product Carriers (Typically for the Import of Jet Fuels)

Vessel Description	
Deadweight Tonnage (DWT)	40,000 – 48,000
Length Over All (LOA) (m)	160 – 180
Beam (m)	27 – 32
Draught (m)	10 – 12
Pumping System	
Pump Type	Deep Well Pumps, one per cargo tank
Pump capacity (m ³ /hr)	500 – 550
Manifolds	Multiple x 8" – 12"

Table 2-3 Panamax Tankers

Vessel Description		
Deadweight Tonnage (DWT)	60,000 – 80,000	
Length Over All (LOA) (m)	180 – 240	
Beam (m)	32 – 40	
Draught (m)	12 – 14.4	
Pumping System		
Pump Type	3 or 4 main pumps	'Frame' Deep Well pumps, one per tank
Pump capacity (m ³ /hr)	2,000 – 2,300	500 – 550
Manifolds	3 or 4 x 16" (Typical)	

Table 2-4 Aframax Tankers

Vessel Description	
Deadweight Tonnage (DWT)	80,000 – 120,000
Length Over All (LOA) (m)	240 – 255
Beam (m)	40 – 44
Draught (m)	12 – 14.9
Pumping System	
Pump Type	3 or 4 main cargo pumps
Pump capacity (m ³ /hr)	2,300 – 3,000
Manifolds	3 or 4 x 16" (Typical)

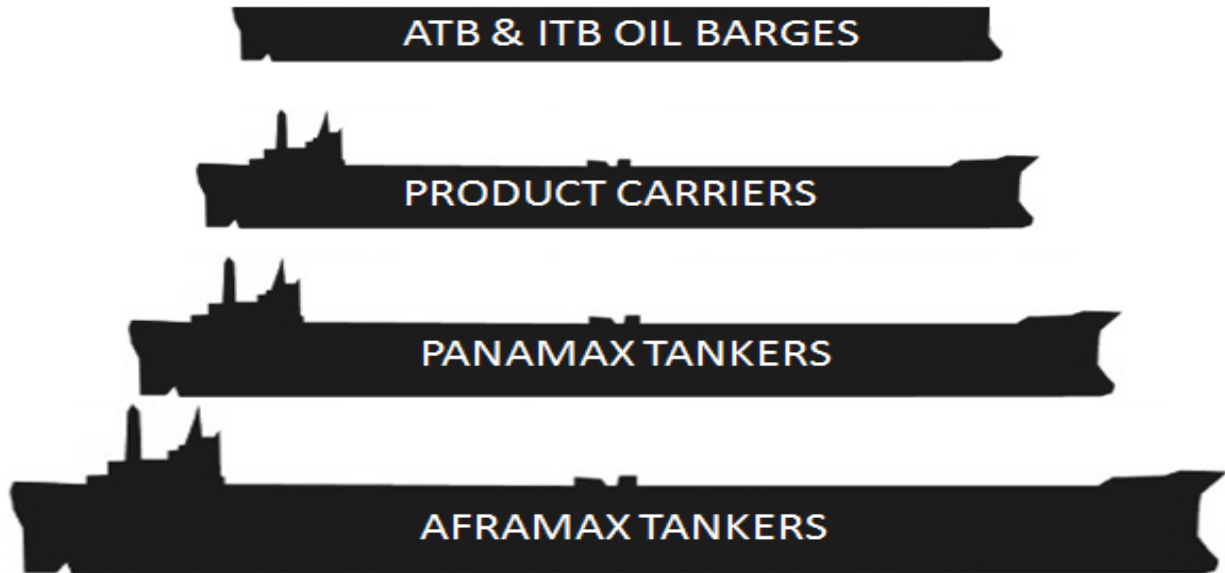


Figure 2-1: Vessel Sizes

Typical Maximum Loading Rates Various Size Tankers:

- Oil Barge: 1,000 – 2,000 m³/h
- Panamax: 8,000 – 10,000 m³/h
- Aframax: 10,000 – 14,000 m³/h

3. VESSEL CARGO SYSTEM

This section explains typical details of the vessel's cargo transfer system.

The handling of cargo oil on a vessel requires careful planning and operation of her cargo and ballast system. The system including the pumps and valves is monitored and operated centrally using a remote monitoring and control system. Operations are carried out by personnel who have been trained in the correct operation of the pumps and the associated systems, as described in the vessel's Class Approved Cargo Operations Manual.

The cargo and ballast system includes the vessel's cargo and ballast tanks, associated pumps and pipelines used for the loading and discharging of the cargo and handling ballast. These components of the vessel's cargo system are carefully selected and incorporated into a system designed to meet certain capacity and safe working criteria as well as industry requirements. The design of the system is evaluated by the vessel's Class Society in keeping with applicable rules and regulations.

The venting system of the cargo and ballast system is a complementary system and its smooth operation is essential to ensure safe cargo handling. Over- or under-pressuring of a cargo tank may cause structural failure of the tank leading to oil finding its way into the vessel's double hull spaces, which could include a ballast tank.

3.1. PIPING AND PUMPING SYSTEM

The cargo and ballast pipes are constructed of welded steel and are of a suitable diameter and thickness requisite to the use and necessary capacity of pressure and flow. The pipes are welded together into continuous lengths with flanges at appropriate intervals. The pipelines are fastened with hoops to supports, which are welded to the deck, inner tank bottom or sides as necessary. This allows them to move slightly in order to minimize local stresses. The entire system will have a number of flexible couplings or "omega bends" to allow for expansion and contraction of the pipes.

Typically the pipeline system handling cargo oil is designed to discharge the vessel's cargo ashore using her cargo pumps. The discharge lines from the pumps run up to the deck of the vessel and then forward to midship area, and there connect to a number of transverse pipes. These transverse pipes are provided with connecting flanges at both sides of the vessel and form the cargo manifold system of the vessels. The number of manifolds on a vessel is typically based upon the number of groups of tanks that form part of her designed cargo segregation. Each side of the manifold pipe will be provided with a valve and a standard presentation flange. There are industry recommendations that govern the number, size and type of manifold connections that are designed into the vessel's pipeline system. It is requirement to fit the pressure gauges outboard of the manifold valve.

During loading the pipeline design allows the cargo to be brought onboard in the midship area via the manifolds and then directed into the appropriate cargo tanks through a system of drop lines bypassing the pump room and pumps. A network of pipelines at the bottom of the tanks allows the cargo oil to flow into the appropriate tank using a system of valves. This network of bottom lines also allows the cargo to be drawn from each tank using the cargo pumps and also allows for cargo to be transferred internally between the tanks.

The entire cargo pipeline system is pressure tested to higher than maximum allowable working pressure at fixed intervals and otherwise tested to normal working pressure more frequently to ensure its integrity. Regular inspections are also carried out as part of ongoing maintenance.

Ballast pipelines are typically rated to lesser pressure than cargo pipelines and its layout is far simpler than that of cargo pipelines. Vessels are fitted with single or dual dedicated ballast pumps and these discharge ballast water from the ballast tanks directly to the sea. To fill a ballast tank the ballast pump draws directly from the sea using a sea suction located at the bottom of the vessel. A suitable number of valves form part of the design of the ballast water handling system. The main suction and discharge valves at the hull of the vessel are key components and subject to additional survey and maintenance.

The main cargo pumps are normally of the centrifugal type although some vessels may be fitted with positive displacement pumps either as main cargo pumps or for stripping the cargo tanks. These may be steam, electric or hydraulically driven. It is more common for the pumps to be situated in a dedicated pump room with the motive power being provided via shaft and coupling from the adjacent engine room. Pump speed, pressure and temperatures are monitored. Appropriate safety devices such as over pressure, over speed and high temperature trips are provided both for the pump as well as the motor. The pump shaft and its seals will also be fitted with suitable safety devices such as temperature sensors connected to trips. In the case of tankers, the pump room is typically located at the back of the cargo area, just forward of the accommodation and engine room. The pumps are located at the bottom of the pump room and typically at a level similar to the bottom lines. Barges will typically have their pump rooms located on deck.

A large number of valves control the flow of oil through the tanks, pipes and pumps. There is an ability to interconnect various sections of the pipeline system at different locations to allow flexible cargo operations. Where segregation of different grades of cargo is needed, double valves are installed. A majority of the valves are operated remotely by a hydraulic system. Indicators in the tanker's cargo control room show the state of open or close for all remotely controlled valves. Normally butterfly valves are used for oil flow control. The timing of valves closure is adjusted to avoid shocking the pipeline system from surge pressures.

Those vessels that are fitted with in-tank deep well submerged pumps have dedicated discharge pipes for each tank that flow into common larger diameter pipes to the manifolds. These pumps are often hydraulically operated with the hydraulic power pack located in the vessel's machinery space or in the case of barges in a dedicated location on deck. The pump will be by-passed during loading. These types of pumps are common on product and parcel tankers as well as barges such as those that discharge jet fuel at the terminal. They are less common on common on crude oil tankers

3.1.1 Cargo Manifolds

Each manifold will be provided with valves in accordance with OCIMF recommendations. The manifold connections will be numbered clearly from fore to aft and provided with individual blank flanges fitted with lifting handles. It is a requirement to keep the flanges secured and removed only when it is required to connect to the terminal's cargo handling system.

The manifolds, including the vapour and bunker manifolds are accessed by a working platform extending fore and aft beneath, and to the outboard side of the manifolds on both sides of the vessel. A manifold drip tray is permanently fitted under the manifolds. Cargo manifold reducers are provided in accordance with OCIMF recommendations and as related to the size of the vessel.

The manifolds can be drained to a tank on the vessel upon completion of cargo loading operations. The manifold areas on both sides of the vessel are fitted with various deck fittings in the form of bollards, fairleads, cleats and other such fittings designed to facilitate the lifting and securing of submarine pipelines at an offshore Conventional Buoy Mooring (CBM). This equipment is not typically used at a permanent fixed berth such as Westridge terminal.

3.2. VENTING SYSTEM

The venting arrangements of cargo and ballast tanks are important for safe handling of cargo and ballast. Each ballast tank is provided with means to vent to atmosphere at its forward and aft ends through vent pipes that extend to a specified height above the vessel's deck. Each vent opening is fitted with a flame arrestor.

The cargo venting system is designed and operated as to ensure that neither pressure nor vacuum in cargo tanks shall exceed design parameters. Primarily the system has to cope with the passage of large volumes of vapour, air or inert gas mixtures during cargo loading and discharging as well as allows for the flow of the small volumes of vapour, air or inert gas mixtures caused by thermal variations in a cargo tank in all cases through pressure/vacuum valves. The venting system is provided with devices to prevent the passage of flame into the cargo tanks. It is also fitted with pressure/vacuum valves fitted to each tank, common and

individual pressure monitors, pressure relief devices, etc., which all form part of the venting system and there is also a recording device incorporated into the system. The design, testing and locating of these devices have to comply with the requirements established by the IMO.

The cargo venting arrangement is designed on the basis of the maximum designed loading rate multiplied by a factor of at least 1.25 to take account of gas evolution, in order to prevent the pressure in any cargo tank from exceeding the design pressure. The Cargo Operations Manual mentioned previously provides information regarding the maximum permissible loading rate for each cargo tank and in the case of combined venting systems, for each group of cargo tanks.

The cargo venting system is typically combined with the vessel's inert gas system and incorporates the safety controls of the Inert Gas System (IGS).

3.2.1 Inert Gas System (IGS)

SOLAS requires every oil carrying vessel in excess of 20,000 DWT to be fitted with an Inert Gas System, which is capable of providing sufficient inert gas for the particular design of the vessel. Inert gas is introduced into the cargo tank during cargo discharge and that keeps the air space in a cargo tank at a reduced oxygen content (below 8% by volume), which will not combustion. It is not considered to be a fixed firefighting installation but in the event of fire it may help in restricting and controlling the fire, thus considered a fire protection arrangement. On the majority of tankers inert gas is provided from boiler flue gas. Alternatively, vessels may be fitted with an inert gas generator.

There are several safety components including an oxygen sensor, flow control devices such as one way valves, and a deck seal. The deck seal is designed to prevent cargo vapours flowing back into the inert gas production system.

The inspection of the IGS and associated piping, seals and safety devices is part of the Loading Master's checks. Tankers that are unable to arrive at the berth with cargo tanks in a suitably inerted condition and demonstrate that they are able to maintain cargo tanks in such a condition during loading or discharge of cargo shall not be allowed to remain at or alongside the facility.

3.2.2 Vapour Emissions Control System (VECS)

Every vessel loading at Westridge terminal will employ a closed loading method and consequently will be connected to, and utilize the tanker's Vapour Emission Control System (VECS) designed and operated to OCIMF guidelines and recommendations. Vapour displaced as a result of loading the tanker's cargo tanks will be collected using a dedicated VECS pipeline and sent ashore using a dedicated ship's manifold designed for the purpose. The collected vapours are processed using the shore infrastructure where Vapour Recovery Units (VRU) are fitted.

The key safety features are sensors that check oxygen content and back pressure in the VECS.

3.2.3 Vapour Manifold

Located forward and aft of the cargo manifolds, a separate VECS manifold is provided to allow connection to the shore Vapour Recovery System. This manifold is required to be painted yellow in order to differentiate the connection from the standard cargo manifolds. The VECS connection flange will also be provided with a projecting pin, typically located at the top centre of the manifold flange face and between adjacent bolt holes. This pin prevents a conventional loading manifold from being mistakenly connected to the VEC System. This manifold connects through deck lines directly with the ships inert gas pipeline and venting system.

3.3. LOADING COMPUTER

All tankers are required to plan the distribution and stowage of cargo amongst the cargo oil tanks and this is normally achieved using the onboard loading computer, which is a Class requirement. This ensures that the vessel is stable throughout and the computer also checks to see that hull stresses do not exceed any design limits. The system is normally connected to the vessel's draft gauges as well as with the cargo and ballast tank gauging system. There are a number of visual and audible alarms that assist the operator in preventing tank overflow and provide warnings in case any parameters are not met. The system also provides advice on water ballast distribution, water ballast exchange, damage stability, etc.

The loading computer is also required to calculate the cargo stowage in keeping with pre-defined damage stability conditions to ensure that in case of an accident the vessel is able to meet stability, hull girder strength and cargo outflow limits and thereby prevent further deterioration of the situation.

3.4. SERVICE CRANE

The ship's manifolds are served by a hydraulic or pneumatic operated service crane(s) which typically has, depending on the deadweight of the tanker and the requirements of the vessel's classification society, a lifting capacity of 10 t to 15 t SWL. The crane is used to assist in lifting and connecting flex PLEM pipeline(s) at an SPM operation, or reducers, to the ships manifolds as required. The crane is operated by trained ship's crew from a central control position. The crane shall not be used to connect the self-powered cargo and vapour arms at Westridge terminal.

3.5. POLLUTION PREVENTION

The integrity of the cargo system is a key element in pollution prevention during oil cargo transfer operations. Ensuring that the oil is stowed safely in the tanks during loading is managed by the cargo officers as guided by the vessel's Cargo Operations Manual. The volume gauges of each cargo tank as well as the combined and independent high and overfill alarms assist the cargo officer when each tank reaches its planned filling height and the flow of oil is switched to other tanks within the vessel's cargo system. Manual checks of tank levels are also carried out to verify readings from the fitted automatic level gauges.

Connection and disconnection of the vessel manifold with the shore loading/unloading arms is undertaken under strict joint supervision of the ship and terminal. The system is tested at a low pressure before the pumps are run up to their working pressure. Pressure gauges connected to the pumps and at the manifold monitor the achieved pressure to ensure no section of the cargo handling system is over pressurised.

The area near the manifold is protected with a large spill tray that is sized to the number and size of manifolds on the vessel as well as her size. The entire cargo deck area is enclosed with a scupper bar in the form of a vertical extension, to the ship's hull side plates, above the weather deck and running along the horizontal length of the main weather deck. It provides a dam to the outboard edge of the weather deck. The height of the scupper bar is commensurate to the size of the vessel with those on barges generally of 4" height while the tankers are required to have their scupper bars ranging in height between 12" and 14".

Scuppers act as a containment barrier in the unlikely event of a cargo overflow. The scuppers are provided with scupper plugs to allow controlled run-off of rain water in port, but are kept closed and secured during the loading and /or discharge procedures.

The cargo deck area can be drained to a small tank using either emergency drain valves or small pneumatically driven pumps or a combination of both.

3.6. MAXIMUM LOADING & DISCHARGE RATES

The number and diameter of the manifolds and loading arms connecting the ship to shore and leading to and from the shore tanks are major determinants of the cargo transfer rates achievable. The maximum loading and discharge rates depend on the diameter, number and configuration of the pipeline system, ship's cargo pump capacity, and the ability of the venting or inert gas system to cope. The capacity of the VECS to handle the venting gases from the vessel's cargo tanks is therefore a key element that will control the loading rate. Flow rate into each cargo tank is normally kept to linear velocity rates between 7 and 12 metres/second. It is important not to shut valves abruptly against the flow of oil in order to avoid pipeline shock.

Overall the loading rate is governed by the loading systems and equipment will be designed to achieve the necessary loading rates. Throughout the loading the cargo officers closely monitor the flow rate, compare ship/shore volumes transferred and carefully control the quantity of cargo or ballast in all the tanks onboard to ensure that the planned conditions are met throughout the time cargo is being transferred.

Aframax Tankers will be typically fitted with three main cargo pumps, each capable of handling 2,500 to 3,500m³/h of oil cargo against a working back pressure of approximately 1,177 kPa (170 psi). The tanker will be fitted with additional smaller pumps and eductor systems. The vessel will connect to the shore facility using three 16" manifold connections. These vessels can achieve peak loading rates of between 10,000 and 14,000 m³/hr using three manifolds provided there is capacity to handle such rates in the VECS and the terminal's VRU.

Panamax Tankers will be typically fitted with three main cargo pumps, each capable of handling 2,000 ~ 2,300m³/h of oil cargo against a back pressure of 1,177 kPa. The tanker will be fitted with additional smaller pumps and eductor systems. The vessel will connect to the shore facility using three 16" manifold connections. They can be loaded to rates between 8,000 and 10,000 m³/hr if VECS and VRU allows.

In case a smaller Product Carrier calls at the terminal to discharge Jet fuel it will typically be fitted with a number of Deep Well Pumps of capacities between 500 and 550m³/h, at least one per cargo tank. Such vessels are often provided with multiple cargo manifolds ranging between sizes between 8" and 12" and discharging rates depend on the number of pumps that can be brought into use at any point of time.

Oil Barges are typically fitted with two or three diesel electric cargo pumps with capacity to handle 1500m³/h each. These barges are provided with three cargo manifolds of 8" to 10" size.

3.7. FIRE PREVENTION AND FIRE FIGHTING SYSTEM

As described in Termpol 3.9, tankers must be equipped with fire prevention and firefighting systems per international rules and regulations, i.e. SOLAS. This requires specific fire protection, fire detection and firefighting equipment to be part of the vessel's design standards and the tanker's crew has to meet international training standards for this purpose. The tanker's inert gas system maintains cargo tanks in an inert condition (oxygen content must be less than 8% volume, but in practice 5%), which removes any danger of fire or explosion in the tank. All electrical equipment in designated areas must meet intrinsically safe standards. Appropriate means of dowsing a fire, e.g. water, foam, chemicals, etc. are provided depending on the type of space to be protected.

Cargo transfer at Westridge Marine Terminal is always conducted under closed loading conditions with a vapour collection manifold in use. This ensures that there are no vapours on the deck of the vessel.

Every tanker and barge attending the facility will, in compliance with the International Safety Management (ISM) code, have an established procedure to describe, identify and respond to emergency shipboard situations. The procedure will, as one of the priorities, identify the ship's response to fire onboard in the crew accommodation, engine room, pump room at the manifolds or cargo tanks. The plan will provide a clear line of command, individual responsibilities, procedures and communications. The emergency response plan will identify assembly locations, an Emergency front-line group, a back-up group and an engineering group. The planned procedures should apply equally at sea, at anchor or in port.

3.8. BALLAST

The ballast water onboard the vessel is stored in segregated tanks, which on a double hull tanker are integrated into the space between the outer and inner hulls. Additionally there are ballast tanks at each end (Fore Peak and Aft Peak tanks) of the vessel to assist in trimming. Provided ballast water management has been practiced in accordance with the regulations, the ballast will be free of any oil contamination or any invasive species, and the vessel will be free to discharge this water directly to the sea using her ballast pumps. In case the ballast onboard does not meet the required criteria, is found to be contaminated with oil or if ballast management practices have not been followed, the vessel will be prohibited from discharging her ballast. For a vessel that had been nominated to load at the terminal this could mean that the vessel will either have to abort her loading or only load the amount she can without discharging any ballast. Port and Government authorities regularly carry out spot checks of vessel ballast to ensure they meet regulatory conditions.

In accordance with Ballast Water Management² (BWM) all ships trading internationally are required to manage their ballast water and sediments to a certain standard, according to a ship-specific ballast water management plan. All ships will also have to carry a ballast water record book and in future an International Ballast Water Management Certificate. The BWM standards will be phased in over a period of time. As an intermediate solution, ships are required to exchange ballast water mid-ocean. However, eventually most ships will need to install an on-board ballast water treatment system. For vessels calling Westridge Marine Terminal, such mandated equipment installation should take place in a similar time frame as the commissioning of the project. Vessel ballasting systems are described in more detail in Termpol 3.9.

² International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM)

4. TERMINAL CARGO SYSTEM

The Westridge Marine Terminal is an existing facility and is already equipped to undertake safe cargo oil transfer operations. The existing equipment and monitoring system will be upgraded or replaced in keeping with industry best practices in order to ensure continued safe cargo transfer operations.

4.1. SYSTEM OVERVIEW

Batches of oil destined for Westridge Marine Terminal will be collected in the storage tanks at Burnaby Terminal and delivered via two new 762.0 mm (NPS 30) pipelines and the existing 609.6 mm (NPS 24) pipeline. Each pipeline line will have a capacity of 4,635 m³/hour (700,000 bbl/d), except that the existing line will only be capable of this flow rate when delivering light oil. The three delivery lines will terminate at receiving traps located at Westridge Marine Terminal. Interconnecting piping and a valve manifold will allow any of the three pipelines to deliver to any of the three berths. The pipelines will be operable simultaneously.

Custody transfer meters, located just downstream of the manifold, will be provided on each of the loading lines. A control valve will also be provided on each loading line to modulate the loading flow rate.

Two vapour recovery units (VRUs) and one vapour combustion unit (VCU) will be located at Westridge Marine Terminal. The vapour streams displaced from the vessels during loading will normally go to the VRUs, which will remove odorous components and capture the majority of the hydrocarbon vapours for reinjection onto the vessels being loaded or future vessels. During periods when one of the VRUs is shut down for maintenance the VCU will be used. The VCU will also be used if three vessels are being loaded simultaneously, which is expected to be infrequent. One of the VRU designs under consideration requires two small tanks for synthetic crude used as part of the capture and reinjection cycle. The design of the VRU/VCU system will be finalized during the Detailed Engineering and Design Phase.

The control system for the new facilities will be integrated with existing Westridge Marine Terminal control system and will comply with existing control philosophies. The majority of operational functions will be able to be controlled from the primary or secondary control centres in Edmonton.

New control panels housing remote input/output (I/O) racks will be provided in each of the new Electrical Service Buildings (ESBs). The uninterruptible power supply (UPS) will provide power to the new remote I/O racks. Additional human machine interfaces (HMIs) will be added as required. Upgrading and reconfiguration of the existing HMIs will be performed, as necessary, to incorporate status, analog information, and control of the additional tanks,

pipings, valves, alarms, equipment, process data, and trends. Where possible, tank and meter display screens will be the same as currently in use.

The metering system will be controlled by flow computers and a PLC, consistent with those currently in service. Control and shutdown functions for the protection of equipment and systems will be installed at the equipment and will be independent of inputs from SCADA³ or operation of the SCADA system. The operating limits and protective device settings document will be updated to include settings and functionality for all new equipment.

4.2. PIPING

Dock lines, tank lines, manifold, pump, meter, and interconnection piping will be above ground where practical, but may be below ground at certain road or other crossings. Dock lines and tank lines will be designed to be “pig-able”.

The design pressure of the Westridge Marine Terminal process piping upstream of the last valve prior to the loading arms will be either 1,900 kPag (276 psig) consistent with a pressure rating of PN 20 (ANSI 150#), if pipeline pressure relief is provided, or 4,960 kPag (720 psig) consistent with a pressure rating of PN 50 (ANSI 300#), if pipeline pressure relief is not provided. The determination of the provision of pipeline relief will be made during the Detailed Engineering and Design Phase. The design pressure of the piping downstream of the last valve prior to the loading arms will be 1,900 kPag (276 psig), since vessels are protected by pressure relief systems. The design pressure of the vapour recovery system piping will be 1,900 kPag (276 psig) unless otherwise determined during the Detailed Engineering and Design Phase.

Process piping will be designed for the peak loading rate of 4,635 m³/hr (700,000 bbl/d). Pipe, fittings, and flanges will meet the requirements of CSA Z245.1 Steel Pipe, CSA Z245.11 *Steel Fittings*, and CSA Z245.12 *Steel Flanges*. Valves will meet the requirements of CSA Z245.15 *Steel Valves*. Material grades and wall thicknesses will be determined in accordance with the applicable standards and specifications. The operating pressure will not be greater than 80% of the test pressure. Non-destructive testing of pipe welding will be in accordance with applicable standards and specifications and all piping will be hydrostatically pressure tested in accordance with the applicable standards and specifications.

4.2.1 Pipeline Pressure Relief

If the design pressure of the Westridge Marine Terminal process piping upstream of the last valve prior to the loading arms is selected as 1,900 kPag (276 psig) consistent with a pressure rating of PN 20 (ANSI 150#), full-flow pressure relief and a dedicated relief tank will be

³ SCADA (supervisory control and data acquisition) is a type of computer controlled industrial control system that monitors and controls industrial processes.

provided. The volume of the relief tank will be finalized during the detailed Engineering and Design Phase.

4.2.2 Loading and Vapour Recovery Arms

To achieve the peak loading rate of 4,635 m³/hour (700,000 bbl/d) it is expected that each berth will require three 16" diameter loading arms. A spare loading arm may be provided at one or more berths for redundancy. Berth 1 will also be fitted with one 12" diameter unloading arm. Each berth will also be fitted with one 12" diameter vapour recovery arm. The spacing between loading arms will be approximately 4.0 m (13.1 ft.). The size and placement of the loading arms shall conform to OCIMF recommendations.

4.3. VAPOUR EMISSIONS AND CONTROL SYSTEM (VECS)

Two vapour recovery units (VRUs) will process vapors displaced from vessels during crude oil loading. The preliminary technology considered has an absorption vessel for removing odorous sulfur compounds and an activated carbon adsorption vessel for removing hydrocarbons heavier than ethane.

The VRU process includes a regeneration of the activated carbon through reversal of the flow. The hydrocarbon laden vapour stream will be absorbed into a synthetic oil stream supplied from one of the VRU tanks. The enriched synthetic oil will be held in the other VRU tank for eventual reinjection onto the vessel being loaded or onto a future vessel.

Other technologies are being considered for vapour recovery. The technology selection and design of the VRUs will be completed during the detailed engineering and design phase.

4.3.1 Vapour Combustion Units

One thermal oxidizer type vapour combustion unit (VCU), similar to the one currently in service, will be provided. Fuel for the VCU will be either propane or natural gas. The VCU will be used when one of the VRUs is unavailable due to maintenance or repair or when three vessels are simultaneously loading, which is expected to be infrequent. The technology selection and design of the VCU will be completed during the detailed engineering and design phase.

4.4. GANGWAY TOWER

Each berth will be provided with an articulated telescopic gangway tower for ship to dock access. All movements of the gangway will be self-supporting and self-actuating, not requiring assistance from other lifting or pulling equipment. In the stored position, the gangway will fold clear of the edge of the loading platform. The gangway will be designed to retract and clear the vessel during an emergency.

The gangway height will be adjustable for the full range of tides and vessel freeboards. The gangway will be equipped with a telescopic access ramp. The end of the gangway will have the ability to turn 90 degrees after clearing a vessel's rail to provide flexibility in accommodating vessels with different deck configurations.

The gangway tower will support an integrated stores crane and a fire-fighting monitor. A lay down area adjacent to the gangway tower will allow for truck loading and unloading. The crane will be capable of 360 degree rotation.

4.5. POLLUTION PREVENTION

Each berth will be provided with a spill containment boom sized to encircle an Aframax class vessel. Loading of a vessel will not start before the deployment of the boom and the boom will remain in place until the loading arms have been retracted and secured.

Secondary containment for the VRU tanks and the relief tank will be provided in accordance with CSA Z662 and the BC Fire Code (BCFC).

All new process facilities, including the receiving traps, piping manifold, vapour recovery equipment, and loading platforms, will be located within secondary containment. Storm water from these process areas will be directed to a new oil / water separation system prior to discharge into Burrard Inlet. Details of the containment and water treatment system will be determined during the detailed engineering and design phase.

Storm-water from non-process areas, including roadways, will be allowed to drain directly to Burrard Inlet.

4.5.1 Sump Tanks

Thermal relief valve discharge lines and selected drain lines associated with the process piping in the Westridge Marine Terminal receiving trap area, valve manifold, and metering area will be routed to one or more below grade sump tanks. The tanks will be sized to allow the drain-down of a significant portion of the process piping. Final sizing will be determined during the detailed engineering and design phase.

A lift pump and reinjection pump will be installed at each tank to allow re-injection of the sump contents back into the process piping. Pump-out to a tanker truck will also be possible through an above ground connection.

The sump tank design will include vents high enough to prevent spillage during equipment drain down. Sump tanks will be constructed from fibre-glass (or a similar composite material) and will be of double-wall design. The interstitial space between the two shells will be monitored to assess the integrity of the tank.

A storm water collection sump tank will be located below each loading platform containment area. Although the sump tank is intended for storm water, its capacity will be equal to 30 seconds of the full flow from one loading arm in case of a leak. Each sump tank will have a separate sump pump which will direct the contents of the tanks to an onshore holding tank for treatment and disposal. The sump tank will be emptied prior to arrival of each new ship.

4.6. FIRE PROTECTION SYSTEMS

A new fire-protection system will be provided at Westridge Marine Terminal. It will consist of a Fire Water System that will feature two new submersible pumps, taking water from Burrard Inlet. Water from the Burnaby City will also be available for firefighting purposes.

The foam system will be housed in a new centralized foam building complete with a foam concentrate storage tank and injection system. The foam distribution system will serve the new dock complex and shore infrastructure using necessary foam turrets and nozzles.

Storage tanks will be fitted with seal-area foam pourers permanently connected to the fire-water / foam supply. The foam supply to each tank will be activated by automated valves.

A nitrogen gas generator or a nitrogen storage system will be provided to allow for the purging of the vapor recovery lines.

4.7. ELECTRICAL SYSTEMS

New Electrical Services Buildings (ESBs), are planned to house, switch gear, motor control centres (MCCs), and control panels.

A standby generator will be installed to provide emergency power to all motor operated valves (MOVs) and designated emergency equipment during a power outage. An uninterruptable power supply (UPS) will be installed to maintain communications and critical information during the transfer from utility power to generator power.

Consideration will be given to the space required on the docks for future shore power transformers and conversion equipment.

Area lighting will be directional and targeted to the greatest extent practical to reduce extraneous lighting impact on the adjacent community.

4.8. INSTRUMENTATION AND SAFETY SYSTEMS

The general scope of the instrumentation will include:

- a radar gauging system on each storage tank, with high level and low level sensing and overflow protection capability;
- a redundant overflow protection system on each storage tank;
- a fire detection system on each storage tank;
- a leak detection system under each storage tank and in the interstitial space of the sump tank(s);
- a hydrocarbon detection system in each storage tank containment areas and selected other containment areas;
- piping pressure and temperature sensors and transmitters for measurement and protection,
- ultrasonic meters;
- densitometer(s), viscometer(s), and automatic sampler(s);
- waste oil sump level and control instrumentation; and
- berthing assistance instrumentation

4.9. CUSTODY TRANSFER AND METERING SYSTEM

The custody transfer metering system will consist of six meter runs, two on each dock delivery line and two spare meter runs. The meters will be ultrasonic. Measurement accuracy will meet or exceed *Canadian Weights and Measures Regulation Part IV* of +/- 0.25%. The proving method will be a permanent bi-directional, positive displacement, meter prover. The custody transfer metering system will include instrumentation to provide continuous monitoring of fluid characteristics (including temperature, pressure, viscosity, and density), an automatic sampler, and flow computers.

4.10. EMERGENCY SHUTDOWN SYSTEMS

All equipment added for TMEP will be integrated into the existing Westridge Marine Terminal Emergency Shut Down (ESD) system, which will be expanded and enhanced as necessary. Additional integration will be developed between the ESD systems at Burnaby Terminal and at Westridge Marine Terminal. A standby generator will ensure essential services and ESD functionality during power outages.

ESD buttons will be located near each loading arm and in the new operations building. The activation of any of these ESD buttons will safely stop loading operations and send an alarm to the primary and secondary control centres. The ESD condition will cause the booster pumps located at Burnaby Terminal shut down and may cause other automated devices to activate.

Loading arms will be equipped with a powered emergency release system. In the event that motion of the loading arm exceed pre-set limits, two fast-acting, hydraulically actuated ball valves will close and the arm will be decoupled from the vessel's manifold. Any spill volume will be contained and collected on the vessel in the fitted manifold spill tray.

4.11. COMMUNICATIONS

The existing wired and fiber optic industrial network will be expanded to provide communications between PLCs and equipment. Communications to the primary and secondary control centre SCADA systems will be by leased land line. Back-up communications will be provided by satellite. An additional communications link will be installed between Westridge Marine Terminal and Burnaby Terminal to allow instantaneous response to alarms originating at either location.

4.12. JET FUEL SYSTEM

The terminal expects to continue to service jet fuel barges that will discharge their cargo at Westridge Marine Terminal. A dedicated pipeline will be provided for this purpose and jet fuel will be discharged at Berth #1 using a 12" cargo arm that will not be used for crude oil service. As is current practice, the jet fuel shall be received into tanks located near the foreshore at Westridge and from there staged for transfer via a separate 6" pipeline to Vancouver International Airport.

5. SAFE OPERATIONS

Westridge Marine Terminal being an already established oil handling facility has sixty years' experience in undertaking safe cargo transfer operations. The terminal's safe and pollution free record has been a result of ongoing focus on all matters of safety and pollution prevention, which requires close liaison and participation by all members of the ship and terminal staff who are involved in the process.

As described earlier, the terminal expects to continue to load vessels with crude oil and also occasionally receive jet fuel from barges or small tankers. In either case, the following procedures adjusted for whether a vessel is loading or discharging shall be complied with.

5.1. VESSEL STAFF

The vessel's Master and designated cargo officer are responsible for planning and executing all aspects of the cargo transfer in a safe manner in keeping with OCIMF recommendations and industry best practice. Staff onboard is required to possess special training on the handling of oil cargo including safety and emergency training. They will also be familiar with the vessel's equipment and operating characteristics.

5.2. TERMINAL STAFF

Terminal staff is trained in their duties and ensure that terminal equipment is maintained and operated properly. They carry out regular checks and rounds of the terminal and the various infrastructures to confirm these are operating in accordance with given equipment parameters.

5.2.1 Loading Master

Trans Mountain allocates a Loading Master to all arriving vessels. This person has knowledge of tanker operations and is designated by the Terminal to liaise and communicate with a vessel prior to and during her stay at the terminal about operations at the dock; the Loading Master acts as the Terminal's Representative.

The Loading Master witnesses operations and confirms that safety and tanker and terminal best practices are being followed. He/she has the authority to immediately stop or abort cargo transfer operations and seek immediate actions and assistance to safeguard the terminal and the environment if he/she determines that, in his/her sole judgement at the time, the situation so demands. The Loading Master provides local knowledge and prompt on-scene guidance to the Vessel and Terminal during an emergency. However, the Loading Master's authority does not extend to the vessel or her crew.

The Loading Master updates information in the Terminal's files about the performance of the vessel.

5.3. CONTROL OF OIL TRANSFER OPERATIONS

5.3.1 Vessel

The Cargo Control Room (CCR) of a tanker is typically situated one or two decks above the main deck at the front of the ship's accommodation block and provides a view of the tanker's cargo deck and cargo manifolds. The CCR contains all necessary controls, monitoring systems and alarms including control feedback equipment necessary to safely direct and control all cargo operations. The tanker's cargo watch officer will control the cargo transfer from the CCR.

On barges where a CCR is not available there will normally be a person available on deck who will be responsible for monitoring and controlling the transfer operation. In addition there will be other persons on watch to ensure safe conditions are met and prevent any abnormal conditions from developing.

Tankers and barges attending the proposed facility will comply with all applicable standards and guidelines for monitoring and alarm systems as identified by ISGOTT & OCIMF recommendations for the installation, application, use, testing and maintenance of the following:

- Monitoring of all cargo manifold pressures
- Monitoring of cargo temperatures
- Monitoring and alarms of cargo pump rpm and safety trips.
- Monitoring and alarms of cargo pump output pressures
- Monitoring of the status of all cargo valves
- Monitoring and alarm of cargo valve, hydraulic operating system pump pressure and hydraulic oil levels
- Monitoring and alarms of Inert Gas System (IGS) O₂ levels and main IG line pressure
- Monitoring of all cargo tank levels
- High-level cargo tank alarms, audible & visual. (on deck)
- High-High Level (overflow) cargo tank alarms, audible & visual (on deck).
- OBD Valve Monitoring and alarms
- Checking the mooring and gangway to ensure the vessel remains safely moored
- Undertake rounds on deck and pump room to ensure there are no undetected leaks from pipelines, etc.

- Fire alarms
- These items are often incorporated into a checklist that staff use to ensure all items have been checked on a regular basis

5.3.2 Terminal

The terminal control room is the hub for all the operational and emergency equipment at the marine terminal. All operational equipment, such as mooring loads, berthing assists, fire monitors, etc., communicate with the Control Room through the Supervisory Control and Data Acquisition (SCADA) computer control system. SCADA allows the terminal operators to monitor all equipment relevant to the operations of loading/unloading cargo from vessels or barges, as well as all emergency events. The Operations Room will be strategically situated and elevated so as to provide a full visual coverage of the marine transfer facility and tanker.

(A) ALARMS

Since the proposed facility will provide a number of independent tanker berths, the operation and emergency plan will include necessary monitoring, alarm, and identification of the individual berths at which the event has taken place. This will be achieved through the installation of a differentiated alarm system. SCADA system will be used to manage all operational equipment used in the process of loading and unloading of cargo and ensure it is done safely as well as alert staff in the event of an emergency. The system will be designed to identify differing types of operational warnings and emergencies, and provide numerous alarm trips at strategic points on the berth and immediate vicinity.

(B) MONITORING AT THE BERTH

Presently cargo temperatures, cargo line pressure, and flow rates are monitored on shore, at the berth operations room situated at the existing terminal. The proposed new terminal facility will also be provided with a similar monitoring and alarm capability for each of the individual transfer berths. Using SCADA the terminal operator will have full access to the flow rates and be able to compare the volumes transferred with the vessel.

(C) VECS

The Vapour Emissions Control (VEC) System is also monitored and alarmed at various points in the system with a complete graphic flow displays in the berth operations room. The new facility will be provided with a similar monitoring and alarm capability with full flow graphics.

5.4. SAFE ACCESS TO & FROM VESSEL

Although there will be sufficient area for the vessel to land its own, ship's gangway, it will be a terminal practice to utilise the gangway tower described earlier to provide safe access to and from the vessel.

The gangway will be designed to provide safe access at any stage of tide or draft whether the vessel is loading or discharging. Once deployed and positioned on the deck of the tanker the design of the gangway will allow free motion to allow for surge, sway and heave, including changes in tidal conditions and draft.

The shore gangway will be provided with a powered or manual back-up system in the event of a failure of the primary system.

The vessel's offshore gangway will be kept in the horizontal position ready for lowering and to be used as an emergency escape to the water.

5.5. COMMUNICATIONS

In order to ensure safe transfer operations at all times the new facility will maintain a reliable communications system in the form of telephone, portable VHF/UHF and radiotelephone systems all of which will be intrinsically safe and comply with the appropriate safety requirements. The facility will also be provided with a purpose designed back-up communication system.

The responsible watch officer on an attending tanker will be provided with a shore supplied, intrinsically safe, portable VHF/UHF radio with a designated facility working channel and back-up channel. The radios and working/back-up channels will be supplied and confirmed at the pre-loading safety meeting via the exchanged safety check-off list. The facility will also provide the vessel with a list of telephone numbers for direct contact with emergency and first response services.

5.6. GENERAL PROCEDURE OF CONNECTING TO VESSEL'S MANIFOLD

5.6.1 Ship/Shore Manifold/Loading Arm Connection.

Subject to the pre-loading procedures including necessary tank and equipment inspections, safety meetings and exchange of ship/shore information, the loading arms provided at each berth will be connected to the attending tanker's cargo manifolds. An additional arm will be provided for the Vapour Emission Recovery System (VECS) that will be connected to the vessels vapour line manifold. The Loading Master will liaise on these matters with the tanker crew.

Typically each loading arm will be offered up into the close vicinity of the vessel's selected corresponding manifold via the manipulation of an intrinsically safe remote control or via fixed shore controls on the dock-working platform controlling the hydraulic power system.

Each loading arm will be provided with a hydraulically operated Quick Connect/Disconnect Manifold Coupler (QCDC). Each coupler will be provided with an alignment

system to guide the coupling onto the flange of the vessel's manifold and a positive locking system which prevents the connection from becoming loose or from being released accidentally. The provision of quick connect/disconnect couplers allows a high level of safety and efficiency when multiple loading arms have to be connected and disconnected.

The use of QCDC also provides a means of quickly isolating the vessel in the event of a fire or in the event of the tanker having to be moved off the dock in an emergency. The locking system is hydraulically/mechanically actuated providing a secure and reliable connection. The presentation face of the QCDC is fitted with an 'O' ring for positive sealing. As a fail-safe precaution in the event of a hydraulic motor or hose failure the connection remains intact and connected. The system can be manually overridden.

The presentation flanges are fitted with a blank flange cover in order to secure the loading arm and prevent any residual oil leaking out or rain/sea water leaking in. The flanges can be of non-sparking steel or approved synthetic materials. The blanks should be provided with lifting handles.

Prior to removing the manifold and loading arm blanks the loading arm and vessel's manifold are checked for residual oil or residual pressure using the drain valve provided. Once it has been established that the loading arms are clear of oil and/or pressure the blanks are removed and the arm made ready for connection.

Once the loading arm presentation flange is in close vicinity to the vessel's manifold flange the hydraulic control system is put into neutral and the final connection is made and secured manually. The process is repeated as necessary. The last connection is that of the shore Vapour Emission Control System (VECS) which is connected to the vessel's vapour line.

The vessel's vapour manifold flange is fitted with a special connecting flange fitted with a centre pin protruding from the face of the flange. The pin engages with a female receptor on the shore vapour line flange. This is to prevent the accidental connection of a cargo line with the vapour recovery system.

5.6.2 Ship/Shore Insulating Discontinuity

The loading arms will be fitted with an insulating flange and gasket/'O' ring so designed and fitted as to provide complete electrical isolation between the vessel and the shore. The examination and maintenance of the flange and associated securing fittings will be ongoing both as a part of planned maintenance and at the time of making the vessel to shore connections.

The design and operational specifications of the manifolds, loading arms and associated connections will comply with the relevant regulations, requirements and standards of the pertinent authorities and government bodies.

5.6.3 Loading Arm Operating Envelope

The design of the marine loading arms will consider the potential movement (i.e. surge, sway, heave, pitch, roll and yaw) of the vessel at the berth. It will also consider site-specific tidal range change of draft and trim due to loading/discharge and will accommodate the freeboard range of all design vessel sizes to be accommodated at the proposed berth. In considering the variation in the size of design tankers the loading arm-operating envelope will allow for maximum and minimum setback and manifold spacing.

The arms will be counterbalanced to ensure that no other weight than that of the oil content in the arm itself is placed on the manifold and manifold connection. However, since the loading arms will be of a large diameter, manifold jacks will be provided in order to avoid overstressing the vessel's manifold.

The operating limits of the loading arm, typically +/- 1.5m surge and 3.0m sway, will be monitored and staged visual & audible alarms provided that will indicate that the individual arms are approaching or at their operating limits in any of the pertinent planes of operation. At this point loading will be stopped in order to adjust the moorings or remedy the cause of the alarm.

The second stage alarm will, given the provision of a powered, automatic, emergency release system, close down the transfer operation, drain the arm and release the coupling/s.

Loading arm specifications will be specific to the diameter and number of shore pipelines and the operating envelope developed in association with the range of the design tankers. These are to be established in the detailed design stage.

The berth operator(s) and the vessel's crew will ensure that the tanker's moorings are tended regularly and as necessary in order to maintain the tanker's manifolds well within the intended operating envelope.

5.7. UNDERTAKING CARGO TRANSFER

Prior to the vessel's arrival she would have completed a number of checks in accordance with the ISM Code requirements and her onboard safety management system. These require the Cargo officer to prepare a cargo loading/discharge and stability plan and carry out checks to ensure that all equipment required for safe cargo transfer is in satisfactory condition. The oxygen content of each of the cargo tanks will be verified and the various tank gauges and alarms confirmed. Cargo tanks would be kept under a slight positive pressure. Ballast water management activities would have taken place well in advance of her arrival into Canadian waters. Fire hoses and extinguishers will be prepared at the manifold and the deck scuppers put in place. The cargo officer will brief the other officers and staff of their duties in port as well as any specific safety precautions. The watch rotation will be set and fatigue management procedures established.

The Loading Master will confirm through information received from the shipper and the vessel's master and agents that she meets the necessary criteria (Tempol 3.9) for her acceptance and in consultation with the terminal staff also confirmed the status of cargo and dock readiness in advance of the vessel's arrival.

Once having arrived in port, the vessel will be berthed in accordance with the established practices described in Tempol 3.13 and the gangway placed. The Loading Master will carry out the necessary checks and inspections of the vessel before final acceptance. The Loading Master shall verify that the vessel is securely moored and the oil spill boom has been placed around the vessel before asking for the manifolds to be connected with the terminal's system. A safety meeting will be held with vessel and terminal staff in attendance during which time a Ship/Shore Safety Checklist⁴ will be completed and signed by the vessel's cargo officer, Master and the Loading Master. The check list will form part of the Terminal records.

Information related to the cargo including a MSDS as well as any specific information related to security will be provided to the vessel. The vessel's cargo transfer plan will be discussed and the initial, maximum and completing cargo transfer rates will be agreed at this time. Communication protocols will be established and a radio check completed. The main engine must remain available at all time. The vessel's exhaust emissions must be compatible with the MARPOL Annex VI requirements and she must use fuel of a type allowed in the region.

5.7.1 Commencing Cargo Transfer

Following the safety meeting and exchange of cargo data (including loading plan and loading rates) the manifold connections will be checked to ensure that the flanges are properly secure with no chance of leaks. All other cargo manifolds on the vessel will be shut and properly with the required number of bolts in place. There will be common understanding of the emergency shutdown procedure between the vessel and the terminal.

The cargo officer and a crew member will set the deck and tank valves ready for the particular operation, i.e. loading or discharge. The terminal in the meantime will also line up the necessary pipelines and valves.

Once readiness has been confirmed between the vessel and the terminal, via the Loading Master, cargo transfer may commence. Prior to commencing transfer radio checks will again be completed between the vessel's deck watch, the person at the manifold, the vessel's CCR, the Loading Master and the terminal control room.

When instructed the vessel's manifold valves are opened and the cargo transfer is commenced at a slow rate. In case of discharge (Jet Fuel) the vessel controls the rate by adjusting the pumps onboard. In case of loading (crude oil) the rate is controlled by the

⁴Responsibility and accountability for the statements within the Ship/Shore Safety Check-List is based on recommendations in ISGOTT. The acceptance of responsibility is confirmed by ticking or initialling the appropriate box and signing the declaration at the end of the Check-List. Once signed, the Check-List details the minimum basis for safe operations as agreed through the mutual exchange of critical information.



terminal. In both cases checks are then carried out to confirm cargo is flowing to the selected tanks and that there are no leaks in the system.

If cargo is being loaded the back-pressure of the VECS is checked to ensure that the recovery rate is not overwhelming the capacity of the system.

5.7.2 During Cargo Transfer

Loading or discharge rates are increased after approximately 20 minutes after checking that cargo is flowing to the appropriate tank and there are no system leaks (but only on the instructions of the receiving party) until full loading or discharge rate is achieved and the receiving party advised. At this time the vessel crews will commence normal monitoring and watch keeping, with the deck watch commencing periodical rounds on deck to check various items including those items marked for periodical checking on the Ship/Shore Safety Checklist. As part of such checks the scuppers will remain properly plugged, any accumulated water from the deck will be drained, the pipelines are visually inspected, the valve settings are checked, the venting system is verified to be working as it should, etc. The cargo tanks will be gauged at hourly intervals and the cargo volumes compared between vessel and terminal. The moorings of the vessel will be checked and adjusted as required. The deck watch will also check the water around the outside of the vessel on a regular basis and report to the CCR. The oxygen content of the cargo tanks will be checked using portable meters or the central monitoring system.

The terminal operator will monitor the transfer using SCADA and keep a watch in and around the proximity of the vessel by means of CCTV. Mooring loads will be reviewed to confirm these remained within their parameters.

The vessel will adjust the quantity of ballast onboard using the ballast pump(s) and periodically verify that hull stresses, draft and stability parameters continue to be met.

The Loading Master will also carry out periodical rounds on decks and verify that the transfer is proceeding smoothly with both the vessel and the terminal.

As tanks reach their pre-planned levels the tank valves of other tanks are opened and the completed tanks are shut off. Both parties will inform each other prior changing over any tanks.

5.7.3 Completion of Cargo Transfer

The bulk of the cargo having been transferred the vessel and shore shall prepare for the final completion of cargo transfer. If the vessel is loading, the cargo officer shall request the terminal to reduce the loading rate to the prior agreed amount. This rate will be maintained and adjusted as the final cargo transfer quantity is reached. While doing so the tanks will be closely monitored using the tanks gauging system, and manually if loading to near full tank capacity. Any overfill situation shall be avoided by immediately shutting down the transfer if deemed necessary. The Loading Master will normally be in the vicinity of the CCR or on deck during this time.

On completion the vent valves on top of the cargo transfer arms are opened allowing any residual oil to drain back into a selected tank onboard the vessel. The vessel's manifolds are closed and the shore side section of the loading arm is drained off into a shore holding tank. After verifying that the cargo transfer arms have been properly drained, the cargo arm(s) and the VECS are disconnected from the vessel manifold. Thereafter cargo valves are closed and secured onboard and the quantity of ballast onboard adjusted according to plan. Normally a loaded tanker would have completely empty ballast tanks.

After the final cargo quantity has been verified by a cargo surveyor the vessel is free to leave the berth. The vessel's agent will provide the necessary clearance documents to the vessel's Master after which the vessel will be consider clear to leave the port.

Departure will follow established procedures described in Termpol 3.13.



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APPENDIX G

**VOLUME 2, APPENDIX 2 TRANS MOUNTAIN EXPANSION PROJECT:
UNDERSTANDING THE ECONOMIC BENEFITS FOR CANADA AND ITS REGION.
CONFERENCE BOARD OF CANADA**



The Conference Board
of Canada

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du Canada

CUSTOM REPORT

The Trans Mountain Expansion Project: Understanding the Economic Benefits for Canada and its Regions

Presented: March 6, 2014

Presented by: The Conference Board of Canada

Presented to: Trans Mountain Pipeline (ULC)

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ERRATA NOTE:

This version of the report corrects several tables contained in the same report filed with the Trans Mountain Expansion Pipeline application to the National Energy Board in December 2013, where the provincial fiscal impacts associated with the Trans Mountain Expansion Project's operations for Alberta and British Columbia were transposed. This does not impact the total national figures or the figures for other provinces. The following tables were affected.

Table 1. Summary of the Economic and Fiscal Impacts of the TMEP (page 7)

Table 4. Summary of Fiscal Effects from TMEP Operations (page 39)

Table 5. Summary of the Regional Impacts of TMEP Operations (page 41)

Table 6. Summary of the Regional Impacts of TMEP Development and Operations (page 42)

Table 8. Summary of the Economic and Fiscal Impacts of the TMEP (page 53)

Contents

Executive Summary.....	5
Impacts of TMEP’s Development Phase	5
Impacts of TMEP’s Operational Phase	6
Impacts of Higher Netbacks for Producers	6
Summary	7
Chapter 1: Introduction	8
Chapter 2: Economic Impacts Associated With the Development of the Trans Mountain Expansion Project.....	10
2.1 Direct Effects.....	10
2.2 Indirect Effects	12
2.2.1 Indirect Effects by Sector	13
2.2.2 Indirect Effects by Region	18
2.3 Induced Effects.....	24
2.3.1 Induced Effects by Sector.....	24
2.3.2 Induced Effects by Region.....	25
2.4 Fiscal Effects.....	26
2.4.1 Federal Impacts	27
2.4.2 Provincial Impacts.....	27
2.5 Summary	28
Chapter 3: Economic Impacts Associated With the Operation of the Trans Mountain Expansion	29
3.1 Direct Effects.....	29
3.2 Indirect Effects	31
3.2.1 Indirect Effects by Sector	31
3.2.2 Indirect Effects by Region	34
3.3 Induced Effects.....	35
3.3.1 Induced Effects by Sector.....	36
3.3.2 Induced Effects by Region.....	37
3.4 Fiscal Effects.....	37
3.4.1 Federal Impacts	38
3.4.2 Provincial Impacts.....	38

3.5 The Economic Effects of Non-Firm Transactions	39
3.6 Summary	41
Chapter 4: The Fiscal Impacts of Higher Netbacks for Canadian Oil Producers	43
4.1 The Base Case	44
4.1.1 Fiscal Impacts: Royalties	45
4.1.2 Fiscal Impacts: Income Taxes	46
4.2 The Low Production Case.....	47
4.3 The High Production Case	49
4.4 Summary	50
Chapter 5: Conclusion	52
Appendix A: Resume and Professional Qualifications of Glen Hodgson	54
Appendix B: Bibliography.....	56
Appendix C: Input/Output Models	57
Key Assumptions.....	58

Executive Summary

Oil is a global commodity, with a well established transportation infrastructure. As a result, global benchmark prices are usually nearly identical to one another once adjustments for quality and transportation costs are taken into account. However, this has not been the case in recent years, with Canadian benchmark prices lagging considerably behind their global peers. The combination of stagnant North American demand, rising North American production, and an oil transportation infrastructure that is largely confined to exporting Canadian production to the U.S. Midwest all contributed to this outcome. The result is that Canada has not been getting the full fiscal and economic benefits associated with exploiting its non-renewable oil resources.

In response, there has been growing interest in developing new oil pipeline infrastructure in North America. There are currently four major pipeline projects under consideration that would carry oil away from Western Canada if completed. One of these is the Trans Mountain Expansion Project (TMEP or the Project), which would nearly triple the capacity of the existing pipeline that runs from Edmonton, Alberta to Burnaby, British Columbia. The objective of this report is to assess the economic and fiscal impacts associated with the proposed expansion of the Trans Mountain pipeline. We do this in three ways:

- Assessing the impacts associated with the initial required investments to build the pipeline and related infrastructure.
- Assessing the impacts associated with operating the pipeline once it is up and running.
- Assessing the impacts associated with higher netbacks to oil producers that are expected to result from smaller price differentials between Canadian and international oil price benchmarks.

Impacts of TMEP's Development Phase

If approved, the TMEP is expected to cost approximately \$5.5 billion¹, with the expenditures taking place over a seven-year period, from 2012 to 2018. If we adjust for price increases, that is equivalent to \$4.9 billion in 2012 dollars. Parts of the Project, such as planning and regulatory filings have already begun; however, the bulk of the spending is expected to take place in 2016 and 2017, when construction activity peaks. For the purposes of our analysis, we exclude the financing costs from the analysis; thus we assess the economic impacts of \$4.6 billion of expenditures in 2012 dollars.²

This spending generates direct impacts in the construction sector, supply chain impacts associated with the inputs needed to complete the Project, and induced effects, which occur when the wages that employees earn from the direct and supply chain effects are spent. Combined, these three effects are expected to support 58,037 person-years of employment, with nearly half of those effects being direct,

¹ The Trans Mountain Expansion Application to the NEB provides an estimated capital cost for the Project of \$5.4 billion; this reflects a reduction in the required investment associated with the expected contribution from Westridge Dock bid premiums, which do not reduce the total expenditures on of the Project for the purposes of this Report.

² All subsequent dollar figures are in 2012 dollars unless otherwise noted.

and the rest being indirect and induced. Most of the employment effects will occur in British Columbia (61.8 per cent) and Alberta (25.2 per cent), reflecting that this is where the pipeline will be built. However, Ontario (8 per cent), Quebec (2.4 per cent), and the other Prairie provinces (1.9 per cent) will also experience job gains.

The additional economic activity also generates fiscal effects at both the federal and provincial level. The development of the TMEP is expected to generate a total of \$1.2 billion in federal (\$646 million) and provincial (\$568 million) government revenues. This is equivalent to \$27 for every \$100 of investment. The largest fiscal impacts are found in personal income taxes (\$559 million), indirect taxes such as sales taxes (\$335 million), and corporate income taxes (\$184 million). Assuming that the federal tax revenues will be distributed across the provinces on a per capita basis, British Columbia (\$394 million) and Ontario (\$307 million) will experience the largest combined federal and provincial fiscal effects. Other regions of the country, such as Alberta (\$239 million), Quebec (\$166 million), and the Prairies (\$58 million) will also experience fiscal benefits.

Impacts of TMEP's Operational Phase

Once operational, the TMEP will also generate positive economic and fiscal impacts on an ongoing basis. We assess the operational impacts of the pipeline over its first 20 years of service under two scenarios. The first considers the impact of only the long-term contracts that have been signed and can be considered the minimum impact associated with firm commitments. The second scenario assesses the economic impacts when the spot or non-firm capacity in the pipeline is fully utilized, and can be considered the maximum impact.

At a minimum, including the direct, supply chain, and induced effects we expect pipeline operations will support 50,273 person-years of employment, and this figure rises to 65,184 if the non-firm capacity is fully utilized. British Columbia (60.2 per cent) and Alberta (20.5 per cent) still experience the largest portion of the employment impacts. However, other regions of the country, such as Ontario (12.6 per cent), Quebec (3.9 per cent), and the Prairies (2 per cent) benefit from the employment impacts during the operational phase of the Project.

In terms of fiscal effects, pipeline operations are expected to generate between \$2.5 and \$3.3 billion in combined federal and provincial revenues over the first 20 years of operations. A key reason for this is that the oil pipeline industry generates large corporate income tax effects. Corporate profits account for the largest share of the revenues (60.1 per cent), followed by personal income taxes (19.7 per cent) and indirect taxes (12.5 per cent). Regionally, assuming a per capita distribution of federal revenues, British Columbia experiences the largest combined federal and provincial impact (34.8 per cent), followed by Ontario (24.3 per cent), Alberta (18.4 per cent), and Quebec (13.8 per cent).

Impacts of Higher Netbacks for Producers

In addition to the economic and fiscal impacts associated with building and operating the pipeline the TMEP has the potential to improve the price Canadian oil producers receive for their product. At a minimum, shippers on the TMEP will have access to tidewater, allowing them the ability to attract world prices for their product, rather than North America prices. However, the market study completed by IHS

Global Canada Limited (the IHS study) found that the TMEP and other planned pipeline expansion projects will alleviate the glut of oil flowing to the hub at Cushing, Oklahoma, which is expected to raise prices for all heavy oil producers in Western Canada.

As indicated in the IHS study, producers of conventional heavy oil and bitumen from the oil sands will benefit from higher prices, leading to higher revenues and profits. In turn, these businesses may choose to pay higher dividends or reinvest these profits. As well, there will be fiscal implications in terms of higher royalties and corporate profits paid to federal and provincial governments. We estimate these fiscal impacts under the three different production cases developed by IHS, a base case outlook, a high production outlook, and a low production outlook.

In the IHS base case oil company revenues rise by \$45.4 billion over the first 20 years of the pipeline's operations as a result of higher netbacks that can be attributed to the market access provided by the TMEP. This generates total fiscal benefits of \$14.7 billion. The federal corporate income tax effects account for \$6.1 billion of these effects. The combined royalty and corporate income tax effect for Alberta is \$8.2 billion, and for Saskatchewan it is \$454 million. The cumulative fiscal effect ranges between \$9.2 billion in the high production case and \$13.8 billion in the low production case.

Summary

Table 1 summarizes the economic and fiscal impacts associated with the TMEP using the minimum operating impacts and the base case for assessing the impact of higher netbacks. Between 2012 and 2037, the Project is expected to generate 108,310 person-years of employment. As well, the Project will produce \$18.5 billion of fiscal benefits over the same period.

Table 1. Summary of the Economic and Fiscal Impacts of the TMEP (cumulative effects, 2012-2037)

	Atlantic Canada	Quebec	Ontario	Other Prairies	Alberta	British Columbia	Territories	Canada
	Using Minimum Operational Effects and the Base Case for Higher Netbacks							
Employment effects (person-years)	617	3,372	11,004	2,124	24,926	66,132	135	108,310
Project development	289	1,402	4,659	1,099	14,632	35,864	92	58,037
Project operations	327	1,970	6,345	1,025	10,293	30,269	43	50,273
GDP effects (millions of 2012\$)	46.0	285.8	951.5	185.5	5,360.5	11,329.2	15.7	18,174.2
Project development	21.7	120.1	408.6	98.5	1,402.4	2,789.1	11.2	4,851.7
Project operations	24.3	165.6	542.9	87.0	3,958.1	8,540.2	4.5	13,322.5
Fiscal Impact (millions of 2012\$)	564.0	1,920.1	3,277.7	1,030.5	9,545.8	2,118.0	26.6	18,482.7
Project development	48.2	166.2	306.6	57.5	239.1	394.3	2.2	1,214.1
Project operations	104.0	352.1	620.1	111.1	437.8	918.8	4.7	2,548.6
Higher netbacks	411.8	1,401.8	2,351.0	861.9	8,868.9	804.9	19.7	14,720.0

Source: The Conference Board of Canada.

Beyond these economic and fiscal benefits, the TMEP will also provide important strategic benefits. In particular, by allowing significant volumes of Canadian oil to reach tidewater Canadian production will no longer be landlocked inside the stagnant North American market. Many producers would now have access to growing markets in Asia. Ultimately, the TMEP is a means for Canada to maximize the value it receives for its non-renewable oil resources.

Chapter 1: Introduction

Oil is a global commodity, with a well established transportation infrastructure. As a result, global benchmark prices are usually nearly identical to one another once adjustments for quality and transportation costs are taken into account. However, this has not been the case in recent years, with North American benchmark prices lagging considerably behind their global peers.³ This situation has had significant negative economic and fiscal consequences for Canada, particularly in its oil producing regions.

In response, there has been growing interest in developing new oil pipeline infrastructure in North America. There are currently four major pipeline projects under consideration that would carry oil away from Western Canada if completed. One of these is the Trans Mountain Expansion Project (TMEP or the Project), which would nearly triple the capacity of the existing pipeline that runs from Edmonton, Alberta to Burnaby, British Columbia.

The objective of this report is to assess the economic and fiscal impacts associated with the proposed TMEP. (See text box “Trans Mountain Expansion Project Description.”) As part of this process, we examine the potential impacts in multiple ways, including the following:

- The impacts associated with the initial required investments to build the pipeline and related infrastructure.
- The impacts associated with operating the pipeline once it is up and running.
- The impacts associated with higher netbacks to oil producers that are expected to result from smaller price differentials between Canadian and international oil price benchmarks.

The results of this analysis allow for a clearer understanding of the economic and fiscal impacts of the pipeline itself, as well as the potential implications for Canada’s governments and the oil extraction industry. We discuss the results at both the national and the provincial level, with a particular focus on British Columbia and Alberta, since this is where most of the benefits would occur. We also examine how other provinces and the country overall will benefit, with a focus on supply chain and fiscal effects.

³ Kelly, Steve. *Trans Mountain Expansion Direct Evidence*.

Trans Mountain Expansion Project Description

The Trans Mountain pipeline system commenced operations 60 years ago and now transports a range of crude oil and petroleum products from western Canada to locations in central and southwestern British Columbia (BC), Washington state and offshore. Trans Mountain currently supplies much of the crude oil and refined products used in BC. Trans Mountain pipeline is operated and maintained by staff located at Trans Mountain's regional and local offices in Alberta (Edmonton, Edson, and Jasper) and BC (Clearwater, Kamloops, Hope, Abbotsford and Burnaby).

The Trans Mountain pipeline system has an operating capacity of approximately 47,690 m³/d (300,000 b/d) using 24 active pump stations and 40 tanks. The expansion will increase the capacity to 141,500 m³/d (890,000 b/d).

The proposed expansion will comprise the following:

- Pipeline facilities that complete a twinning (or "looping") of the pipeline in Alberta and BC with about 987 km of new buried pipeline.
- New and modified facilities, including pump stations and tanks.
- A total of three new berths at the Westridge Marine Terminal in Burnaby, BC each capable of handling Aframax tanker size.

Source: Trans Mountain.

Chapter 2: Economic Impacts Associated With the Development of the Trans Mountain Expansion Project

In terms of economic effects, all projects go through two distinct phases. The first is the development phase, when a project is planned, construction activity takes place, and equipment is purchased and installed. The second phase consists of the period over which a project is operational. This includes the annual expenditures on things like labour, facilities maintenance, and other inputs over the lifetime of a project. This chapter considers the economic impacts of developing the TMEP, while the next chapter considers the economic impacts of TMEP operations once the Project is finished.

In this report we quantify four economic effects associated with the development and operations of the TMEP, including the following:

- 1) **Direct Effects.** These are the economic effects directly associated with the development and operation of the TMEP. During the development phase, most of the direct effects occur in the construction industry, and during the operational phase all of the effects occur in the oil pipeline industry.
- 2) **Indirect Effects.** The indirect or supply chain effects measure the economic effects associated with the use of intermediate inputs or other support services that will be used to either build the pipeline or maintain it once it is operational.
- 3) **Induced Effects.** The induced effects occur when the wages that employees earn from the direct and supply chain effects are spent. As such, the economic impacts associated with induced effects generally occur in consumer oriented industries, such as retail.
- 4) **Fiscal Effects.** Finally, we measure the fiscal impact associated with the other three economic effects, at both the federal and the provincial level.

In order to conduct this analysis, we use both Statistics Canada's interprovincial Input-Output (I/O) model and the Conference Board of Canada's proprietary forecasting models. The direct, indirect, and induced gross domestic product (GDP) and employment impacts associated with the construction and operation of the TMEP were generated using Statistics Canada's I/O model, which allows for detailed supply chain analysis for nearly 300 different industries by province. For a more detailed explanation of I/O models see Appendix C. The fiscal effects were estimated by the Conference Board of Canada. The revenue and cost estimates associated with the construction and operation of the TMEP used to conduct the analysis were prepared by Trans Mountain Pipeline.

2.1 Direct Effects

If approved, the TMEP is expected to cost approximately \$5.5 billion, with the expenditures taking place over a seven-year period. Adjusted for price increases, that is equivalent to \$4.9 billion in 2012 dollars. Some of these expenditures have already occurred. Parts of the Project, such as planning and regulatory application filings have already begun, and thus Project Development is expected to cover the 2012 and 2018 period. However, the bulk of the spending activity is expected to take place in 2016 and 2017, when construction activity peaks. (See Table 2.)

Table 2. Expenditure Assumptions Associated With the Development of the TMEP (millions of \$)

Year	Nominal \$	2012 \$	2012 \$ Excluding financing costs
2012	34.2	34.2	33.4
2013	55.7	55.0	52.0
2014	93.7	90.3	83.8
2015	273.0	251.7	239.2
2016	2,547.2	2,269.9	2,194.4
2017	2,451.8	2,121.0	1,930.4
2018	49.8	41.7	41.7
Total	5,505.3	4,863.6	4,575.0

Source: Trans Mountain Pipeline.

For the purposes of the analysis, we use the price adjusted figure to conduct the analysis. This is because price inflation does not add to the economic value or jobs that would be supported by the Project. As well, we exclude the estimated financing costs associated with the Project. This is because the economic impacts of the financing costs could be quite small depending on how and where the money is raised. For example, if the project is financed through internal cash flows, or through money raised in foreign markets the impacts on the Canadian financial services sector would be minimal. The end result is that we assess the economic impacts of \$4.6 billion of expenditures in 2012 dollars.⁴

Although only 63.6 per cent of the pipeline's length will be in British Columbia, 69.5 per cent of the expenditures would take place there (\$3.2 billion), with the remainder occurring in Alberta (\$1.4 billion). To put that into perspective, this is equivalent to 8.7 per cent and 1.9 per cent respectively of total construction expenditures in British Columbia and Alberta in 2011.⁵ Factors affecting the regional mix of spending include the terrain that the pipeline covers, the fact that portions of the new pipeline will consist of reactivated existing pipe, and the need to build new port facilities at the Westridge Marine Terminal in British Columbia.

These expenditures will have a direct impact in both provinces. In terms of employment, the development of the pipeline is expected to support 28,202 person-years of employment, with 20,675 of these jobs occurring in British Columbia and the rest occurring in Alberta.⁶ The timing of these employment impacts will coincide with changes in annual expenditures on the Project. For example, in 2012, the direct employment impacts were estimated to be 206 people. But at the peak of construction in 2016, the employment supported by the Project will rise to 13,527 people. (See Chart 1.) At their

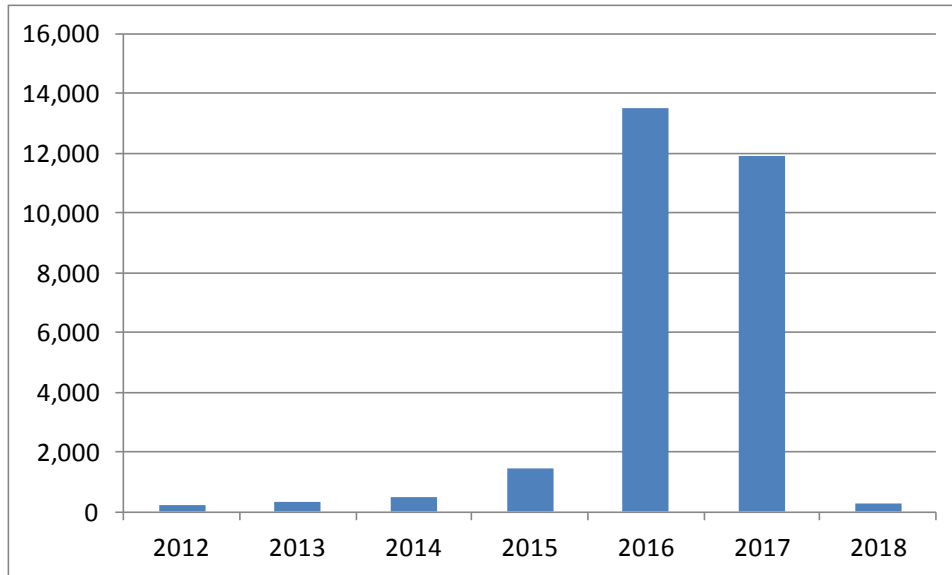
⁴ Unless otherwise noted, all subsequent dollar figures in the report are stated in 2012 dollars.

⁵ Based on data from Statistics Canada CANSIM table 029-0024.

⁶ A person-year of employment is the amount of work that one person would normally conduct in a year. It is an average figure for each industry and takes into account the fact that some workers are part time.

peak, the provincial employment effects will be equivalent to 4.3 per cent and 1.4 per cent of British Columbia’s and Alberta’s respective 2016 construction employment.⁷

Chart 1. Employment Impacts Associated With the Construction of the TMEP (number of employees)



Source: The Conference Board of Canada.

In terms of GDP, we expect that the TMEP will directly generate cumulative GDP effects of \$2.2 billion over the development period of the Project. Thus for every \$100 dollars spent on the Project, \$47 dollars in GDP will be generated. This means that 47 cents of every dollar spent goes to wages and profits, primarily in the construction industry, while the other 53 cents is spent on material inputs. The regional and temporal GDP impacts are similar to those noted for employment, with British Columbia accounting for 70 per cent of the total and the rest occurring in Alberta. The GDP effects peak in 2016 and 2017, when construction activity is at its peak.

2.2 Indirect Effects

In addition to the direct effects discussed above, the TMEP will also generate indirect or supply chain effects, and the I/O model captures these effects. Development of the Project will support another 14,055 person-years of employment indirectly. Thus, the combined direct and indirect employment effects of the TMEP are 42,257 person-years of employment. This is equivalent to 9,236 person-years of employment being supported for every \$1 billion dollars of investment.

Another way to look at the indirect effects is in terms of multipliers; i.e. how many jobs or dollars of GDP are indirectly generated relative to the direct effects. For example, for every two jobs directly associated with the TMEP, it supports another job indirectly among its suppliers. The GDP multiplier is somewhat larger, with \$0.58 of indirect GDP being supported by each direct dollar. The key reason for the higher

⁷ The Conference Board of Canada. *Provincial Economic Outlook: Spring 2013*.

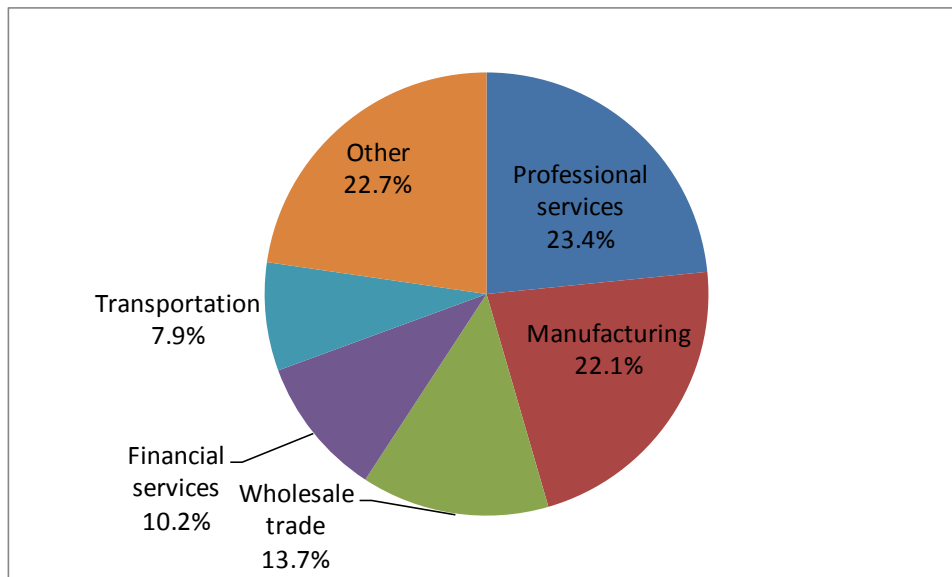
GDP multiplier is that most of the sectors where the largest indirect effects occur have a high level of GDP per employee.

The indirect effects are felt across a wide range of industries that are part of the supply chain that would be linked to the TMEP. The supply chain effects include both those that would directly supply the Project, as well as second and third order effects on suppliers who are farther down the supply chain. Although the majority of the indirect effects occur in British Columbia and Alberta, all of the other provinces experience some benefits. More than one quarter of the indirect employment effects occur in other provinces, with Ontario experiencing the largest benefit. The rest of this section describes how different industries and different regions of the country benefit from the supply chain effects that result from the construction of the TMEP.

2.2.1 Indirect Effects by Sector

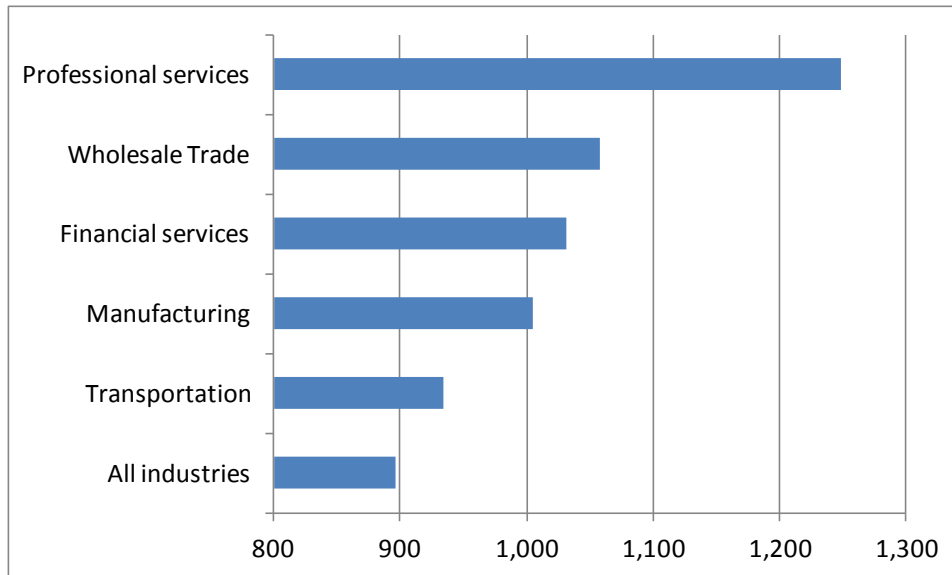
Beyond the number of jobs that would be indirectly supported by the construction of the TMEP, it is also important to examine the types of jobs. The indirect effects are largely confined to five broad sectors. In order of size, they include professional services, manufacturing, wholesale trade, financial services, and transportation. (See Chart 2.) It is worth noting that all of these sectors pay above-average wages. Even the lowest-paying sector, transportation and warehousing, has average weekly earnings that are 5 per cent above the average for all industries. (See Chart 3.) As such, the direct and indirect effects of the TMEP support a substantial number of high paying jobs.

**Chart 2. Key Sectors That Experience Supply Chain Effects
(share of supply chain employment effects)**



Source: The Conference Board of Canada.

Chart 3. All of the Sectors Most Affected by the TMEP’s Development Pay Above Average Wages (average weekly earnings in 2012, including overtime, \$)



Source: Statistics Canada CANSIM table 281-0027.

2.2.1.1 Professional Services

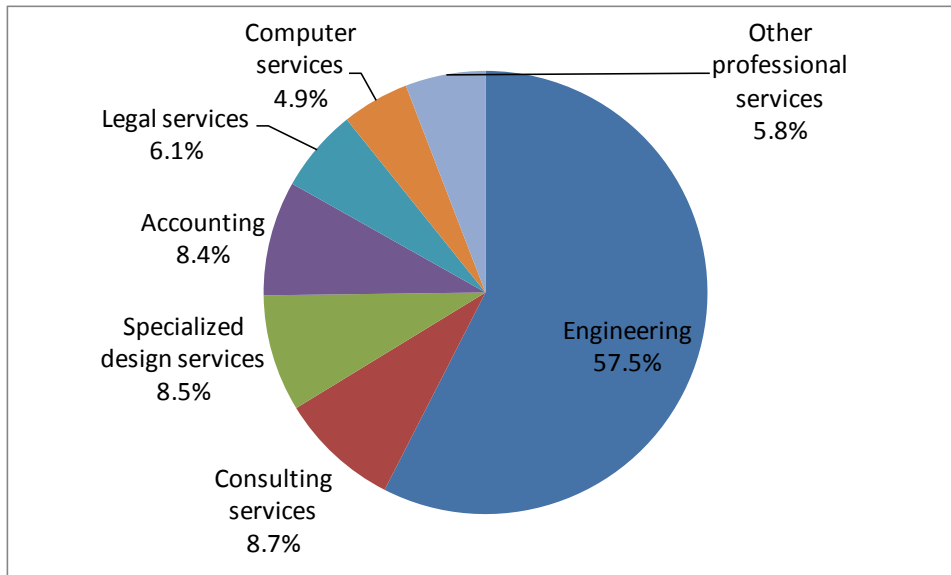
The professional services sector encompasses a wide area of activities in which human capital is the major input. These businesses essentially sell the knowledge and skills of their employees. With 3,287 person-years of employment in the sector being supported by the TMEP, or 719 for every \$1 billion of inflation-adjusted investment, the largest supply-chain effects accrue to this sector.

The single largest effects within this sector occur in the engineering services industry, with 1,890 person years of employment, or 413 for every \$1 billion in investment, being supported by the TMEP. (See Chart 4.) Engineering is the largest activity within this industry, but activities like geophysical surveying and mapping would also likely be an important component of the supply-chain benefits. The benefits for the engineering industry are so large that they account for 13.4 per cent of the total supply chain effects associated with development of the TMEP.

Other industries within the professional services sector would also realize employment benefits. For example, every billion dollars in investment generates 63 person-years of employment in consulting services. Specialized design services (61 person-years) and accounting services (60 person-years) also benefit. A variety of other professional service industries – everything from computer services, to legal services, to advertising and public relations – are also positively affected.

Regionally, the largest impact is in British Columbia, where nearly two-thirds of the employment benefits will occur, while another 25 per cent would be associated with Alberta. Still, substantial benefits do accrue to other Canadian provinces. For every \$1 billion in investment spending connected to the TMEP, 83 person-years of professional services employment will be supported outside of the two provinces through which the pipeline would traverse.

Chart 4. Engineering Accounts for Most of the Supply Chain Effects in the Professional Service Sector (share of supply chain employment effects in professional services)



Source: The Conference Board of Canada.

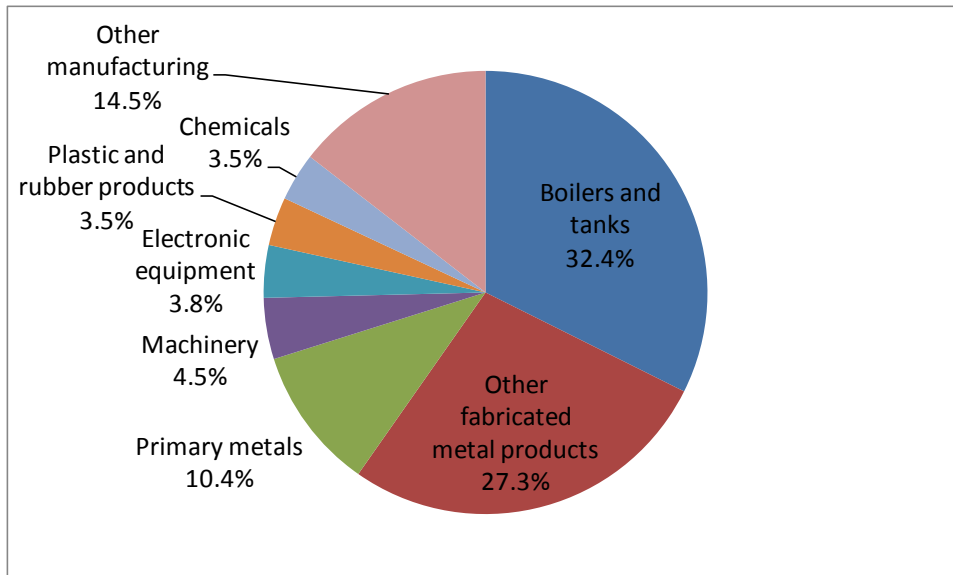
Most of the professional service jobs supported outside of Alberta and British Columbia (65 per cent) will be in Ontario; the province will experience a disproportionate benefit in several industries. For example, even though Ontario accounts for only 8 per cent of the total employment effects in professional services, it accounts for 35 per cent of the effects in the computer services industry—a higher share than either British Columbia or Alberta. It will also receive a relatively high share of the effects in the advertising and public relations (29 per cent), and scientific research and development services (27 per cent) industries. In aggregate, 96 per cent of the expected gains in professional services will accrue to British Columbia, Alberta, or Ontario.

2.2.1.2 Manufacturing

Manufacturing is another sector that experiences indirect effects associated with the development of the TMEP, accounting for 22.1 per cent of the employment benefits. This is equivalent to 3,108 person-years of employment, or 679 for every \$1 billion of investment.

Key industries within the manufacturing sector that realize the greatest benefits include makers of boilers and tanks, where 32 per cent of the manufacturing related employment effects will be apparent. (See Chart 5.) Other types of fabricated metal products, such as architectural metal products, and machine shops, as well as primary metals (in particular steel producers) are where the largest effects are apparent. For example, the economic activity associated with the producers of steel pipe (a major input into the Project), is captured in the steel products industry. However, a wide variety of other manufacturing industries, such as machinery, electronic equipment, plastic and rubber products, and chemicals also benefit.

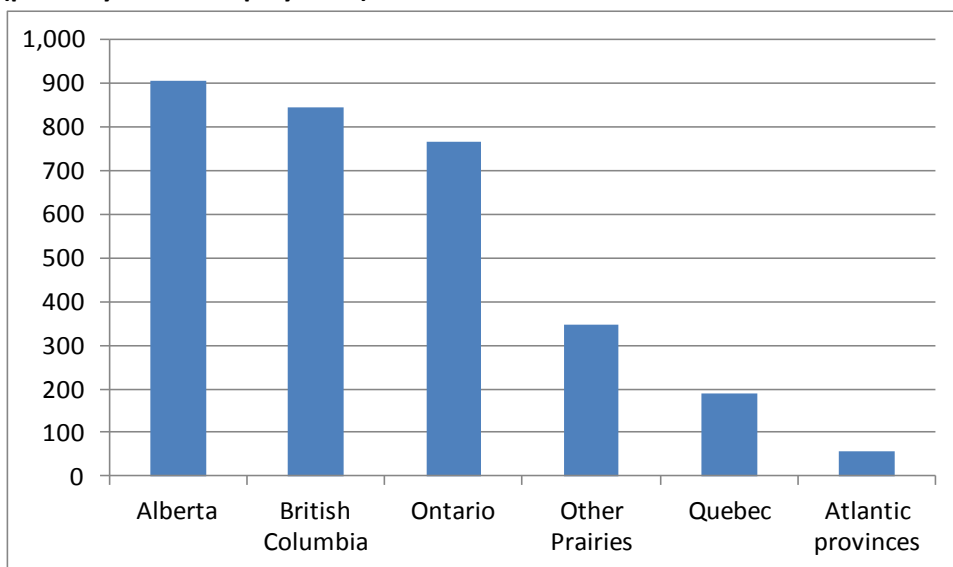
Chart 5. Most of the Manufacturing Impacts Occur Among Producers of Fabricated Metal Products (share of supply chain employment effects in manufacturing)



Source: The Conference Board of Canada.

Compared to the professional services industries, the regional impacts within the manufacturing sector are more diverse. Just 56 per cent of the associated jobs in the sector accrue to Alberta or British Columbia, compared to 88 per cent in professional services. Among the sectors most affected by the TMEP, manufacturing is where the largest benefits occur outside of Alberta and British Columbia. For every \$1 billion in inflation-adjusted investment in the TMEP, 297 new person-years of employment are supported outside of Alberta or British Columbia. (See Chart 6.)

Chart 6. The Manufacturing Employment Effects Are Widely Dispersed Across Regions (person years of employment)



Source: The Conference Board of Canada.

One-quarter of all manufacturing-related jobs supported by the TMEP would originate in Ontario, not at all surprising given that the majority of Canada's manufacturing sector is located in that province. In some industries like iron and steel mills, more benefits accrue to Ontario (60 per cent) than to Alberta and British Columbia combined. The province also does well in architectural and structural metals, steel products, and plastics. Nearly 20 percent of manufacturing jobs will be found outside of Alberta, British Columbia and Ontario. Of these, nearly half will occur in Manitoba and Saskatchewan. The remaining manufacturing employment effects are concentrated in Quebec, where 190 person-years of employment can be expected.

2.2.1.3 Wholesale Trade

The wholesaling process is an intermediate step in the distribution of goods. Firms operating in this sector are organized to sell goods in large quantities to other firms, without transformation, and to render services incidental to the sale of merchandise in general. A total of 1,919 person-years of employment would be supported in this sector as a result of the development of the TMEP, which equates to 419 person-years of employment for every \$1 billion invested.

Most of the jobs in the wholesale trade sector would be concentrated in two industries; building materials suppliers, and machinery and equipment suppliers. Combined, these two industries account for 73 per cent of the indirect benefits that are expected to accrue to the wholesale trade sector. This essentially reflects the role of wholesalers as middlemen, supplying the equipment and materiel needed to undertake the Project. The only other specific activity worth noting are wholesalers of electronic products, which account for another 10 per cent of the estimated employment effects.

Wholesaling activities are concentrated in the two provinces through which the pipeline would pass. Specifically, British Columbia would realize 1,016 (53 per cent) person-years of employment and Alberta would see 461 person-years of employment (24 per cent). However, for every \$1 billion spent on the proposed pipeline, 97 person-years of employment in wholesaling are supported outside those two provinces, and as with all other industries, the majority of them should be expected in Ontario, but about 7 per cent of them could be expected elsewhere.

2.2.1.4 Financial Services

The financial services sector covers a diverse array of activities, including banking, insurance, and investment-related services. As well, activities like the rental and leasing of machinery, equipment, and real estate are included. In total, the indirect benefits associated with this sector include 1,439 person-years of employment. This is equivalent to 315 person-years of employment per \$1 billion invested in the TMEP, and 10.2 per cent of the total indirect employment effects.

The aggregate benefits are concentrated in three main industries, including rental and leasing activities, banking, and investment services. In the case of rental and leasing activity, more than 95 per cent of the employment effects occur in either Alberta or British Columbia – a logical outcome given that rental and leasing of machinery and equipment is normally a local activity. However, both the banking and financial investment services industries experience above-average effects outside of Alberta or British Columbia.

For example, 47 per cent of all the indirect benefits in the banking industry occur elsewhere in Canada—as these services are easily tradable they tend to be less location specific.

In aggregate, for every \$1 billion invested in the TMEP, 91 person-years of employment in the financial services sector would be supported elsewhere in Canada and more than two-thirds of this would be created in Ontario. Given that most of Canada's largest banks and insurance companies are headquartered in Ontario, it is not surprising that 30 per cent of the employment effects in banking, holding companies, financial investment services, and insurance carriers would be generated there.

2.2.1.5 Transportation

The other sector to derive substantial indirect benefits as a result of the development of the TMEP is transportation. Establishments in the sector use transportation equipment as a productive asset to provide transportation of passengers or cargo, as well as the warehousing and storage of goods. The major modes of transportation include trucking, ground passenger, rail, water, air, and pipelines. Couriers and postal service are also included.

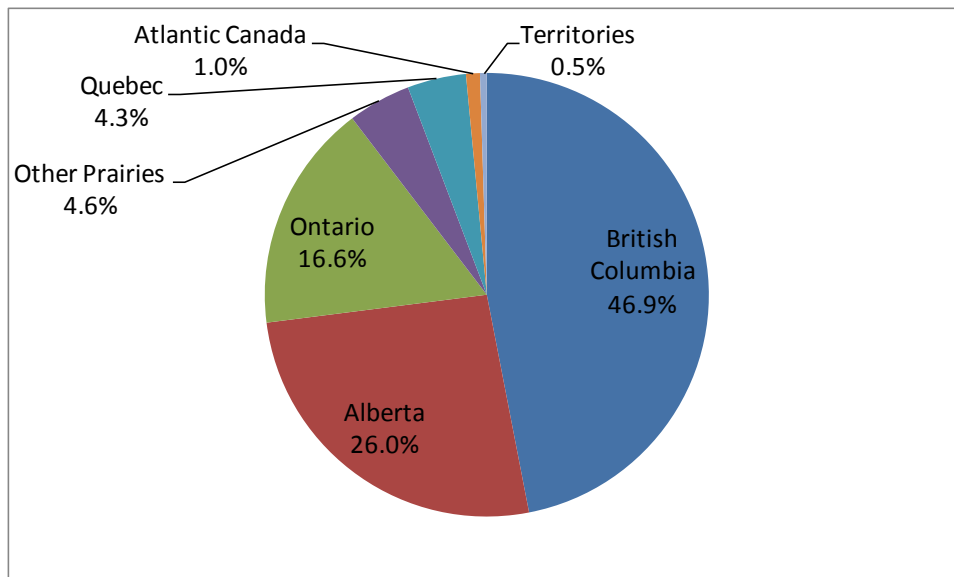
The proposed TMEP, in aggregate, would support 1,116 person-years of employment in the transportation sector, equivalent to 244 for every \$1 billion of investment. More than 60 per cent of these will be either in the trucking industry, or activities that support the trucking industry. This reflects the fact that there are logistical challenges involved with getting sufficient materials to the construction sites, given that the actual pipeline will span more than 1,000 km. Rail transportation will also garner 12 per cent of the estimated employment effects, reflecting the need to move some of the material inputs long distances across the country.

Again, British Columbia derives the largest benefits associated with the transportation sector, as 36 per cent of the employment effects will be found there, the wide majority of them in trucking. The story is similar for Alberta, which will garner 29 per cent of the benefits, most of them in trucking. Still, 394 person-years of employment will be supported in other Canadian provinces – or 86 per \$1 billion invested. Truck transportation is the dominant industry within the sector across the country, accounting for 63 per cent of the transportation jobs in Ontario, 70 per cent in Quebec, and 62 per cent of the jobs in the Prairie Provinces.

2.2.2 Indirect Effects by Region

Although the majority of indirect impacts will occur in British Columbia and Alberta, every region in the country will derive some economic benefit from the development of the TMEP. We estimate that 27.1 per cent of the indirect employment impacts, or 3,796 person years of employment will occur in other regions of the country. (See Chart 7.) As well, the mix of industries affected in each region can be very different. For example, manufacturing accounts for more than half of the employment effects in the Prairie Provinces, but only 12.8 per cent of the effects in British Columbia.

Chart 7. Indirect Employment Effects Supported by the Construction of the TMEP by Region (share of construction related indirect employment effects)



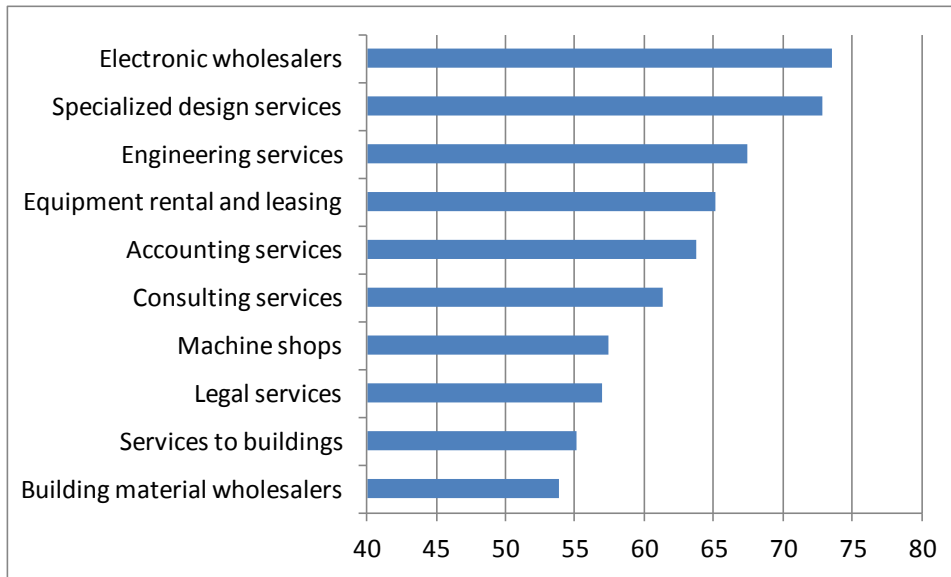
Source: The Conference Board of Canada.

2.2.2.1 British Columbia

British Columbia experiences the largest supply chain effects associated with the development of the TMEP. In total, 6,599 person-years of employment will be supported by the Project, equivalent to 46.9 per cent of the total supply chain effects. Despite the fact that nearly half of the supply chain effects will occur in British Columbia, the mix of sectors affected in the province is somewhat different than in other provinces. Professional services experience the largest benefits by far, accounting for nearly one-third of the total, followed by wholesale trade, and then manufacturing.

It is interesting to note the industries that stand out in British Columbia, in terms of those that experience effects that are both substantial in size and account for an outsized share of the national impacts. For example, 67 per cent of the national impacts in the engineering industry occur in British Columbia, accounting for a total of 1,275 person-years of employment. (See Chart 8.) Engineering accounts for the largest impact by far in British Columbia. However other industries with noticeable effects include wholesalers of building materials, specialized design services, and equipment rentals and leasing.

Chart 8. Key Industries that Experience Outsized Effects in British Columbia
 (share of national supply chain employment effects for select industries, per cent)



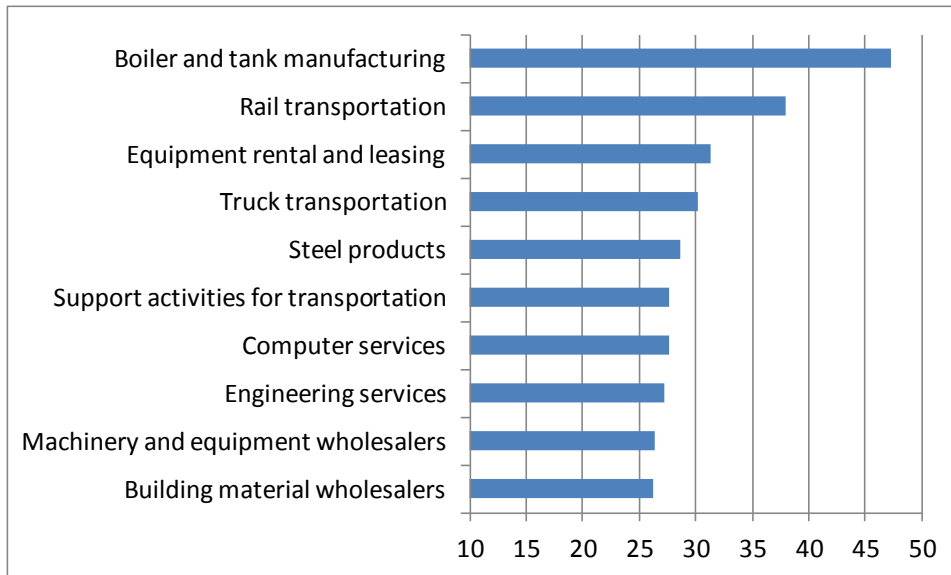
Source: The Conference Board of Canada.

2.2.2.2 Alberta

Much of the remaining indirect employment impacts accrue to Alberta. In total, the development of the TMEP is expected to support 3,660 person-years of employment in Alberta, which is equivalent to 26 per cent of the total national effects. The sector that will experience the single biggest impact in Alberta is manufacturing. This is followed by professional services, and then wholesale trade. Alberta stands out by accounting for an outsized share of the effects in the manufacturing and transportation sectors.

As is the case in British Columbia, engineering services are where the largest employment impacts occur in Alberta. (See Chart 9.) However, where Alberta stands out is in the manufacture of boilers and tanks. Nearly half of the employment effects in this industry occur in Alberta. Other industries where Alberta stands out include truck transportation, wholesalers, and rental and leasing of equipment.

Chart 9. Key Industries that Experience Outsized Effects in Alberta
(share of national supply chain employment effects for select industries, per cent)

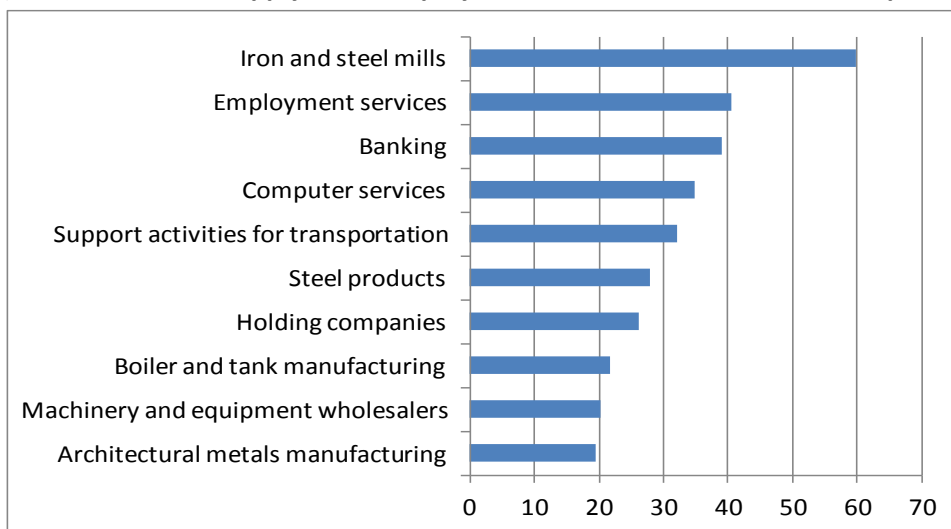


Source: The Conference Board of Canada.

2.2.2.3 Ontario

Outside of Alberta and British Columbia, Ontario experiences the largest supply chain impacts associated with the development of the TMEP. A total of 2,340 person-years of employment will be supported in Ontario, equivalent to 16.6 per cent of the total. Manufacturing and financial services are the two key areas where Ontario stands out. More specifically, industries where Ontario experiences an outsized share of the employment effects include boiler and tank manufacturing, machinery and equipment wholesalers, banking and support activities for transportation. (See Chart 10.)

Chart 10. Key Industries that Experience Outsized Effects in Ontario
(share of national supply chain employment effects for select industries, per cent)

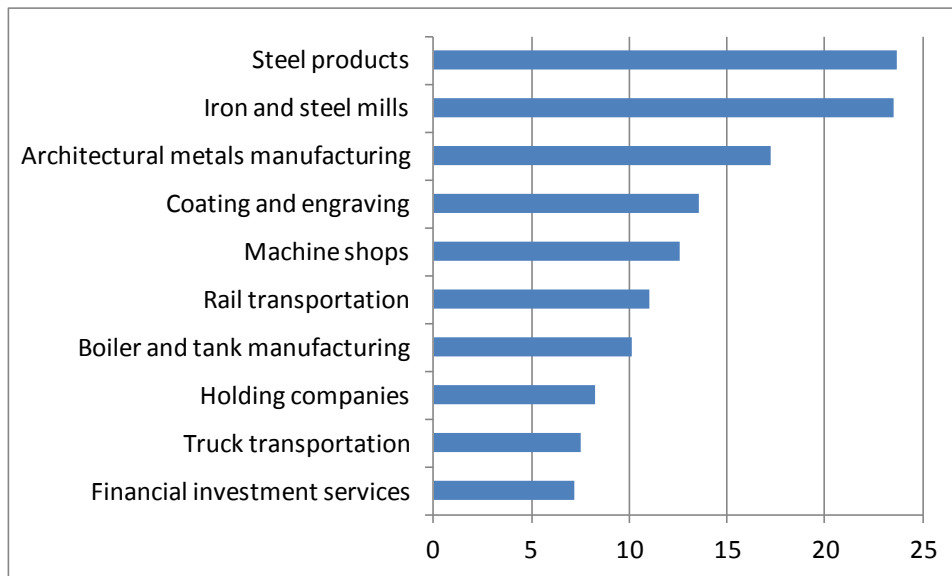


Source: The Conference Board of Canada.

2.2.2.4 Other Prairies

Beyond British Columbia, Alberta, and Ontario, the employment effects associated with the development of the TMEP become smaller. Manitoba and Saskatchewan combined will see 645 person-years of employment being supported by the Project, with the effects split evenly between the two provinces. As a result, the other Prairies region will account for 4.6 per cent of the supply chain effects. The key areas where the region stands out include manufacturing and transportation. We estimate that 53.9 per cent of the employment effects in Manitoba and Saskatchewan are found in the manufacturing sector. Key types of manufactured products include boilers and tanks, architectural metals and steel products. (See Chart 11.) In the I/O model results, a good portion of the pipe used to build the pipeline will be sourced from Saskatchewan.

Chart 11. Key Industries that Experience Outsized Effects in the Other Prairies Region (share of national supply chain employment effects for select industries, per cent)

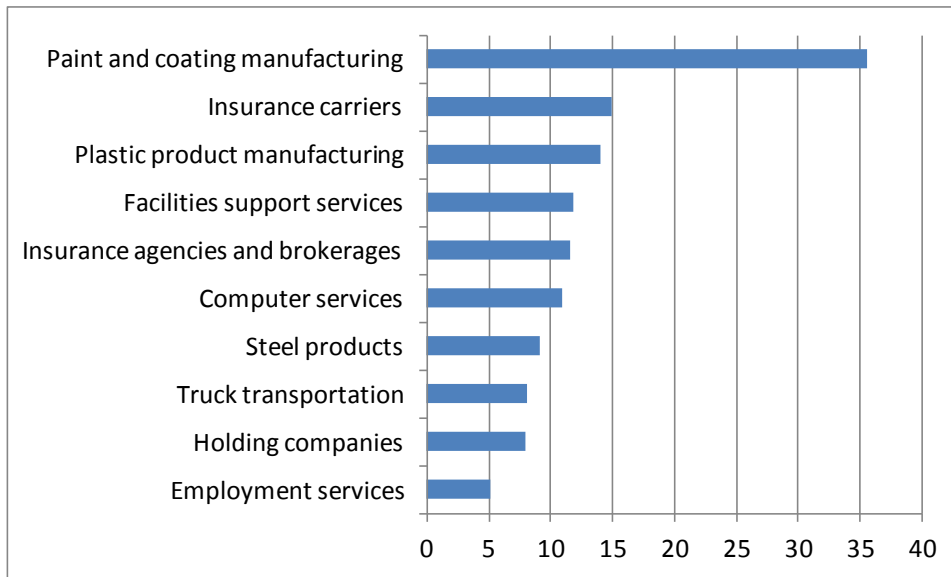


Source: The Conference Board of Canada.

2.2.2.5 Quebec

The employment impacts in Quebec are modestly smaller than those experienced in the other Prairies region. A total of 601 person-years of employment will be supported in Quebec as a result of the development of the TMEP, equivalent to 4.3 per cent of the total. Areas where the effects in Quebec stand out include manufacturing and transportation. In particular, truck transportation, manufacturing of paints and coatings, and computer services will all experience outsized effects. (See Chart 12.)

Chart 12. Key Industries that Experience Outsized Effects in Quebec
(share of national supply chain employment effects for select industries, per cent)

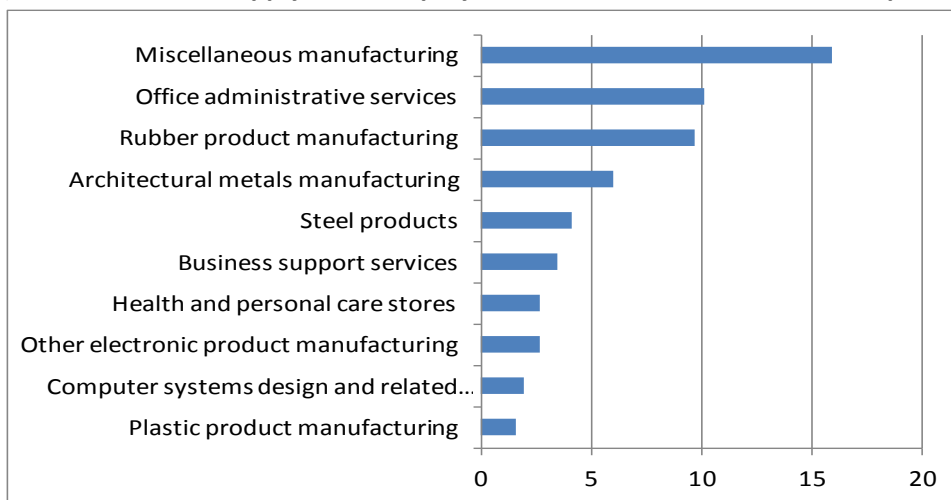


Source: The Conference Board of Canada.

2.2.2.6 Atlantic Canada

The Atlantic Provinces experience the smallest employment effects as a result of the development of the TMEP. Their smaller size and physical distance from where the TMEP will be built are both factors limiting the benefits they will experience. Only 142 person-years of employment will be supported in the region, equivalent to 1 per cent of the total impact. Most of those effects will occur in Nova Scotia and New Brunswick. The effects in any particular industry are generally quite small, but there are outsized effects in a few industries, such as architectural metals, office administrative services, and miscellaneous manufacturing. (See Chart 13.)

Chart 13. Key Industries that Experience Outsized Effects in Atlantic Canada
(share of national supply chain employment effects for select industries, per cent)



Source: The Conference Board of Canada.

2.3 Induced Effects

Additional benefits beyond those described above will arise as a result of the development of the TMEP. For example, the person-years of employment supported both directly and indirectly by development of the pipeline generates wages that, when spent, sustain additional employment across the country. This income effect is commonly referred to as “induced effects” in the economic literature.

Induced effects lead to additional impacts on GDP, employment, income, and tax revenues and they are felt across a wider range of industries relative to the supply-chain effects described above. And because the direct and indirect jobs created tend to be in high-wage industries, the spin-off effects are substantial. Indeed, the induced impacts associated with developing the TMEP are estimated to be slightly larger, in terms of both GDP and employment, than the indirect benefits.

In total, 15,780 person-years of induced employment would be supported by development of the pipeline – equivalent to 3,450 jobs for every \$1 billion in inflation-adjusted investment. These employment impacts are widespread, with 10 different sectors experiencing an impact of at least 500 person-years of employment. When the induced employment impacts are added to the previously discussed direct and indirect employment effects, the development of the TMEP is expected to support 58,037 person-years of employment.

The induced GDP effects are also considerable. For every \$1 in GDP directly created as a result of the Project, another \$0.66 is supported by the income effects, in addition to \$0.58 in supply-chain benefits. Thus, in aggregate, the GDP effects associated with the development of the Project are \$4.9 billion (\$2.2 billion directly, \$1.3 billion indirectly, and \$1.4 billion induced). This is equivalent to \$1.06 of GDP for each dollar spent on the development of the TMEP.

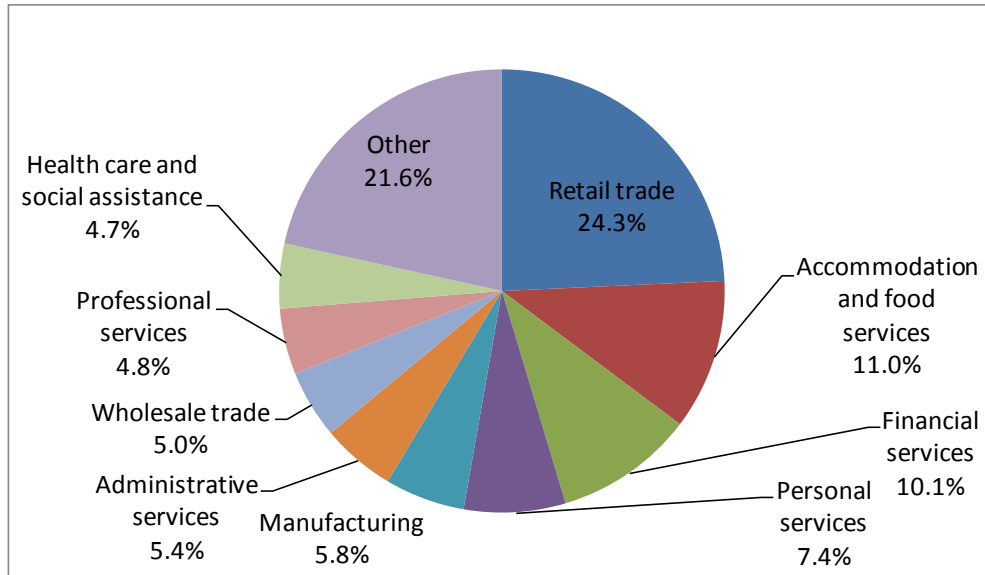
2.3.1 Induced Effects by Sector

The distribution of the induced employment effects across sectors is largely a reflection of how Canadian consumers spend their money. (See Chart 14.) For example, the largest impact is found in the retail sector, which accounts for 3,831 person-years of employment, or 24.3 per cent of the total. Specifically, the induced effects accruing to the retail sector would support 1,220 person-years of employment in food and beverage establishments, another 445 in clothing and accessories, and 328 in motor vehicles and parts sales. The benefits are extremely varied, with impacts apparent in everything from furniture and home furnishings, to home electronics and appliances, to sporting goods and hobbies.

Accommodations and food services is another consumer oriented sector that experiences sizeable benefits. A total of 1,729 person-years of employment, or 11 per cent of the total employment effects occur in this sector. Other major sectors where sizeable employment impacts will occur include financial services (1,589 person-years of employment), personal services (1,168 person-years of employment), and manufacturing (918 person-years of employment). The impacts in the financial services sector reflect people’s need for things like chequing accounts and consumer financing. Personal services includes things like household services (such as maids, nannies, and gardeners), as well as activities like

motor vehicle repair, laundry services, and hair salons. Finally the impacts in manufacturing generally occur among makers of consumer goods, such as food and furniture.

Chart 14. The Induced Impacts Affect a Range of Consumer Oriented Sectors (share of induced employment effects by sector, per cent)



Source: The Conference Board of Canada.

2.3.2 Induced Effects by Region

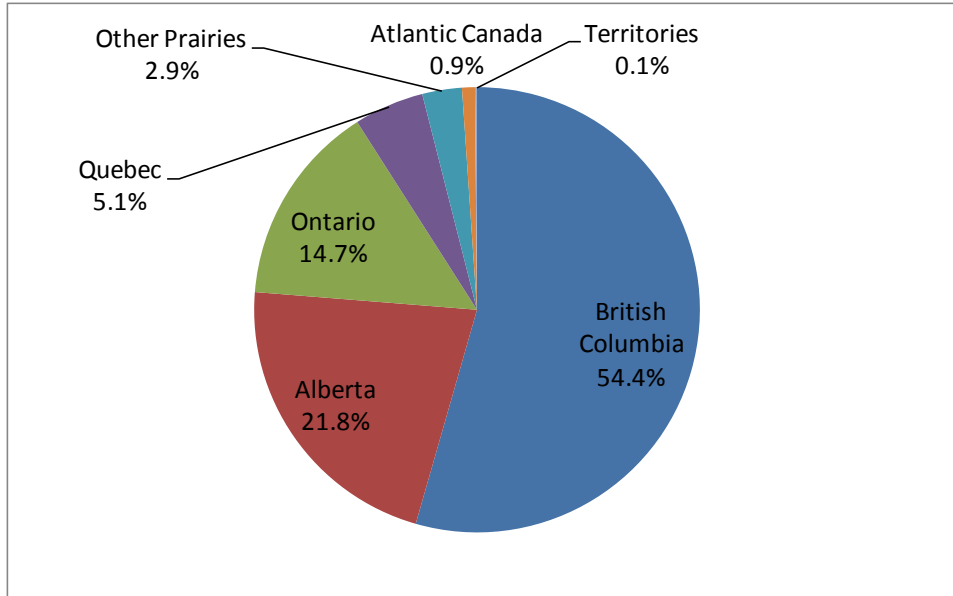
The regional distribution of the induced effects is fairly concentrated. Some 76 per cent of the total benefits accrue to either British Columbia (8,590 person-years) or Alberta (3,445 person-years). (See Chart 15.) This is not surprising. The majority of the direct and indirect jobs and labour income supported by the Project occur in those provinces, and the residents of those provinces who benefit from the Project will spend most of their income there. The induced impacts across the rest of the provinces largely reflects their shares of the direct and indirect effects.

The sectoral mix of the induced effects is similar across the different regions, since people tend to buy the same sorts of goods and services regardless of where they live. However, because the different regions of the country specialize in making different types of consumer products, there are some variations across the provinces. For example, although Ontario receives 14.7 per cent of the total induced employment effects on an aggregate basis, 24.2 per cent of the benefits in the financial services sector accrue there. Ontario also experiences an outsized share of the effects in the manufacturing sector.

Similarly, Manitoba and Saskatchewan combined can expect just 2.9 per cent of the total induced employment effects, but would garner 16.6 per cent of the agricultural impacts. Essentially the food that people buy as a result of the induced impacts needs to be grown somewhere, and the Prairies will supply some of that food. Quebec stands out in terms of its manufacturing sector. Quebec experiences

induced effects of 801 person-years of employment, 5 per cent of the total, but it experiences 15.3 per cent of the employment effects in the manufacturing sector.

Chart 15. The Induced Impacts Primarily Occur in British Columbia and Alberta (share of induced employment effects by sector, per cent)



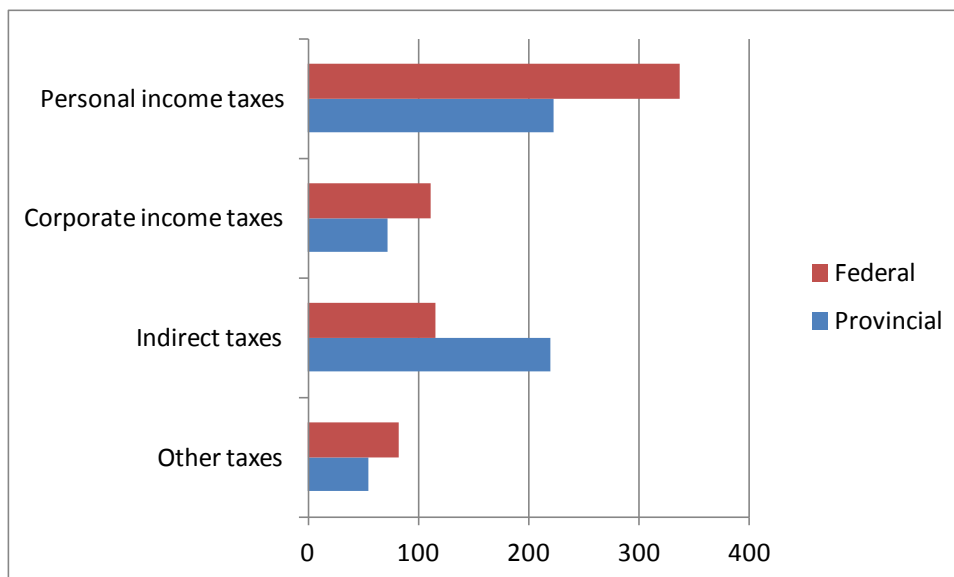
Source: The Conference Board of Canada.

2.4 Fiscal Effects

The direct, supply chain, and induced effects associated with the development of the TMEP also have positive fiscal implications at both the provincial and federal level. The three main types of government revenues that will be affected by the Project include personal income taxes, corporate income taxes, and indirect taxes (such as sales taxes and taxes on fuel). The analysis of the fiscal effects of the project was completed using The Conference Board of Canada's national and provincial forecasting models.

The \$4.6 billion in spending associated with the development of the TMEP is expected to generate \$1.2 billion in federal and provincial government revenues between 2012 and 2018. This is equivalent to \$27 for every \$100 of investment. With \$3.3 billion in wages and salaries and \$1.4 billion in corporate profits being generated by the development of the TMEP, the largest fiscal impacts are found in personal and corporate income taxes. (See Chart 16.)

Chart 16. Personal and Corporate Income Taxes Account for Most of the Fiscal Effects (tax revenues, millions of 2012\$)



Source: The Conference Board of Canada.

2.4.1 Federal Impacts

The federal government will experience the largest impact, even larger than that of Alberta and British Columbia combined. In aggregate, the development of the TMEP is expected to generate \$645.8 million in federal government revenues, or \$14 for every \$100 spent on the Project. This is equivalent to 0.3 per cent of total federal government revenues in 2012. Slightly more than half of this will come from higher personal income tax revenues. Other major sources include corporate income taxes (17.2 per cent) and goods and services tax (GST) inflows (14.4 per cent).

Another source of revenues is the \$56.4 million generated from higher employment insurance premium receipts. With a total of 58,037 person-years of employment (including the combined direct, supply chain, and induced effects) supported by the development of the TMEP, additional employment insurance premiums will be generated. Since fewer people would be unemployed, government payments of employment insurance would also be reduced, providing an additional benefit not included here.

2.4.2 Provincial Impacts

In aggregate, the TMEP is expected to generate \$568.6 million in provincial government revenues, or 12 cents for every dollar spent. This is equivalent to 0.2 per cent of total provincial revenues in 2012. At \$222 million, personal income taxes will account for nearly half of the provincial fiscal effects. Indirect taxes (which include sales taxes) and corporate income taxes account for most of the rest of the effects, at \$220 million and \$73 million, respectively.

In terms of the breakdown by province the largest benefits would accrue to British Columbia, which would receive 54.4 per cent of the total, or \$309 million. Alberta would receive most of the rest of the

provincial fiscal effects, at \$168 million. Ontario (\$57 million), Quebec (\$17 million), Saskatchewan (\$9 million), and Manitoba (\$5 million) will experience much more modest fiscal effects. For the Atlantic provinces, the fiscal effects are very small.

If we assume that the federal government revenues would be spent rather than be used to reduce the deficit, the benefits would filter down to all of the provinces through transfers and other program expenditures. Since many of these expenditures are at least partially dependent on the population distribution across provinces, the impact of higher federal revenues will be higher for most provinces than the direct province-specific fiscal effects. For example, assuming a straight per capita distribution of federal revenues, Ontario would garner 39 per cent, or \$250 million of the federal fiscal benefits, compared with a direct provincial fiscal impact of \$57 million. The exceptions are British Columbia and Alberta, where the direct provincial impact is bigger than the estimated federal transfers.

2.5 Summary

The development of the TMEP is expected to result in \$4.6 billion in investment spending, which will have positive economic and fiscal effects. For example, the combined direct, indirect, and induced employment effects will support 58,037 person-years of employment. (See Table 3.) As well, the combined GDP effects of the Project are \$4.9 billion, equivalent to \$1.06 dollars for every dollar of investment. Finally, this economic activity is expected to support \$1.2 billion in federal and provincial government revenues. British Columbia is the largest beneficiary for all of these effects, but considerable effects are apparent in Alberta and Ontario as well. In the rest of the provinces the effects are smaller, but individual industries do experience notable effects in most regions.

Table 3. Summary of the Regional Impacts of Developing the TMEP (cumulative effects, 2012-2018)

	Atlantic Canada	Quebec	Ontario	Other Prairies	Alberta	British Columbia	Territories	Canada
Employment effects (person-years)	289	1,402	4,659	1,099	14,632	35,864	92	58,037
Direct	0	0	0	0	7,527	20,675	0	28,202
Indirect	142	601	2,340	645	3,660	6,599	69	14,055
Induced	147	801	2,319	454	3,445	8,590	23	15,780
GDP effects (millions of 2012\$)	21.7	120.1	408.6	98.5	1,402.4	2,789.1	11.2	4,851.7
Direct	0.0	0.0	0.0	0.0	650.1	1,518.0	0.0	2,168.1
Indirect	10.8	52.7	207.7	61.4	394.0	514.8	9.0	1,250.5
Induced	10.9	67.4	200.9	37.1	358.3	756.3	2.2	1,433.0
Fiscal Impact (millions of 2012\$)	48.2	166.2	306.6	57.5	239.1	394.3	2.2	1,214.1
Direct Provincial Revenues	4.4	17.1	56.5	14.1	167.5	308.7	0	568.3
Per Capita Share of Federal Revenues	43.8	149.1	250.1	43.4	71.6	85.6	2.2	645.8

Source: The Conference Board of Canada.

Chapter 3: Economic Impacts Associated With the Operation of the Trans Mountain Expansion

The nature of the oil pipeline industry dictates that the scale of the effects associated with the operational phase of the Project is very different than the construction phase. The pipeline industry is heavily capital intensive; the amount of capital stock per employee in the industry is 50 times the average for all sectors in Canada.⁸ This means that a pipeline project involves large upfront costs during its development stage. Meanwhile, the subsequent operational stage generates much smaller employment effects in any given year. For example, the entire oil pipeline industry in Canada employed only 2,700 people in 2012 according to Statistics Canada's Labour Force Survey.

Although the direct employment effects for the oil pipeline industry are generally very small, it still generates considerable GDP effects. There are several factors that determine an industry's GDP, including the wages and salaries that it pays, the amount of depreciation it records on its assets, and the profits that it earns. In all three respects the oil pipeline industry is above average. As a result, the oil pipeline industry has a very high ratio of GDP per employee; at \$783,703 per employee it is nearly nine times the average for all industries.⁹

As well, since pipelines are expected to have extended lives, the cumulative impact over the course of their lives can be significant. This chapter assesses the economic and fiscal impacts of the TMEP's operations over a 20-year time horizon. Although the expected life of the Project is much longer—the existing pipeline has been in operation for nearly 60 years—20 years covers the initial period for which Trans Mountain has firm contracts in place.

3.1 Direct Effects

The assessment of the employment and GDP effects of TMEP operations is based on the incremental revenues that the Project is expected to generate. There are 13 shippers that have entered into binding 15 and 20-year contracts to ship a total of about 708,000 b/d of oil through the pipeline once it is completed. This is equal to about 80 per cent of the pipeline's planned nominal capacity of 890,000 b/d.

Because the terms of these contracts are known, the associated revenues can be reasonably estimated. Annual revenues associated with these contracts were estimated by the Conference Board to be \$944 million based on the projected capital costs of the Project and the toll structure that would be applied. This revenue estimate only includes the fixed component of the toll. The variable component is primarily based on the electricity costs associated with shipping through the pipeline and is passed directly through to shippers. As such, the variable component would not have an impact on the labour or material inputs that the pipeline would use, or on the profits that it generates, and is not included when estimating the economic effects.

⁸ Based on data from Statistics Canada CANSIM table 031-0002 and the Labour Force Survey.

⁹ Based on data from Statistics Canada CANSIM table 379-0031 and the Labour Force Survey.

The 20 per cent of the pipeline's expected capacity that is not committed to firm long-term contracts will be available on a spot or non-firm basis once the Project is operational. We consider the additional economic and fiscal effects of non-firm sales under a different scenario later in this chapter. First, we present an analysis of the effects for the capacity that is committed to long-term contracts. Since the terms of the contracts require shippers to pay for their capacity whether or not they use it, they have a strong incentive to make use of it. As such, the operational economic and fiscal impacts associated with the long-term contracts can be considered the minimum effects associated with operating the pipeline.

For the purposes of this analysis we assume that the full 708,000 b/d of capacity will be covered by long-term contracts over the 20-year period. A portion of the capacity committed to long term contracts has the potential to become available for non-firm sales after 15 years. However, we assume that the relevant contracts will be renewed for an additional five year period; this is an option available in the contracts. Otherwise, we expect that Trans Mountain would attempt to find other firm contract customers for that capacity, which would have the same effect.

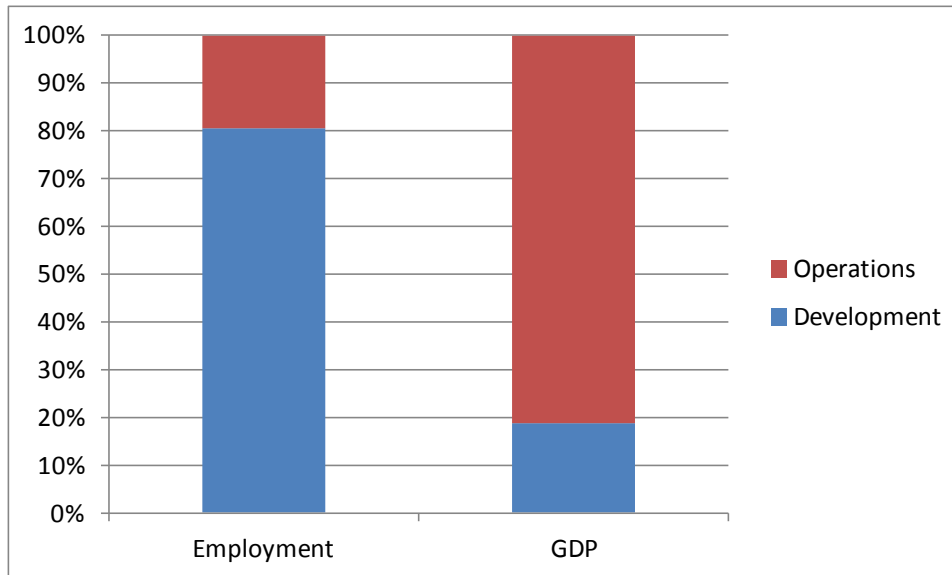
The other consideration when estimating the economic impacts of the pipeline's operations is that 300,000 b/d of capacity is already in place. The TMEP would expand this capacity to 890,000 b/d. However, even if the TMEP were not to proceed, the existing capacity would continue to operate. As such, we only consider the impact associated with the expanded operations rather than the existing pipeline. Information provided by Trans Mountain indicates that the revenues associated with the existing pipeline are approximately \$300 million per year. Once this is removed from the revenues associated with the long-term contracts for the TMEP, the Project will generate a \$644 million increase in annual revenues.

Based on annual revenue of \$644 million, the TMEP will directly support 342 jobs per year, for a total of 6,841 person years of employment over the first 20 years of the pipelines operations. The majority of these positions will be found in British Columbia, which will account for 242 jobs per year or 71 per cent of the total, with the rest being located in Alberta. This reflects the location of pipeline related facilities, such as pumping stations and terminals, which will require employees to operate them.

In terms of GDP, the TMEP is expected to generate \$469 million of GDP annually, or \$9.4 billion over the first 20 years of its operations. The GDP results stand out from the employment results in a couple of ways. First, Alberta's share of the direct GDP effects associated with pipeline operations is larger at 31.4 per cent, versus 29.3 per cent for employment. This reflects the fact that the average wages and salaries per employee in the oil pipeline industry in Alberta are higher than in British Columbia.

Secondly, the comparison of the GDP effects between the development and operational stages of the Project is very different than the employment effects. Operations will account for one-fifth of the employment effects, but 81 per cent of the total GDP effects associated with the development and operation of the project. (See Chart 17.) The reason why the GDP effects are so much larger is because the GDP per employee in the oil pipeline industry is so high. GDP per employee in the industry is very high because of the high levels of capital invested per employee, which results in high labour productivity.

Chart 17. The Direct Effects of Operations on GDP are Much Larger than for Employment (share of employment and GDP effects by project stage)



Source: The Conference Board of Canada.

3.2 Indirect Effects

As with the development phase, the TMEP will also generate indirect or supply chain effects once it is operational. An estimated 1,492 jobs will be supported by the pipeline in every year of operations. This is equivalent to 29,845 person-years of employment over the first 20 years of the Project’s life. Thus, for every job created directly by the TMEP another 4.4 are supported indirectly. This is a high employment multiplier and it is largely a reflection of the small direct employment effects in the oil pipeline industry.

The opposite situation is apparent with the indirect GDP effects. The operation of the TMEP will support \$136 million of indirect GDP annually, which is equivalent to only \$0.29 for every dollar of direct GDP. This is a very low GDP multiplier and it reflects the high level of direct GDP that the oil pipeline industry generates.

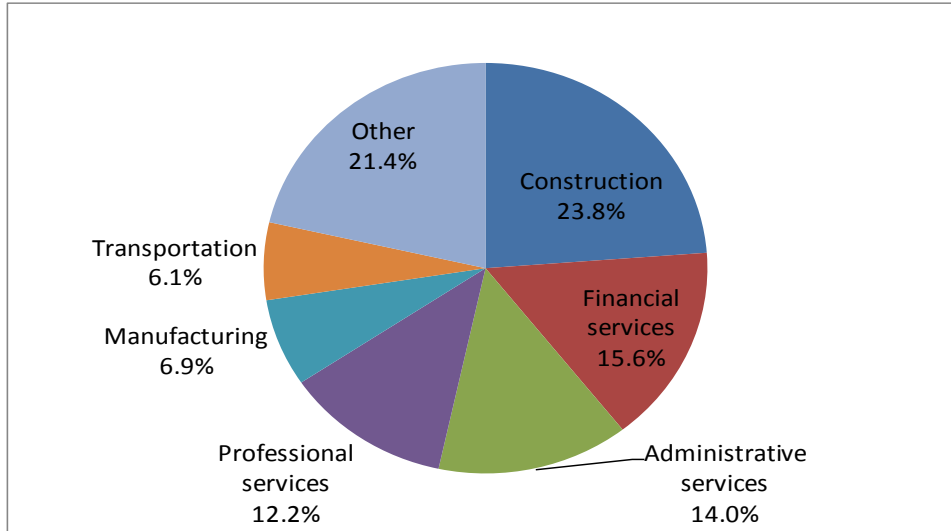
Although the number of indirect jobs supported by the operation of the TMEP is not particularly large in any given year, over the first 20 years of the pipeline’s operations they actually exceed those supported by the development of the pipeline—29,845 person-years of employment versus 14,055. What is more, the indirect effects have a somewhat different industrial and regional mix. Regionally, the operational impacts are even more heavily focused in British Columbia., Sectors like construction and administrative services, which include activities like services to buildings and employment services, grow in importance.

3.2.1 Indirect Effects by Sector

The indirect employment effects that arise from pipeline operations are largely confined to six broad sectors. In order of size, they include construction, financial services, administrative services, professional services, manufacturing and transportation. Combined, these six sectors account for 79 per cent of the indirect employment effects. (See Chart 18.) The effects within some of these sectors are

similar to what was discussed as part of the development phase in Chapter 2, but in general the impacts on specific industries can be quite different for operations than for the development phase.

Chart 18. Key Sectors that Experience Supply Chain Effects from Operations
(share of indirect employment effects from operations)



Source: The Conference Board of Canada.

Also notable is the importance of electricity as an input into the oil pipeline industry. Although it accounts for only 3.2 per cent of the supply chain employment effects, it accounts for 12.4 per cent of the indirect GDP effects. Like the pipeline industry, electricity generation is heavily capital intensive, which leads to it generating very large GDP effects, but limited employment effects. As such, although electricity is a major input into the oil pipeline industry, the employment impacts associated with this spending are small.

3.2.1.1 Construction

The TMEP is expected to support 355 indirect jobs annually in the construction sector once it is operational. The key reason for this will be ongoing maintenance and repairs. All of these jobs will be found in either British Columbia or Alberta, along the route of the proposed pipeline. The jobs will be heavily weighted towards British Columbia, which will account for 94 per cent of the total. The fact that more of the pipeline is located in British Columbia, there are more pump stations located there, and the more difficult terrain that the pipeline traverses in the province all contribute to this difference.

3.2.1.2 Financial Services

Since the financial services sector provides inputs into essentially every industry, it is a key component of the supply chains for many of them. However, with 232 jobs being indirectly supported in the financial services sector annually, it accounts for 15.6 per cent of the total employment effects associated with the operation of the TMEP. These impacts are concentrated among holding companies, investment services, banking, and insurance.

Regionally, the impacts in the financial services sector are more widely dispersed, with 29 per cent of the employment effects occurring outside of British Columbia and Alberta. Most of these effects occur in Ontario, particularly in the investment services and banking industries. These services tend to be more tradable and Ontario's well developed financial services sector means that businesses are more likely to make use of financial institutions that are located in that province.

3.2.1.3 Administrative Services

Administrative services businesses are primarily engaged in activities that support the day-to-day operations of other organizations. A total of 209 indirect jobs in the administrative services sector will be supported by TMEP operations each year. Key administrative industries that provide inputs into the oil pipeline industry include services to buildings (such as janitorial and pest control services), employment services, waste remediation, and security services.

Once again, the employment effects in the administrative services sector are concentrated in British Columbia (54.9 per cent), Alberta (21.8 per cent), and Ontario (17.3 per cent). The limited tradability of some services is a factor that restrains the impacts outside of British Columbia and Alberta. Most of the impacts in Ontario occur in the employment services industry, which has a higher degree of tradability.

3.2.1.4 Professional Services

A total of 182 professional service jobs are supported annually as a result of the supply chain effects associated with the operation of the TMEPs. However, the operating effects on the sector are very different than those associated with the development of the Project. Instead of the main effects occurring in the engineering industry, it is the computer services industry where the largest impacts occur, with 5.8 per cent of the total indirect employment effects occur in the computer services industry. Other industries within professional services that experience notable employment effects include engineering, accounting, and consulting.

Regionally, we see a similar pattern of the largest impacts occurring in British Columbia (41.2 per cent), Alberta (29.6 per cent), and Ontario (20.5 per cent). The impacts in the other provinces are very small, with Quebec accounting for nearly all of the remaining impact. Most of the professional services jobs that are supported outside of British Columbia and Alberta are computer services positions.

3.2.1.5 Manufacturing

The indirect impacts among the particular industries within the manufacturing sector associated with operations are similar to those for the development phase of the Project. Key manufactured inputs include architectural metals, boilers and tanks, and cement products. This reflects the need for ongoing maintenance and repairs on the pipeline's infrastructure over its useful life. However, the scale is smaller. Only 103 manufacturing jobs are expected to be supported annually by TMEP operations, equivalent to 2,020 person-years of employment over the first 20 years of operations. This is only about two-thirds of the manufacturing employment impacts that will occur during the development phase.

The diversity of the regional impacts within the manufacturing sector are also much less during the operating phase of the Project versus the development phase. British Columbia experiences the largest

impact (52 per cent), followed by Ontario (18.3 per cent), and then Alberta (14.8 per cent). The key reason for British Columbia accounting for a much higher share of the manufacturing effects during the operational phase is the change in the mix of manufactured inputs. For example, cement products, wood products and printing are all industries that experience a relative increase in their importance. Wood products produced in British Columbia are readily available, while the cement products and printing industries tend to be much more regionally focused than many other segments of the manufacturing sector.

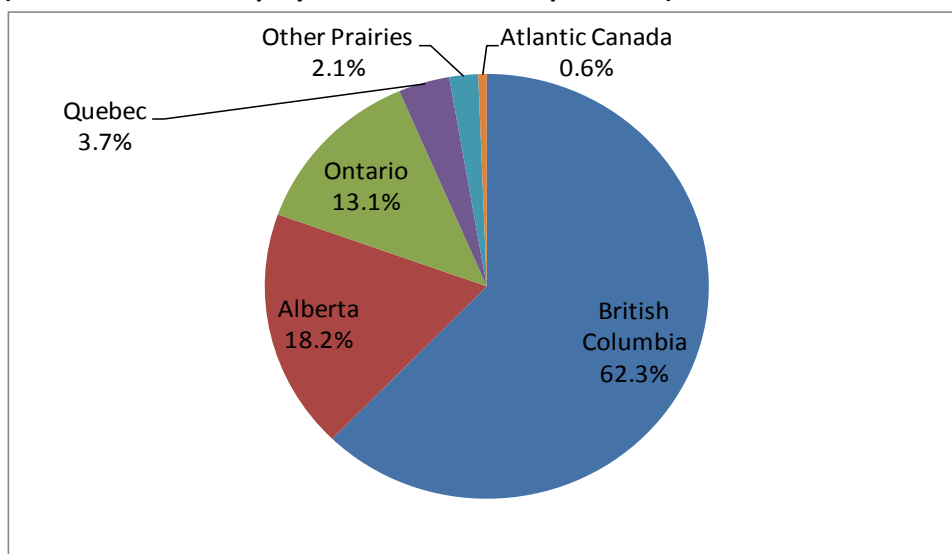
3.2.1.6 Transportation

The last major sector where considerable indirect employment effects occur as a result of TMEP operations is transportation, with 81 jobs being supported annually. Most of these jobs occur in the couriers and messengers, transportation support services, and trucking industries. The impact in the couriers and messengers industry reflects the standard day-to-day need for businesses to interact with other organizations. The impacts in the other transportation industries reflect the need to supply the TMEP with materials and supplies on an ongoing basis. The geographically dispersed nature of the pipeline also contributes to the need for transportation services. As well, the majority of the employment impacts occur in British Columbia, which accounts for 56 per cent of the total. Most of the remaining effects occur in Alberta (18.6 per cent) and Ontario (17.4 per cent).

3.2.2 Indirect Effects by Region

Nearly all of the indirect effects associated with operations of the TMEP occur in British Columbia, Alberta, or Ontario; only 6.5 per cent of the employment effects occur in other provinces. (See Chart 19.) The main reason for this is the importance of construction activity as an input into the oil pipeline industry, which by necessity is almost entirely conducted locally. Many of the other key inputs provided by sectors like administrative services and professional services require a local presence as well.

Chart 19. Supply Chain Employment Effects from Operations by Region
(share of indirect employment effects from operations)



Source: The Conference Board of Canada.

3.2.2.1 British Columbia

British Columbia experiences the majority of the supply chain effects associated with the operation of the TMEP. A total of 932 jobs are expected to be supported annually in the province, equivalent to 18,641 person-years or 62 per cent of employment over the first 20 years of operations. This is more than double the supply chain impacts in British Columbia associated with developing the Project. Industries that experience notable supply chain effects in British Columbia include repair construction, services to buildings, holding companies, and electric power generation.

3.2.2.2 Alberta

Nearly 20 per cent of the employment supported by the supply chain effects associated with the operation of the TMEP occurs in Alberta. In total, 273 jobs will be supported in Alberta annually, equivalent to 5,460 person-years of employment over the first 20 years of operations. In comparison, the development of the TMEP will support 3,660 person-years of employment in Alberta. Industries that experience significant indirect effect in Alberta include computer services, holding companies, electric power generation, construction, and employment services.

3.2.2.3 Ontario

Ontario is the only other province to experience substantial supply chain effects as a result of TMEP operations, with 195 jobs being supported annually, or 3,895 person-years of employment over the first 20 years of operations. Again the indirect operational impacts in Ontario are actually larger than the development impacts. The largest impacts in Ontario include the computer and employment services industries. As well, several different types of financial services industries benefit including banking, investment services, and holding companies.

3.2.2.4 Other Regions

The indirect employment impacts associated with the operation of the TMEP are much more modest in the rest of the country. Across all of the other provinces the employment impacts total only 99 jobs annually, or 1,970 person-years of employment over 20 years. In some cases, such as Saskatchewan, the impacts of operations are actually less than those from the Project's development. This reflects the fact that a good portion of the pipe used to initially build the pipeline would be sourced in Saskatchewan according to the modelling results. The impacts are generally spread across a variety of industries, but the largest impacts in other regions occur in industries like computer services, investment services, and holding companies.

3.3 Induced Effects

As with the development phase of the Project, the wages earned in the direct and indirect jobs supported by TMEP operations will generate additional economic effects when they are spent. These induced effects add considerably to the total economic effects associated with TMEP operations. However, in the case of operations, the induced effects are smaller than the indirect effects. The opposite was true for the induced effects from the development phase.

The key reason for the difference is that the direct employment effects of operations are much smaller than for development. Even though the direct jobs in the oil pipeline industry are very high paying, there

are fewer of them. The end result is the labour income that results from direct and indirect employment during the operational phase is only \$2.45 billion over 20 years of operations, versus \$2.62 billion for the Project’s development. Less labour income to spend results in smaller induced effects.

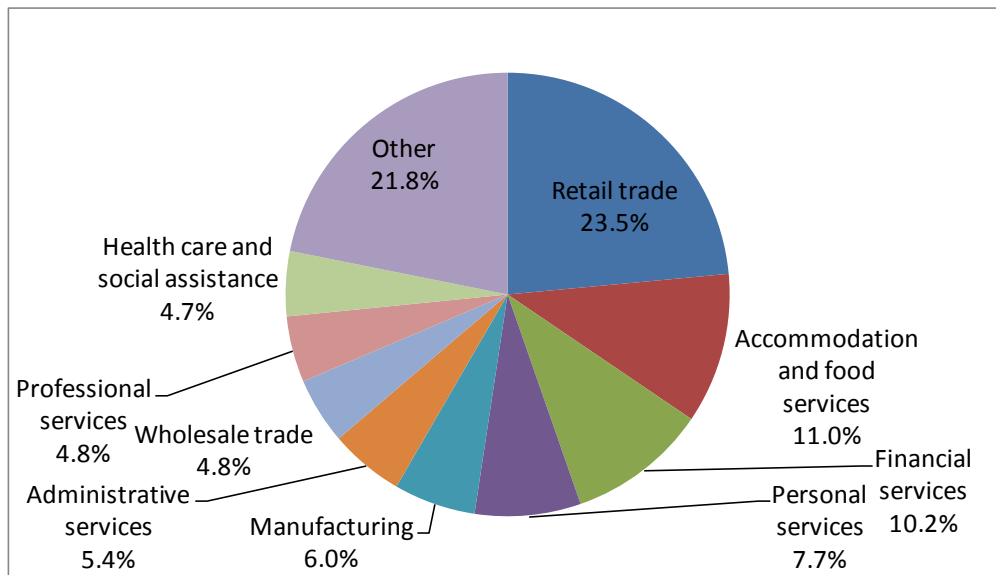
In total, 13,588 person-years of induced employment would be supported by pipeline operations over the first 20 years of operations, equivalent to 679 jobs per year. Thus, the combined direct, indirect, and induced employment impacts associated with pipeline operations will be 50,274 person-years over 20 years, or 2,514 jobs per year.

The induced GDP effects are also considerable. For every \$1 in GDP directly created as a result of the pipeline’s operations, another \$0.13 is supported by the induced effects, compared to \$0.29 in supply-chain benefits. This represents a total GDP effect of \$13.3 billion over the first 20 years of operations. Thus the combined development and operational GDP effects associated with the TMEP are \$18.2 billion.

3.3.1 Induced Effects by Sector

In terms of the industries where the induced impacts occur, the mix is very similar to those discussed in Chapter 2. The same group of consumer oriented sectors, including retail trade, accommodation and food services, financial services, and personal services account for most of the effects. (See Chart 20.) The pattern of induced effects reflects how people spend their money, and that generally is not dependent on how they earn that money. The modest differences in the sectoral induced effects between the operational and development phases of the Project are caused by the different regional mix for the direct and indirect effects. Essentially, people’s consumption patterns vary only modestly across regions.

Chart 20. Induced Employment Effects from Operations by Sector
(share of induced employment effects from operations)

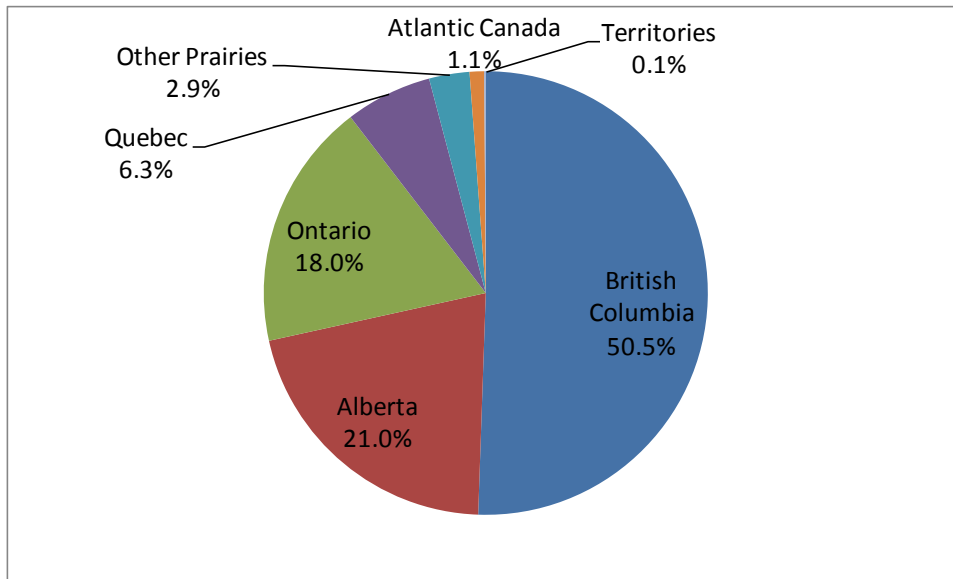


Source: The Conference Board of Canada.

3.3.2 Induced Effects by Region

The regional distribution of the induced effects is again similar to what occurs during the development phase of the Project. British Columbia (6,868 person-years) and Alberta (2,853 person-years) account for 72 per cent of the total effects. (See Chart 21.) However, since 87 per cent of the labour income generated by the direct and indirect effects is in those two provinces, this result is not surprising. The reason why the induced effects are more spread out geographically is because some of the things people buy in British Columbia and Alberta are sourced from other parts of the country.

Chart 21. Induced Employment Effects from Operations by Region
(share of induced employment effects from operations)



Source: The Conference Board of Canada.

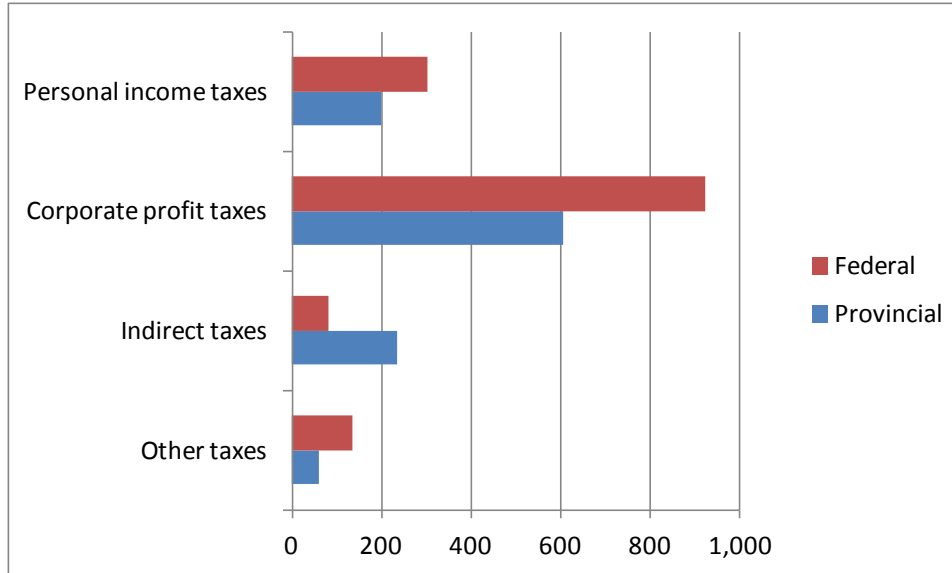
3.4 Fiscal Effects

The direct, supply chain, and induced effects associated with the operation of the TMEP also have fiscal implications at both the provincial and federal level. Over the first 20 years of its life, the TMEP is expected to generate \$2.5 billion in federal and provincial government revenues. This is more than double the \$1.2 billion in fiscal impacts associated with the development phase of the Project. The operational fiscal impacts are heavily weighted towards corporate income taxes, which account for 60 per cent of the combined provincial and federal fiscal impacts. (See Chart 22.) Personal income taxes and indirect taxes, such as sales taxes account for most of the remaining fiscal impacts.

The key reason for the large role of corporate taxes in the fiscal effects is the breakdown of the GDP effects for TMEP operations. As indicated previously, the oil pipeline industry generates a high level of GDP. Because of this, the direct GDP effects account for 70 per cent of the total operational GDP effects. At the same time, the oil pipeline industry is highly capital intensive, so most of the GDP generated by the industry comes in the form of depreciation of its assets and corporate profits. Since it is the income components of GDP, including corporate profits and labour income, that determine most of the fiscal

effects, the end result is that corporate profits in the oil pipeline industry are the key factor driving the results.

Chart 22. Corporate Income Taxes Account for Most of the Operations Related Fiscal Effects (tax revenues over 20 years of operations, millions of 2012\$)



Source: The Conference Board of Canada.

3.4.1 Federal Impacts

The federal government will be the major beneficiary of the fiscal impact from TMEP operations, at \$1.4 billion. This is equivalent to 0.6 per cent of federal government revenues in 2012. Corporate income taxes are the largest portion of this, at \$925 million. This is followed by personal income taxes (\$303 million) and indirect taxes (\$83 million). Increased contributions to social security programs, such as employment insurance, are also significant, at \$66 million.

Federal government revenues are equivalent to \$11 for every \$100 of GDP generated by the Project’s operations. This is somewhat lower than the \$13 of federal tax revenues for every \$100 of GDP generated by the development phase of the Project. The key reason for this is the shift towards corporate profits as the main source of government revenue. The marginal tax rate on corporate profits is generally lower than the rate for personal income. As well, consumers pay sales taxes on the goods and services they buy, while businesses often get the sales taxes they pay refunded through input tax credits.

3.4.2 Provincial Impacts

In aggregate, the TMEP is expected to support \$1.1 billion in provincial government revenues over the first 20 years of its life. This is equivalent to 0.3 per cent of total provincial revenues in 2012. At \$607 million, corporate income taxes will account for the majority of the provincial fiscal effects. Indirect taxes (which include sales taxes) and personal income taxes account for most of the rest of the effects, at \$237 million and \$200 million, respectively.

In terms of the breakdown by province the largest benefits would accrue to British Columbia, which would receive 66 per cent of the total, or \$727 million, which is equivalent to 1.7 per cent of British Columbia’s 2012-13 revenues.¹⁰ Alberta would receive most of the rest of the provincial fiscal effects, at \$278 million, equivalent to 0.7 per cent of the province’s 2012-13 revenues. Ontario (\$60 million), Quebec (\$18 million), Saskatchewan (\$8 million), and Manitoba (\$5 million) will experience much more modest fiscal effects. For the Atlantic provinces, the fiscal effects are very small. However, if we redistribute the federal fiscal effects across the provinces on a per capita basis, then all of the provinces will experience a larger effect. (See Table 4.)

**Table 4. Summary of Fiscal Effects from TMEP Operations
(tax revenues over 20 years of operations, millions of 2012\$)**

	Direct Provincial Revenues	Per Capita Share of Federal Revenues	Total
British Columbia	727.0	191.8	918.8
Alberta	277.5	160.3	437.8
Ontario	59.9	560.2	620.1
Quebec	18.1	334.0	352.1
Other Prairies	13.8	97.3	111.0
Atlantic Canada	5.9	98.1	104.0
Territories	0.0	4.7	4.7
Total	1,102.1	1,446.4	2,548.6

Source: The Conference Board of Canada.

3.5 The Economic Effects of Non-Firm Transactions

All of the impacts discussed thus far in this chapter are based only on the transportation of volumes that are linked to long-term contracts. These can be considered the minimum economic and fiscal effects associated with the TMEP. There will be about 180,000 b/d of nominal capacity available for non-firm or spot transactions, and the degree to which this capacity is used will determine the amount of additional economic impacts. There are two key considerations concerning the effects of the non-firm capacity. The first is the toll that will be applied to any non-firm transactions. The second is the volumes that will be transported.

The tolls for non-firm capacity will be higher than for product shipped under the terms of long-term contracts. The non-firm toll will be based on a 10 per cent premium to the 15-year firm toll. However, those shippers who signed 20-year contracts receive a 10 per cent discount from the 15-year rate, and large volume shippers (those who contracted for 75,000 b/d or more) receive an additional 7.5 per cent discount.¹¹

¹⁰ Government of British Columbia. *June Update: Budget and Fiscal Plan 2013/14-2015/16*.

¹¹ Transmountain Pipeline. *TMEP Toll Application*.

Based on information provided by Trans Mountain,¹² the average fixed toll that will be applied under long-term contracts was estimated by the Conference Board of Canada to be \$3.66, assuming no change in the capital costs associated with the Project. For non-firm shippers, the estimated toll is \$4.59. The higher toll on non-firm capacity results in higher revenues on a per barrel basis up to 85 per cent capacity utilization of the TMEP. However, once capacity utilization exceeds 85 per cent, under the revenue sharing provisions of the contracts any additional revenues will be split on a 50/50 basis between shippers and Trans Mountain through reductions in the variable toll.¹³ As such, the additional revenues to Trans Mountain from non-firm shipments depend on capacity utilization rates.

If we assume that the available non-firm capacity on the TMEP system is fully utilized over its first 20 years of operations, the calculated economic and fiscal effects based on that assumption represent the maximum potential impact associated with the Project. The reality is likely to fall somewhere in between the minimum and the maximum.

We can use the previously discussed modelling results for TMEP operations to determine the expected economic and fiscal impacts associated with the non-firm transactions. One of the benefits of using an I/O model is that its results are scalable. Since the model is based on a snapshot in time, the relative effects are fixed. Thus, higher revenues from non-firm volumes will result in a proportionate increase in the supply chain and induced effects, while the mix of regions and industries will be unaffected.

Based on an average toll rate of \$4.59 per barrel, a non-firm capacity of approximately 180,000 b/d, and revenue sharing on capacity used above 85 per cent, we estimate the maximum annual revenues associated with non-firm capacity to be \$191 million. This increases the total annual incremental revenues associated with TMEP operations to \$835 million, a 30 per cent increase over the revenue estimated for the fixed contracts alone. Thus, the economic and fiscal impacts in the “maximum” scenario can be expected to be 30 per cent higher than in the “minimum” scenario.

Table 5 provides a summary of the minimum and maximum effects of TMEP pipeline operations over its first 20 years. In the maximum scenario, the combined direct, indirect, and induced employment effects increase from 50,723 to 65,184 person-years. As well, the GDP impacts rise from a cumulative total of \$13.3 billion to \$17.3 billion. Finally, the combined federal and provincial fiscal impact rises from \$2.5 billion to \$3.3 billion.

¹² The weighted average 2018 contract toll was determined by dividing initial year contract revenue by total contract volume.

¹³ Transmountain Pipeline. *TMEP Toll Application*.

**Table 5. Summary of the Regional Impacts of TMEP Operations
(cumulative effects, 2018-2037)**

	Atlantic Canada	Quebec	Ontario	Other Prairies	Alberta	British Columbia	Territories	Canada
	MINIMUM EFFECTS (LONG-TERM CONTRACTS)							
Employment effects (person-years)	327	1,970	6,345	1,025	10,293	30,269	43	50,273
Direct	0	0	0	0	2,005	4,836	0	6,841
Indirect	184	1,113	3,895	625	5,435	18,565	28	29,845
Induced	143	857	2,450	400	2,853	6,868	15	13,588
GDP effects (millions of 2012\$)	24.3	165.6	542.9	87.0	3,958.1	8,540.2	4.5	13,322.5
Direct	0.0	0.0	0.0	0.0	2,947.9	6,427.8	0.0	9,375.7
Indirect	13.7	94.8	330.4	54.3	711.7	1,505.6	3.0	2,713.4
Induced	10.6	70.9	212.5	32.7	298.5	606.8	1.5	1,233.4
Fiscal Impact (millions of 2012\$)	104	352.1	620.1	111.1	437.8	918.8	4.7	2,548.6
Direct Provincial Revenues	5.9	18.1	59.9	13.8	277.5	727.0	0	1,102.2
Per Capita Share of Federal Revenues	98.1	334.0	560.2	97.3	160.3	191.8	4.7	1,446.4
	MAXIMUM EFFECTS (INCLUDING SPOT VOLUMES)							
Employment effects (person-years)	425	2,555	8,226	1,330	13,346	39,246	56	65,184
Direct	0	0	0	0	2,600	6,270	0	8,870
Indirect	239	1,443	5,050	810	7,047	24,071	36	38,696
Induced	186	1,112	3,177	519	3,699	8,905	20	17,618
GDP effects (millions of 2012\$)	31.5	214.8	703.9	112.8	5,131.9	11,073.0	6.4	17,274.3
Direct	0.0	0.0	0.0	0.0	3,822.2	8,334.2	0.0	12,156.4
Indirect	17.8	122.9	428.4	70.4	922.7	1,952.1	4.3	3,518.5
Induced	13.7	91.9	275.5	42.4	387.0	786.8	2.1	1,599.4
Fiscal Impact (millions of 2012\$)	134.8	456.5	804.0	144.1	567.6	1,191.3	6.7	3,305.1
Direct Provincial Revenues	7.6	23.5	77.7	17.9	359.8	942.6	0.0	1,429.1
Per Capita Share of Federal Revenues	127.2	433.1	726.3	126.2	207.8	248.7	6.7	1,876.0

Source: The Conference Board of Canada.

3.6 Summary

Both the development and operational phases of the TMEP will generate economic and fiscal benefits. In general, the economic and fiscal effects associated with operating the pipeline will exceed those experienced during the construction phase of the Project, although the operational effects will be spread over a longer period of time. At a minimum, both phases of the Project are expected to support 108,310 person-years of employment and \$3.8 billion in fiscal effects between 2012 and 2037. (See Table 6.) If the available non-firm capacity on the TMEP is fully utilized these effects increase to 123,221 person-years of employment and fiscal effects of \$4.5 billion.

This chapter and the previous one discussed the economic and fiscal impacts associated with building and operating the TMEP. However, the pipeline is also expected to reduce the discounts on Canadian heavy oil that have been experienced in recent years. The higher received prices for producers, or “netbacks,” will have additional fiscal implications for Canada. The next chapter discusses those impacts.

**Table 6. Summary of the Regional Impacts of TMEP Development and Operations
(cumulative effects, 2012-2037)**

	Atlantic Canada	Quebec	Ontario	Other Prairies	Alberta	British Columbia	Territories	Canada
	MINIMUM EFFECTS (LONG-TERM CONTRACTS)							
Employment effects (person-years)	617	3,372	11,004	2,124	24,926	66,132	135	108,310
Direct	0	0	0	0	9,532	25,511	0	35,043
Indirect	326	1,714	6,235	1,270	9,095	25,164	97	43,900
Induced	291	1,659	4,769	855	6,298	15,458	38	29,368
GDP effects (millions of 2012\$)	46.0	285.8	951.5	185.5	5,360.5	11,329.2	15.7	18,174.2
Direct	0.0	0.0	0.0	0.0	3,598.0	7,945.8	0.0	11,543.8
Indirect	24.5	147.5	538.1	115.7	1,105.7	2,020.3	12.0	3,963.9
Induced	21.5	138.2	413.4	69.8	656.8	1,363.1	3.7	2,666.4
Fiscal Impact (millions of 2012\$)	152.2	518.3	926.7	168.6	676.9	1,313.1	6.9	3,762.7
Direct Provincial Revenues	10.3	35.2	116.4	27.9	445	1,035.7	0	1,670.5
Per Capita Share of Federal Revenues	141.9	483.1	810.3	140.7	231.9	277.4	6.9	2,092.2
	MAXIMUM EFFECTS (INCLUDING SPOT VOLUMES)							
Employment effects (person-years)	714	3,957	12,886	2,429	27,978	75,110	148	123,221
Direct	0	0	0	0	10,127	26,945	0	37,072
Indirect	381	2,044	7,390	1,455	10,707	30,670	105	52,751
Induced	333	1,913	5,496	973	7,144	17,495	43	33,398
GDP effects (millions of 2012\$)	53.2	334.9	1,112.5	211.3	6,534.4	13,862.1	17.6	22,126.0
Direct	0.0	0.0	0.0	0.0	4,472.3	9,852.2	0.0	14,324.5
Indirect	28.6	175.6	636.1	131.8	1,316.7	2,466.8	13.3	4,769.1
Induced	24.6	159.3	476.4	79.5	745.3	1,543.1	4.3	3,032.4
Fiscal Impact (millions of 2012\$)	183.0	622.7	1,110.6	201.6	806.7	1,585.6	8.9	4,519.2
Direct Provincial Revenues	12.0	40.6	134.2	32.0	527.3	1,251.3	0.0	1,997.4
Per Capita Share of Federal Revenues	171.0	582.2	976.4	169.6	279.4	334.3	8.9	2,521.8

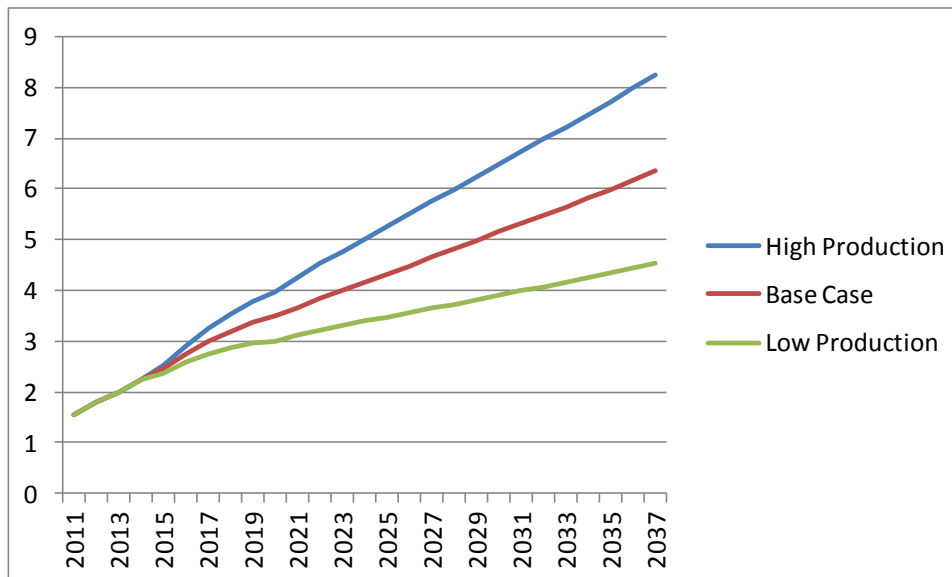
Source: The Conference Board of Canada.

Chapter 4: The Fiscal Impacts of Higher Netbacks for Canadian Oil Producers

In addition to the economic and fiscal impacts outlined in the previous two chapters, there are other implications associated with the development of the TMEP. One of these is the potential for Canadian oil producers to obtain a higher price for their product. The IHS Global Canada Ltd. (IHS) study concludes that the TMEP will help to alleviate the discounting of Canadian crude experienced in recent years and will contribute to higher prices received or “netbacks” for Canadian producers.¹⁴

IHS developed three different production cases for Western Canadian oil production.¹⁵ (See Chart 23.) In all three cases, it is assumed that the Keystone XL pipeline will be built in 2015. In addition, IHS models the price impact of TMEP, Energy East, and Northern Gateway all being completed in 2017/2018 versus a world where they are not built. In every case, the construction of these pipelines results in higher netbacks for all producers of heavy oil (both conventional and diluted bitumen) in Western Canada.

Chart 23. Western Canadian Oil Production Could Take Different Paths
(Western Canadian heavy oil supply, millions of barrels per day)



Source: IHS.

These higher netbacks would lead to higher revenues, and in turn higher profits, which would have real economic consequences, such as increased dividend payments or business investment. As well, there will be fiscal implications in terms of higher royalties and corporate income taxes paid to federal and provincial governments. It is important to note that these benefits will arise regardless of whether or not oil production or investment increases beyond what is currently expected – higher prices alone are

¹⁴ Kelly, Steve. *Trans Mountain Expansion Direct Evidence*.

¹⁵ Kelly, Steve. *Trans Mountain Expansion Direct Evidence*.

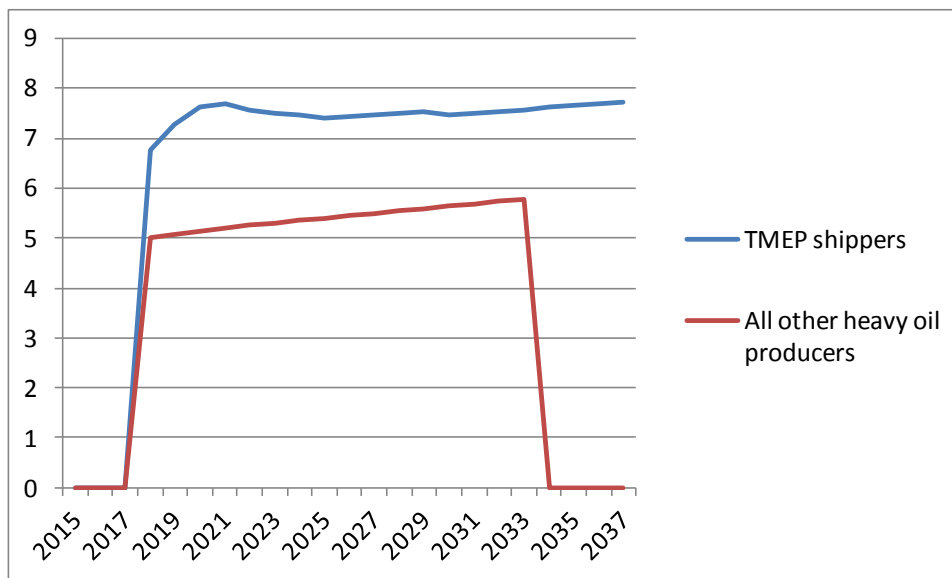
enough to drive positive economic impacts for the Canadian economy. In this study we do not consider the economic effects associated with how producers may make use of higher netbacks. Instead, the rest of this chapter discusses the industry revenue and fiscal implications of higher netbacks associated with pipeline capacity additions in each of the cases.

4.1 The Base Case

In the IHS base case, significant volumes of heavy oil are projected to begin flowing through the TMEP, Energy East, and Northern Gateway pipelines in late 2017. The resulting alleviation of the oversupply situation at Cushing leads to an increase in netbacks for all conventional heavy oil and oil sands producers operating in Western Canada, not just those producers that ship via the TMEP. This situation will persist until 2034, when IHS expects an oversupply situation at Cushing to resume.¹⁶

According to IHS, shippers of heavy oil on the TMEP will receive additional netback benefits from the market access provided by the TMEP, beyond the general industry benefits expected for all heavy oil producers. Heavy oil shippers on the TMEP that sell into California Asian markets are expected to garner higher prices for their products. This will mean a higher netback of about \$7-8 per barrel versus the \$5-6 per barrel that other heavy oil producers will experience.¹⁷ (See Chart 24.) As well, this benefit will persist beyond 2033.

Chart 24. Estimated Higher Netbacks for Oil Producers as a Result of Increased Pipeline Capacity (price premium attributable to pipeline additions, US\$ per barrel, 2012\$)



Source: IHS.

¹⁶ Kelly, Steve. *Trans Mountain Expansion Direct Evidence*.

¹⁷ In the IHS study, these benefits would be realized on volumes shipped to Asia and priced against Middle East crude imported into the region. The benefits for TMEP shippers are based on half of the TMEP firm commitments (equal to 707,500 B/D ÷ 2 = 353,750 B/D) being priced in China rather than in the U.S. Gulf Coast for the period 2018 to 2037.

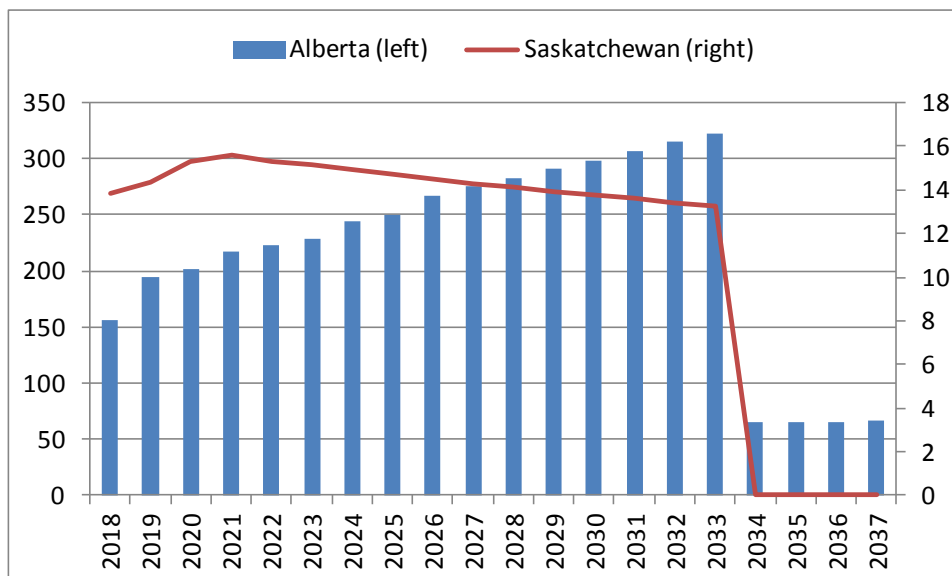
However, not all of the benefits experienced by heavy oil and bitumen producers are attributable to the market access provided by the TMEP. The results are dependent on all three planned pipelines being completed in the 2017/2018 timeframe. As such, IHS attributes 26.6 per cent (equivalent to TMEP’s share of the combined assumed capacity additions) of the general industry benefits to TMEP. Thus, TMEP is expected to increase producer revenues by \$45.4 billion over the first 20 years of its operations, with \$37 billion being attributable to general industry benefits and an additional \$8 billion being attributable to TMEP enabling heavy oil shipments to Asia.

4.1.1 Fiscal Impacts: Royalties

Because the TMEP would increase the netbacks for producers without any attendant increase in producers’ operating costs, both revenues and profits would be expected to rise by \$45.4 billion. This will have implications for the royalties and corporate income taxes that oil producers pay. In the case of royalties, we estimate that Alberta and Saskatchewan will experience a combined increase in royalties of \$4.6 billion over the first 20 years of pipeline operations.

At \$4.3 billion, Alberta will garner most of these royalty benefits, reflecting the fact that the province accounts for most of the heavy oil production in Western Canada. This corresponds to an annual average of \$217 million, which for comparison purposes, is equivalent to about 4 per cent of all oil royalty payments in Alberta in fiscal year 2012-13.¹⁸ However, the benefits will be highest during the 2018-2033 period, when every barrel of diluted bitumen and conventional heavy oil receives a higher price. (See Chart 25.)

Chart 25. Higher Netbacks Will Increase Royalty Collections
(provincial royalty collections due to higher netbacks, millions of 2012\$)



Source: The Conference Board of Canada.

¹⁸ Government of Alberta. *Budget 2013: Fiscal Plan Tables*.

Saskatchewan will also see higher royalty payments, although the gains will be commensurately lower in line with the province's lower production levels. Over the period 2018 through 2033, we estimate that the province would collect an additional \$230 million in royalty payments as a result of higher netbacks from the TMEP. However, since we do not expect any Saskatchewan oil to actually move through the TMEP, Saskatchewan producers will not experience any benefits after 2033.

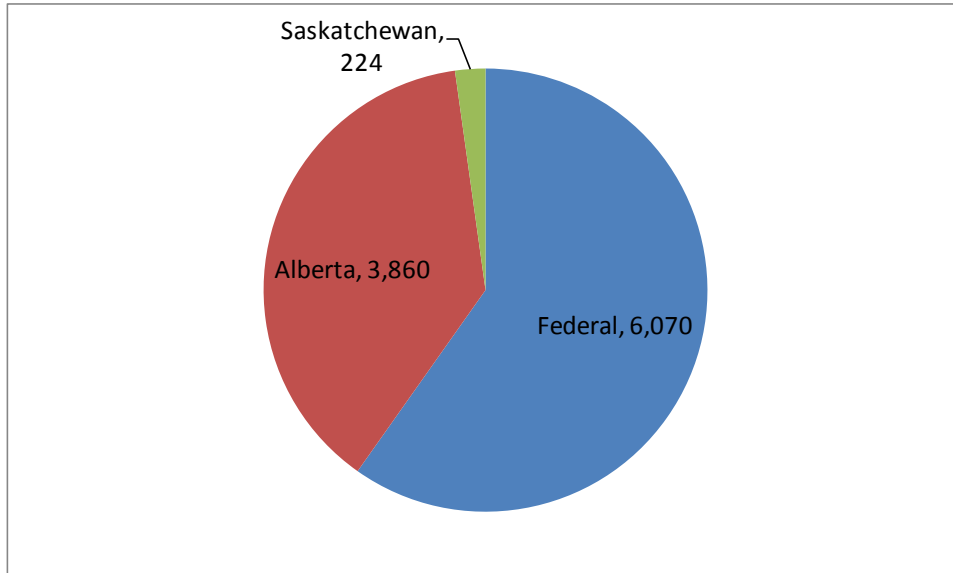
4.1.2 Fiscal Impacts: Income Taxes

Higher profits for oil producers as a result of higher netbacks will also generate significant corporate income tax effects at both the federal and provincial level. Income taxes are applied after royalties are deducted, but the direct link between higher prices and higher profits means that the provincial and federal tax rates are being applied to a sizeable increase in profits. We expect the corporate tax effects to be even larger than the royalty impacts, at \$10.2 billion between 2018 and 2037.

Again, as the largest producer, Alberta will garner a sizeable share of this total figure, at \$3.9 billion over the same period. Saskatchewan will also benefit, but the fiscal impact will be much smaller at \$224 million over the same period. The fact that Saskatchewan heavy oil production is only about one-tenth that of Alberta's and that the ratio is shrinking is one factor. As well, Saskatchewan only garners benefits between 2018 and 2033, when all Canadian heavy oil producers are expected to benefit from higher prices as a result of the TMEP.

As the sole producers of heavy oil and diluted bitumen in Canada, Alberta and Saskatchewan derive all of the benefit from higher provincial tax revenues. But the entire country will also benefit from higher federal corporate income tax collections, which are projected to be larger than those that accrue to Alberta and Saskatchewan combined. (See Chart 26.) Between 2018 and 2037 federal corporate income tax collections are expected to be \$6.1 billion higher as a result of the higher netbacks that result from the TMEP. Since federal revenues tend to be distributed back to the provinces on a per capita basis, this will generate significant benefits for all of Canada's regions.

Chart 26. Higher Netbacks Will Result in Sizeable Corporate Income Tax Benefits (corporate income tax effects due to higher netbacks, millions of 2012\$, 2018-2037)



Source: The Conference Board of Canada.

Thus, in the base case, the cumulative fiscal benefits of the TMEP are considerable. Canada as a whole derives an additional \$14.7 billion in fiscal revenues between 2018 and 2037. Alberta captures the largest share of this benefit. The combined royalty and provincial corporate income tax effects in the province total \$8.2 billion over a 20-year period, or \$410 million per year, which is equivalent to 1.1 per cent of provincial revenues in fiscal year 2012-13.¹⁹ But the benefits are not confined to Alberta. Saskatchewan directly garners \$454 million of the total fiscal effects between 2018 and 2037, while the rest will be spread across the provinces as part of federal disbursements.

4.2 The Low Production Case

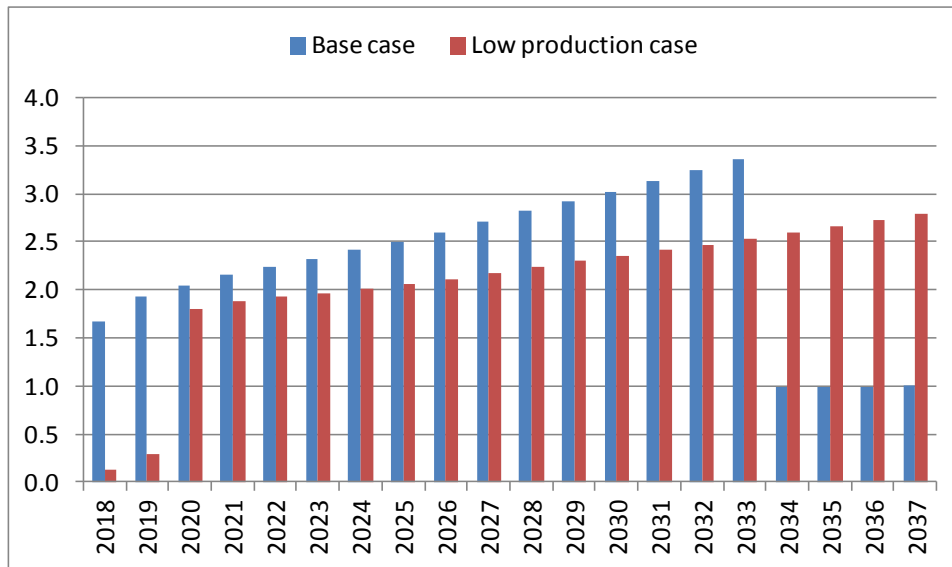
The IHS low production scenario assumes bitumen production is lower than in the base case, but conventional heavy production remains unchanged. In terms of higher netbacks, the key difference between the base case and the low production case is how long it takes for the available supply of oil to again exceed the existing pipeline capacity. In the base case this occurred in 2034, but this is not expected to happen before the end of the forecast period in the low production case. Also of note in the low production case is that the benefit of higher netbacks for non-TMEP shippers does not start until 2020.

In any given year before 2034, the total royalties and corporate income tax collections associated with heavy oil production will be lower in the low production case. Less production leads to lower revenues and profits, and thus lower royalties and corporate income tax collections. However, since the higher netback effects of the TMEP persist for a longer period of time in the low production scenario, IHS estimates oil industry revenues attributable to TMEP to be \$41.9 billion. (See Chart 27.) This is only modestly lower than in the base case.

Chart 27. Higher Netbacks Due to TMEP Will Contribute to Higher Oil Producer Revenues

¹⁹ Government of Alberta. *Budget 2013: Fiscal Plan Tables*.

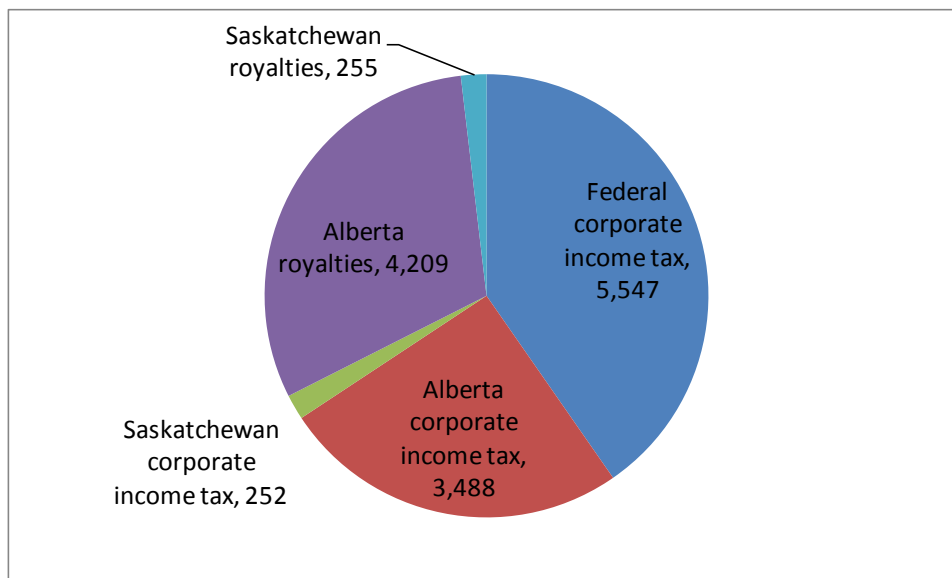
(increase in oil producer revenues attributable to TMEP, billions of 2012\$)



Source: IHS.

In total, government revenues are expected to be \$13.8 billion higher between 2018 and 2037 as a consequence of the higher netbacks that result from TMEP. Corporate income taxes will again account for the largest share of this total at \$9.3 billion. (See Chart 28.) The federal government will experience the largest share of corporate income tax collections (59.7 per cent), followed by Alberta (37.6 per cent), and Saskatchewan (2.7 per cent).

Chart 28. Federal Corporate Income Taxes Experience the Highest Fiscal Impact (fiscal impacts due to higher netbacks, millions of 2012\$, 2018-2037)



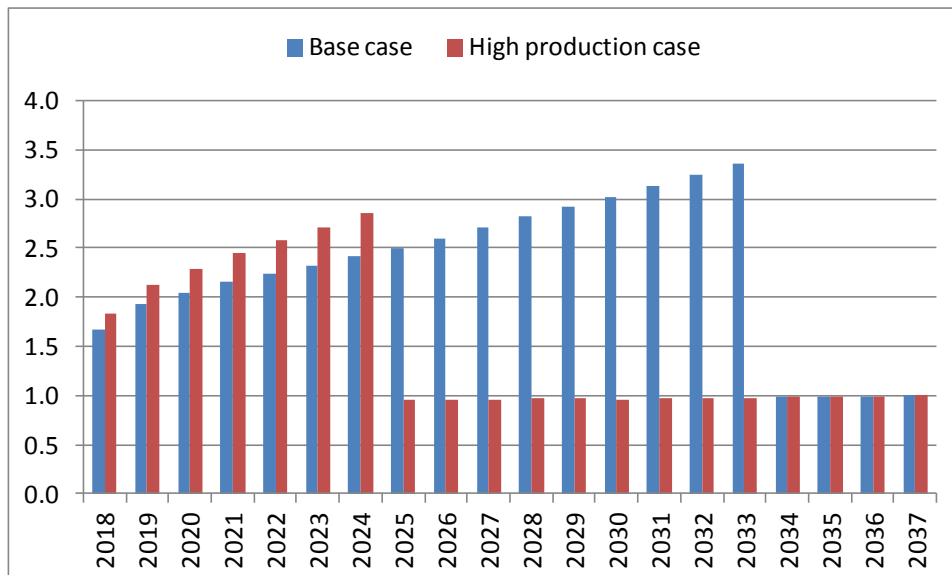
Source: The Conference Board of Canada.

Alberta’s royalty collections will be \$4.2 billion higher as a result of the higher netbacks over the TMEP’s first 20 years of operations. Saskatchewan also benefits from the higher netbacks on conventional heavy oil. Over the same period, its royalty collections are expected to be \$255 million higher. Unlike the base case, because the benefits for non-TMEP shippers will persist through the end of the forecast period, Saskatchewan will experience benefits through to 2037.

4.3 The High Production Case

In the IHS high production scenario bitumen production is expected to expand more quickly than in the base case, but conventional heavy production remains unchanged. In terms of higher netbacks, again the key difference in IHS’s analysis is how long it takes before the available supply of oil exceeds the existing pipeline capacity. In the base case this occurred in 2034, but in the high production case this occurs much sooner, in 2025. As a result, IHS estimates that total oil producer revenues from higher netbacks attributable to TMEP between 2018 and 2037 as a result higher netbacks to be only \$29.7 billion. Thus, the fiscal benefits associated with higher netbacks are the lowest in this scenario. (See Chart 29.)

Chart 29. Higher Netbacks Due to TMEP Will Contribute to Higher Oil Producer Revenues (increase in oil producer revenues attributable to TMEP, billions of 2012\$)

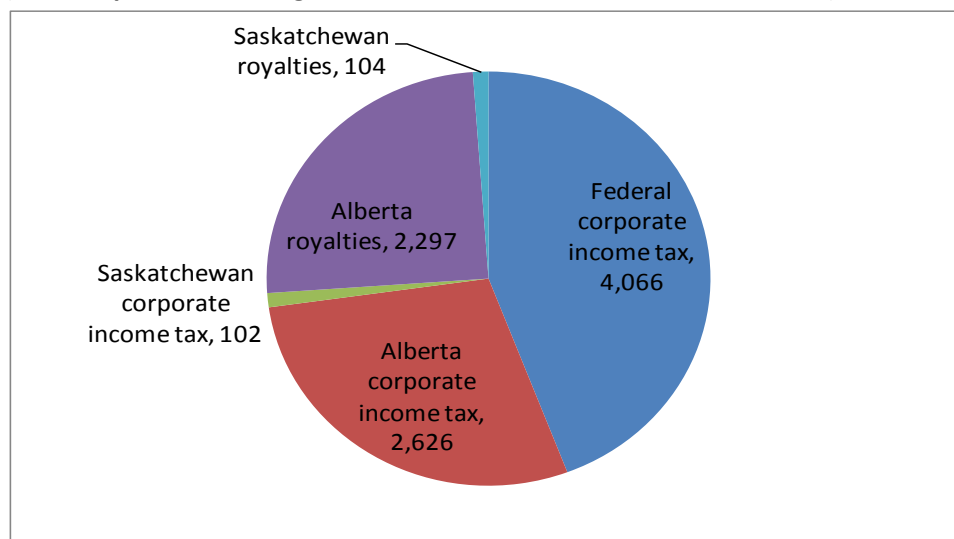


Source: IHS.

Nevertheless, the fiscal benefits are still significant in this case. In total, government revenues are expected to be \$9.2 billion higher between 2018 and 2037 as a result of the higher netbacks that the market access provided by the TMEP will generate. Corporate income tax collections will account for \$6.8 billion of this figure, with the federal government garnering the largest share at \$4.1 billion, followed by Alberta (\$2.6 billion) and Saskatchewan (\$102 million). (See Chart 30.) Royalty payments

account for the rest of the fiscal effects from higher netbacks, with Alberta’s royalties being \$2.3 billion higher and Saskatchewan’s being \$104 million higher.

Chart 30. Summary of the Fiscal Impact in the High Production Case (fiscal impacts due to higher netbacks, millions of 2012\$, 2018-2037)



Source: The Conference Board of Canada.

4.4 Summary

The construction and operation of the TMEP and other pipelines is expected to result in higher netbacks to Canadian oil producers. One result of these higher netbacks is higher royalty and corporate income tax payments in the provinces of Saskatchewan and Alberta, as well as at the federal level. In the base case we expect these fiscal benefits to total \$14.7 billion over the first 20 years of the pipeline’s operations. (See Table 7.) This figure ranges between \$9.2 billion in the high production case and \$13.8 billion in the low production case.

Table 7. Summary of the Fiscal Impacts of Higher Netbacks (cumulative effects, 2018-2037)

	Atlantic Canada	Quebec	Ontario	Other Prairies	Alberta	British Columbia	Territories	Canada
	Base Case							
Total Impact (millions of 2012\$)	411.8	1,401.8	2,351.0	861.9	8,868.9	804.9	19.7	14,720.0
Provincial Corporate Income Tax	0.0	0.0	0.0	223.8	3,860.2	0.0	0.0	4,084.0
Per Capita Share of Federal Corporate Income Tax	411.8	1,401.8	2,351.0	408.2	672.7	804.9	19.7	6,070.0
Royalties	0.0	0.0	0.0	230.0	4,336.0	0.0	0.0	4,566.0
	Low Production Case							
Total Impact (millions of 2012\$)	376.4	1,281.1	2,148.5	880.5	8,311.6	735.5	18.0	13,751.7
Provincial Corporate Income Tax	0.0	0.0	0.0	252.5	3,487.8	0.0	0.0	3,740.3
Per Capita Share of Federal Corporate Income Tax	376.4	1,281.1	2,148.5	373.0	614.8	735.5	18.0	5,547.3
Royalties	0.0	0.0	0.0	255.0	4,209.0	0.0	0.0	4,464.0
	High Production Case							
Total Impact (millions of 2012\$)	275.8	938.8	1,574.6	478.9	5,373.3	539.1	13.2	9,193.8
Provincial Corporate Income Tax	0.0	0.0	0.0	101.6	2,625.7	0.0	0.0	2,727.3
Per Capita Share of Federal Corporate Income Tax	275.8	938.8	1,574.6	273.4	450.6	539.1	13.2	4,065.5
Royalties	0.0	0.0	0.0	104.0	2,297.0	0.0	0.0	2,401.0

Source: The Conference Board of Canada.

Chapter 5: Conclusion

Canadian benchmark oil prices have lagged considerably behind their global peers in recent years. Ultimately this means that Canada is not getting the full fiscal and economic benefits associated with exploiting its non-renewable oil resources. In response, there has been growing interest in developing new oil transportation infrastructure in North America. There are currently four major pipeline projects under consideration that would move oil away from Western Canada if completed, including the TMEP.

If approved, the TMEP will generate economic and fiscal benefits. These benefits will occur in three key areas. The first is during the development stage of the Project, when the pipeline is being developed and built. The second comes during the operational period of the Project, with economic impacts associated with running and maintaining the pipeline. The last comes from the expectation that the TMEP will lead to higher netbacks for producers of heavy oil in Western Canada. All three of these effects will generate economic and fiscal impacts.

Development phase—Including the direct, supply chain, and induced effects, the spending during the development phase of the Project will support 58,037 person-years of employment, and \$1.2 billion in federal (\$646 million) and provincial (\$568 million) government revenues. As the sites where the pipeline will be built, British Columbia and Alberta will account for the majority of these impacts. However, other provinces, and in particular Ontario, will benefit through supply chain effects and the redistribution of federal government revenues to the regions.

Operational phase—We estimate the operational impacts of the pipeline over its first 20 years of service under two scenarios, a minimum scenario based on the existing long-term contracts, and a maximum scenario based on the non-firm capacity in the pipeline being fully utilized. At a minimum, we expect pipeline operations to support 50,273 person-years of employment, and this figure rises to 65,184 if the non-firm capacity is fully utilized. In terms of fiscal effects, pipeline operations are expected to support between \$2.5 and \$3.3 billion in combined federal and provincial revenues, considerably above those from the development phase. British Columbia and Alberta enjoy the lion's share of these benefits; however, other provinces do benefit through supply chain effects and the redistribution of federal government revenues to the regions.

Higher netbacks—We estimate the fiscal impacts of higher netbacks under the three different cases developed by IHS. In the base case we expect these fiscal benefits to total \$14.7 billion over the first 20 years of the pipeline's operations. The federal corporate income tax effects account for the largest share of these effects at \$6.1 billion. The combined royalty and corporate income tax effect for Alberta is \$8.2 billion, and for Saskatchewan it is \$454 million. The cumulative fiscal effect ranges between \$9.2 billion in the high production case and \$13.8 billion in the low production case.

Table 8 summarizes the economic and fiscal impacts associated the TMEP using the minimum operating impacts and the base case for assessing the impact of higher netbacks. Between 2012 and 2037, the

Project is expected to generate 108,310 person-years of employment. As well, the Project will produce \$18.5 billion of fiscal benefits over the same period.

Table 8. Summary of the Economic and Fiscal Impacts of the TMEP (cumulative effects, 2012-2037)

	Atlantic Canada	Quebec	Ontario	Other Prairies	Alberta	British Columbia	Territories	Canada
	Using Minimum Operational Effects and the Base Case for Higher Netbacks							
Employment effects (person-years)	617	3,372	11,004	2,124	24,926	66,132	135	108,310
Project development	289	1,402	4,659	1,099	14,632	35,864	92	58,037
Project operations	327	1,970	6,345	1,025	10,293	30,269	43	50,273
GDP effects (millions of 2012\$)	46.0	285.8	951.5	185.5	5,360.5	11,329.2	15.7	18,174.2
Project development	21.7	120.1	408.6	98.5	1,402.4	2,789.1	11.2	4,851.7
Project operations	24.3	165.6	542.9	87.0	3,958.1	8,540.2	4.5	13,322.5
Fiscal Impact (millions of 2012\$)	564.0	1,920.1	3,277.7	1,030.5	9,545.8	2,118.0	26.6	18,482.7
Project development	48.2	166.2	306.6	57.5	239.1	394.3	2.2	1,214.1
Project operations	104.0	352.1	620.1	111.1	437.8	918.8	4.7	2,548.6
Higher netbacks	411.8	1,401.8	2,351.0	861.9	8,868.9	804.9	19.7	14,720.0

Source: The Conference Board of Canada.

Appendix A: Resume and Professional Qualifications of Glen Hodgson

Employment History

The Conference Board of Canada

Senior Vice-President and Chief Economist – November 2006 to present

Vice-President and Chief Economist – September 2004-November 2006

- Member of executive team.
- Lead a management group of seven directors and forty staff.
- Responsible for economic forecasting of the Canadian, provincial, metropolitan, U.S. and international economies, and for numerous economic analysis contracts annually.
- Also responsible for international development projects delivered for clients.
- Lead spokesman for the Conference Board via presentations, articles and media.

Export Development Canada (EDC)

Vice-President and Deputy Chief Economist – October 2001 to September 2004

- Co-led a group of approx. 55 staff (with six team leaders) analyzing and forecasting major global and Canadian economic trends and assessing economic, political, environmental and other international business risks.
- A lead spokesman for EDC via presentations, articles and media.

Vice-President, Policy and International Relations – 2000-2001

Director, Government and International Relations – 1998-2000

Director, Government Relations and Corporate Policy – 1994-1998

- Reporting to the President, directed a policy staff that grew progressively to eighteen.
- Responsible for many facets of EDC's business strategy and policy, and related domestic and international legislation and regulation.
- Managed the corporation's relationship with its stakeholders in Canada and internationally.

Department of Finance, Government of Canada

Senior Chief, International Finance and Development Division -- 1993-1994

- Co-directed a group of twenty responsible for the Canadian Government's international financial priorities and interests (G-7 financial issues, export credits, debt rescheduling, foreign aid policy, multilateral financial institutions, etc.)
- Provided Budget advice on national defense, foreign aid and international finance.

Departmental Secretary, Deputy Minister's Office -- 1991-92

- Acted as Executive Assistant to the Deputy while directing a staff of 12.
- Helped to manage the Department's relationship with the Minister of Finance, his staff and with other departments and agencies
- Coordinated multiple Federal Budgets; developed the Department's Corporate Plan.

Chief, International Development Finance -- 1988-91

- Directed a group of seven responsible for: Canada's membership in the IMF, World Bank, EBRD and the other regional development banks; foreign aid budgetary and policy issues; and export financing issues.

Economist, International Programs Division -- 1982-84

- Responsible for country risk analysis, debt rescheduling, export and development financing.

International Monetary Fund

Advisor/Assistant to the Executive Director for Canada, Ireland and the Caribbean on the Board of Directors -- 1984-88

- Advisor to the Canadian Executive Director on IMF lending, policy and administration.
- Represented the Executive Director in IMF Board discussions and on country missions.

Education

Ph.D. Candidate in Economics (ABD), McGill University, 1981

M.A. in Economics, McGill University, 1981

B.A. (Honours), University of Manitoba, 1978

Publications – Over 200 publications; full list available separately upon request.

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Appendix C: Input/Output Models

Input/output (I/O) models are economic models that describe how goods and services flow through an economy. There are two key elements in an I/O model, geography and commodities. Commodities represent particular goods or services, and the I/O model encompasses information regarding which industries produce these commodities and how they are used; either as inputs into other industries, consumed domestically, or exported. The geography element tracks where production takes place, and how different commodities are traded across provincial and international boundaries.

One of the uses for I/O models is to calculate the economic impacts associated with different types of economic activity. Because the model describes how the supply chains work, we are able to “shock” the I/O model and observe how the impact feeds through the economy. “Shocks” are inputs into the model and can take different forms. For example, the effects of the TMEP’s operations in this report are measured using a “gross output” or revenue shock. Essentially we increase the revenues of the oil pipeline industry by a certain amount and observe the results. The shock associated with the development of the TMEP was implemented in a different way. We increased the demand for different types of commodities that will be used in the project, such as pipe, tanks, and construction labour.

The I/O model used in this analysis is produced and maintained by Statistics Canada. Statistics Canada updates the I/O tables used by the model annually as parts of the Canadian System of National Accounts (CSNA). The CSNA is a system of integrated statistical accounts consisting of four main components: input-output accounts (national and provincial), income and expenditure accounts (national and provincial), balance of payments and the financial and wealth accounts. The I/O tables cover all economic activities conducted in the market economies of each province and territory, encompassing persons, businesses, government and non-governmental (non-profit) organizations, and entities outside its jurisdiction that give rise to imports or exports (inter-provincially or internationally).

To compile the I/O accounts, Statistics Canada obtains source data from all relevant surveys as well as administrative sources such as tax records, professional and industry organizations, and non-government institutions every year for each province and territory. In the process of preparing statistical estimates, data from various sources are confronted, analysed by subject-matter experts and used to compile estimates that are consistent with all other estimates in the System and provide a valid and coherent statistical picture of the subject matter. Consistency is a key feature of the statistics produced by the Accounts.

The result is that Statistics Canada’s I/O model is the most comprehensive description of how economic activity flows through the Canadian economy. The model describes the flows for more than 700 different commodities and 300 different industries across all provinces and territories. The model solutions include both “open” results, which summarize the direct and indirect impacts of a shock, and “closed” results, which summarize the combined direct, indirect, and induced impacts. Key outputs from the model that can be used to describe the results of a shock include employment, GDP, labour income,

gross output, and international trade. The results described here used Statistics Canada's 2009 I/O model, the most current available at the time of the analysis.

Key Assumptions

Although I/O models can be useful tools for understanding the economic impacts associated with particular projects, it is also important to understand that a number of assumptions are embedded in the results. The following section discusses some of these major assumptions.

Fixed Production Patterns

The tables that underlay the I/O model are based on the supply chain relationship in the Canadian economy at a fixed point in time; in this particular case 2009. As such, the model results do not factor in how things like changes in relative prices for different inputs, productivity, and technology can impact supply chains over time. As well, trade flows do not take into account external factors, such as changes in exchange rates, the emergence of new trading partners, or changes in trade policy.

This assumption is also pertinent in the discussion of the induced effects. The model assumes fixed consumption and savings patterns for consumers over time. In reality, spending and saving patterns are influenced by a variety of factors including economic circumstances and demographics. As a result, the farther you look forward in time using an I/O model the less likely it is that the model accurately describes future economic activity.

Lack of Supply Constraints

Another key assumption embedded in the I/O results is that there are no supply constraints on the economy. This means that the model results assume that all of the inputs needed to conduct the shock are readily available, and that the modelled project will not be competing with others for resources. In reality, if a project is of significant size it may lead to higher prices and/or wages as the new project will draw resources away from other activities.

This is particularly pertinent in the discussion of the induced effects. The induced effects assume that the people employed as a result of the direct and indirect effects would otherwise be unemployed, but at least some of them would likely find other employment, though their pay may be less. Thus, including the induced effects likely overstates the total economic effects; however, not including them would definitely understand the total economic effects.

Industry Homogeneity

I/O models typically assume that all firms within an industry are characterized by a common production process. In practical terms, the model reflects an industry average, thus Trans Mountain's operations and business practices are assumed to be the same as other oil pipeline operators such as Enbridge or TransCanada. If Trans Mountain's production structure is significantly different from the industry average than the economic impact results may be different from what is characterized here.

Industry homogeneity also assumes a constant return to scale for all businesses in an industry; in other words the model assumes a linear relationship between inputs and outputs. In practice, many industries experience at least some economies of scale, which means there is an optimal scale at which businesses should operate. Thus, in the model each extra dollar of revenue or investment is assumed to result in the same relative increase in economic activity. In reality, that may not be strictly true.

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APPENDIX H

VOLUME 3B, SECTION 1.5, CORRECTION TO ABORIGINAL COMMUNITY PROFILES

1.5.2.4.8 Leq'a:mel First Nation

Leq'a:mel First Nation is a land-based community that was identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project. Leq'a:mel First Nation is a member of the Stó:lō Nation.

Trans Mountain provided the Project notification letter to Leq'a:mel First Nation on May 29, 2012. Trans Mountain and Leq'a:mel First Nation held their initial Project meeting on January 22, 2013, to share Project-related information, to determine the community's interest, and to develop a process for their involvement in Project activities. A series of subsequent meetings in-person, over the phone, and via email dialogue have taken place to date and a confidential LOU was executed March 11, 2013.

Leq'a:mel First Nation conducted a TERA-facilitated TLU study, participated in environmental field studies for the collection of TEK, and participated in socio-economic research throughout 2013. The results of these engagement activities as well as Trans Mountain's response to any issues raised through these activities are detailed in Appendix A, and Volumes 5A and 5D of this application.

Trans Mountain has continued to share Project information with Leq'a:mel First Nation and will continue to do so as the Project evolves.

1.5.2.4.9 Matsqui First Nation

Matsqui First Nation is a land-based community that was identified by Trans Mountain as a community that will have an interest in the Project and may have Aboriginal interests potentially affected by the Project. Matsqui First Nation is an independent First Nation, and is affiliated with Stó:lō Nation for the provision of services. Matsqui First Nation has a long-standing relationship with KMC as the existing TMPL system runs through the Matsqui Main Reserve #2, in which members of the Matsqui First Nation reside.

Trans Mountain provided the Project notification letter to Matsqui First Nation on May 29, 2012. Matsqui First Nation has chosen to address outstanding matters associated with the TMPL system prior to engaging in Project discussions. Led by Ian Anderson, President, KMC, a Project engagement meeting took place between Trans Mountain and Matsqui First Nation on January 8, 2013.

Matsqui First Nation has requested no further information about the Project be provided at this time unless incidental to addressing the matters of the existing TMPL system. When Matsqui First Nation determines that it is appropriate to do so, Trans Mountain is prepared to share further Project information.

1.5.2.4.10 Musqueam Indian Band

The Musqueam Indian Band is an inlet community that was identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain provided the Project notification letter to Musqueam Indian Band on May 29, 2012. Led by Ian Anderson, President, KMC, Trans Mountain and Musqueam Indian Band held their initial Project meeting on October 1, 2012 to share Project-related information, to

determine the community's interest in engagement, and to develop a process for involvement in Project activities.

In January 2013, Musqueam Indian Band elected a new Chief and Council. Trans Mountain sent a letter on January 18, 2013, expressing congratulations and an interest in continued engagement. On April 5, 2013, Trans Mountain invited Musqueam Indian Band to participate in a Marine Tanker Terminal Hazard Identification Workshop and on April 29, 2013, three Musqueam Indian Band representatives attended for part of the workshop. A draft LOU was shared with the community on May 1, 2013. On May 9, 2013, Musqueam Indian Band was invited to attend a Burrard Inlet Marine Workshop. Musqueam Indian Band advised that no one was available to attend, but requested to be kept informed of other workshops. Trans Mountain introduced Musqueam Indian Band to TERA on May 14, 2013, to discuss the opportunity for TLU and TMRU studies. On June 19, 2013, Musqueam Indian Band was invited to participate in Central Burrard Inlet Westridge Terminal Emergency Preparedness Study but did not participate. Musqueam Indian Band sent a letter to Ian Anderson, President, KMC, dated August 2, 2013, formally rejecting an offer of a LOU. The results of engagement activity to date, as well as Trans Mountain's response to any issues raised through these activities are detailed in Appendix A of this volume.

Trans Mountain has continued to share Project information with Musqueam Indian Band and will continue to do so as the Project evolves.

1.5.2.4.11 Peters Band

Peters Band is a land-based community that was identified by Trans Mountain as a community that will have an interest in the Project and have Aboriginal interests potentially affected by the Project. Peters Band is a member of the Tit Tribe. Peters Band has a long-standing relationship with KMC as the existing TMPL system runs through the Peters Reserve #1 and Peters Reserve #1a, two reserves in which members of the Peters Band reside.

Trans Mountain provided the Project notification letter to Peters Band on May 29, 2012. Trans Mountain provided information for consideration to Peters Band and has proposed both a capacity funding agreement for consideration of the Project, and a settlement for indenture and legacy issues associated with the TMPL system. To date, Peters Band has not engaged with the Project in a substantial way. Interest in participating in a TLU study is to be determined by

APPENDIX I

VOLUME 3B, APPENDIX A, CORRECTION TO ABORIGINAL ENGAGEMENT LOGS

APPENDIX A-1

**ABORIGINAL COMMUNITIES LOCATED IN THE
EDMONTON TO ALBERTA/BRITISH COLUMBIA BORDER REGION**

1-17 Sunchild First Nation

APPENDIX A-1-17
SUNCHILD FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
04/12/2012	Letter - Outgoing	Chief Stanley Lagrelle	Ian Anderson (KMC)	Team member sent a letter to Chief S. Lagrelle that notified Sunchild First Nation (SCFN) of the Trans Mountain Expansion Project (the Project). Team member stated that the Project was expected to be completed in 2017; during the interim period, KMC was committed to meaningfully engaging with Aboriginal communities along the Project route. KMC recognized the integral role of Aboriginal groups and understood that Aboriginal interests, responsibilities and concerns were critical to the Project's planning. Team member provided the preliminary project scope and stated that further engagement efforts were forthcoming. Also attached: <ul style="list-style-type: none"> • Project Backgrounder • Project Media Release 	None
5/29/2012	Letter - Outgoing	Chief Stanley Lagrelle	Ian Anderson (KMC)	Team member mailed follow-up notification letter regarding preliminary scope of Project, attachments (Project System Map and Project Schedule) and regulatory requirements to Chief and Council.	None
6/25/2012	Email- Outgoing	Doreen Daychief (Consultation Manager)	Mallory Bjella (TERA)	Team member phoned D. Daychief, the Consultation Manager for SCFN (SCFN) to arrange an introductory meeting for the Project, but was unable to establish contact. Team member emailed D. Daychief requesting a meeting with Chief S. Lagrelle and Council on June 27, 2012 in Rocky Mountain House.	None
6/26/2012	Email- Incoming	Doreen Daychief (Consultation Manager)	Mallory Bjella (TERA)	D. Daychief emailed team member to notify that SCFN was involved in community activities for the week of June 27, 2012 and could not meet.	None
7/12/2012	Email- Outgoing	Doreen Daychief (Consultation Manager)	Angelina Silver (TERA)	Team member emailed D. Daychief to schedule an introductory Project meeting with Kinder Morgan (KMC) representatives and requested a return email or phone call. Team member provided contact information.	None
7/30/2012	Phone - Attempt	Doreen Daychief (Consultation Manager)	Angelina Silver (TERA)	Team member phoned D. Daychief and left a voicemail requesting a return call to schedule introductory Project meeting with KMC representatives. D. Daychief phoned team member and proposed August 8, 2012 for an introductory Project meeting at the SCFN band office. Team member informed D. Daychief that a firm time would be emailed after discussion with KMC representatives. Team member emailed D. Daychief later in the day to confirm the meeting on August 8, 2012.	None
7/31/2012	Letter - Outgoing	Chief Stanley Lagrelle	Gary Youngman (KMC)	Team member sent Chief S. Lagrelle a letter to notify SCFN of the field study work beginning in August, 2012. As KMC had not yet had the opportunity to engage Chief S. Lagrelle, the letter acted as an invitation to participate in the studies and engage in dialogue about the Project. Team member requested that S. Lagrelle contact KMC to receive Project information and to discuss how the Community can best participate in the field study program.	None
8/1/2012	Email- Outgoing	Doreen Daychief (Consultation Manager)	Angelina Silver (TERA)	Team member emailed D. Daychief regarding map information requests and attached a GIS Pipeline Data request form to be filled out and sent back.	None
8/8/2012	In-Person	Paul Bigchild (Councillor), Chief Stanley Lagrelle	Regan Schlecker (KMC), Paul Anderson (TERA), Jeff Smith (KMC), Kristina Shrestha (TERA)	Team members met with P. Bigchild and S. Lagrelle. Team member introduced the Project, the Traditional Ecological Knowledge (TEK) and Traditional Land Use (TLU) programs, and TERA's role in environmental studies. Team member announced upcoming aquatics (August 15-28, 2012), vegetation (August 17-21, 2012) and wetlands (August 17-21, 2012) studies beginning the following week in Stony Plain, Entwistle, and Edson. Chief S. Lagrelle concluded that SCFN would like to participate in the TEK program and the studies beginning the following week. Concerns: <ul style="list-style-type: none"> • S. Lagrelle expressed water quality concerns and believes that the low quality of water in the area is a result of the heavy oil and gas presence on their reserve. Team member explained that for TEK Aquatic studies, they do conduct water quality testing but for watercourses that are along the line which is Crown land. • Chief S. Lagrelle concluded that SCFN would like to participate in the TEK program and the studies starting the following week. 	Water Quantity and Quality
8/10/2012	Email- Outgoing	Paul Bigchild (Councillor)	Chanda Drebet (TERA)	Team member emailed P. Bigchild the TEK biophysical study dates, a request for participant information, and stating the requirements for individual involvement in the studies.	None
8/13/2012	Email- Outgoing	Chief Stanley Lagrelle	Chanda Drebet (TERA)	Team member emailed Chief S. Lagrelle with logistics and TERA facilitator contact information for the participant representing SCFN on the upcoming TEM study (August 15-18,2012)	None
8/13/2012	Email- Outgoing	Chief Stanley Lagrelle	Chanda Drebet (TERA)	Team member emailed Chief S. Lagrelle a form to fill out with participant information for the TEK biophysical studies for the Project and inquired about logistics.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
8/15/2012	In-Person	Community member	Aaron Curtis (TERA)	TEM crew #1 conducted a Terrestrial Ecosystem Mapping (TEM) survey on August 15-18, 2012. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - cumulative impacts to wildlife (declining populations); - noise pollution and impact on wildlife; - eagle nesting sites; and - pipeline breaks. Mitigation measures reviewed: - pipe stringing, leaving gaps in the pipe and wildlife bridges; - avoidance of breeding seasons, reducing traffic and no idling and running equipment when not in use; - wildlife studies will identify nest sites; and - geotechnical surveys and pipeline integrity. Unresolved concerns/requests for follow up: - none	Terrestrial - Traditional Land Use, Terrestrial - Land Spills - Environmental Impact, Terrestrial-Water Quality/Quantity
8/15/2012	In-Person	Community member	Michelle Langfeldt (TERA), Brett Franks (TERA)	Wetlands crew #1 conducted a Wetlands survey on August 15- 21, 2012. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - wet terrain/muskeg; - sweet grass will be disturbed by construction; and - bear habitat. Mitigation measures reviewed: - winter construction soil handling methods; - harvesting sweet grass prior to construction; and - studies will include bear den sweeps along the Project corridor. Unresolved concerns/requests for follow up: - none	Terrestrial - Soils, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Water bodies, Terrestrial - Wetlands
8/16/2012	In-Person	Community member	Emily Boiteau (TERA)	TEM crew #1 conducted a TEM study on August 16 - 21, 2012. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - cumulative impacts to wildlife (declining populations); - noise pollution and impact on wildlife; - eagle nesting sites; and - pipeline breaks Mitigative measures reviewed: - pipe stringing, leaving gaps in the pipe and wildlife bridges; - avoidance of breeding seasons, reducing traffic and no idling and running equipment when not in use; - wildlife studies will identify nest sites; and - geotechnical surveys and pipeline integrity. Unresolved concerns/requests for follow up: - none	Environment - Cumulative Effects, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Birds, Terrestrial - Mammals, Terrestrial - Traditional Land Use, Terrestrial - Land Spills - Environmental Impact, Terrestrial - Land Spills - Safety, Terrestrial-Water Quality/Quantity
8/28/2012	Phone - Attempt	Paul Bigchild (Councillor)	Paul Anderson (TERA)	Team Member phoned Community Member to confirm a meeting to discuss budgets for TLU study scheduled for August 28, 2012 in Rocky Mountain House. No answer.	None
9/5/2012	Phone - Attempt	Chief Stanley Lagrelle	Jeff Smith (KMC)	Team member left message for Chief S. Lagrelle regarding meeting to discuss the Project.	None
9/13/2012	Phone - Attempt	Chief Stanley Lagrelle	Jeff Smith (KMC)	Team member left message for Chief S. Lagrelle regarding a meeting to discuss the Project.	None
9/17/2012	Email- Outgoing	Caroline Bigchild (Chief and Council Secretary)	Angelina Silver (TERA)	Team member emailed C. Bigchild, the Chief and Council Secretary for SCFN, to schedule a formal Chief and Council presentation with SCFN and requested a return communication.	None
9/20/2012	Email- Incoming	Caroline Bigchild (Chief and Council Secretary)	Angelina Silver (TERA)	C. Bigchild emailed team member and requested potential dates for a meeting with Chief and Council to discuss the Project.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
9/20/2012	Email- Outgoing	Chief Stanley Lagrelle	Chanda Drebet (TERA)	Team member emailed Chief S. Lagrelle to notify SCFN of an upcoming Aerial Water Bird Survey scheduled September 28, 2012. Team member requested one SCFN participant and attached a work participation form for the study.	None
9/24/2012	Email- Outgoing	Chief Stanley Lagrelle	Lowa Beebe (TERA)	Team member contacted Chief S. Lagrelle inviting participation in an aerial waterbird study scheduled for September 28, 2012.	None
9/25/2012	Phone - Outgoing	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	Team member and D. Daychief discussed Capacity funding guidelines and agenda for September 27, 2012 meeting. D. Daychief requested that lunch be brought in.	
9/25/2012	Email- Outgoing	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	Team member emailed Capacity Funding Guidelines to D. Daychief.	
9/25/2012	Phone - Outgoing	Paul Bigchild (Councillor)	Jeff Smith (KMC)	Team member called P. Bigchild to arrange a meeting on September 27, 2012 and discussed agenda items.	None
9/26/2012	Email- Outgoing	Chief Stanley Lagrelle	Lowa Beebe (TERA)	Chief S. Lagrelle emailed team member and informed her that a participant was available for the aerial wildlife study scheduled for September 28, 2012. Team member emailed Chief S. Lagrelle to request contact information for the participant for the aerial wildlife study on September 28, 2012.	None
9/26/2012	Email- Incoming	Caroline Bigchild (Chief and Council Secretary)	Angelina Silver (TERA)	Team member emailed C. Bigchild and proposed a date from October 4 – October 9, 2012 for a meeting with Chief and Council.	None
9/27/2012	In-Person	Doreen Daychief (Consultation Manager) Paul Bigchild (Councillor), Robert Whitecalf (Councillor), R. Chapman	Jeff Smith (KMC)	Team member met with D. Daychief, P. Bigchild, R. Chapman, and R. Whitecalf and introduced the Project and the environmental programs The group had questions regarding the environmental field studies and employment opportunities .It was agreed that a meeting with Chief and Council should be scheduled for the second or third week of October 2012, and that a full presentation would be required. Team member provided the Project Update Newsletter, the Field Studies Brochure and copies of maps.	Group expressed a concern that industry was always making promises and not delivering.
9/28/2012	In-Person	Community member	Mallory Bjella (TERA)	Wildlife crew #1 conducted a Wildlife overflight from September 28-29, 2012. One participant from Sunchild First Nation participated. No concerns were identified by participants on this survey.	None
10/2/2012	Email- Outgoing	Caroline Bigchild (Chief and Council Secretary)	Lowa Beebe (TERA)	Team member emailed C. Bigchild requesting potential dates for an introductory Project meeting with Chief and Council.	None
10/3/2012	Email- Outgoing	Caroline Bigchild (Chief and Council Secretary)	Lowa Beebe (TERA)	C. Bigchild emailed team member confirming the meeting with Chief and Council on October 9, 2012 Team member emailed C. Bigchild and requested an alternate date for the meeting scheduled for October 9, 2012. Team member proposed October 12, 2012 for the meeting with Chief and Council.	None
10/9/2012	Email- Outgoing	Caroline Bigchild (Chief and Council Secretary)	Angelina Silver (TERA)	Team member emailed C. Bigchild and requested a list of potential dates for a meeting with Chief and Council to discuss the Project. C. Bigchild emailed team member and acknowledged receipt of email sent on October 3, 2012 and informed team member that a response regarding the date for meeting with Chief and Council would be sent after confirming with Chief S. Lagrelle.	None
10/9/2012	Email- Outgoing	Chief Stanley Lagrelle	Lowa Beebe (TERA)	Team member contacted Chief S. Lagrelle and invited participation for an aquatics study scheduled for October 22-29, 2012.	None
10/9/2012	Email- Outgoing	Chief Stanley Lagrelle	Lowa Beebe (TERA)	Team member emailed Chief S. Lagrelle logistic information for the Aerial Bird study October 22-29, 2012.	None
10/17/2012	Email- Outgoing	Caroline Bigchild (Chief and Council Secretary)	Angelina Silver (TERA)	Team member emailed C. Bigchild and requested Band Office contact information and potential dates for a meeting with Chief and Council.	None
10/18/2012	Email- Outgoing	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	Team member sent email to D. Daychief regarding scheduling an upcoming meeting Team member emailed D. Daychief as a follow up to meeting on September 27, 2012. Team member also requested a meeting with Chief and Council to formally introduce the Project and suggested the week of November 5, 2012.	None
10/19/2012	Email- Outgoing	Chief Stanley Lagrelle	Lowa Beebe (TERA)	Team member contacted Chief S. Lagrelle to confirm meeting place on October 22, 2012 at Lakeview Inn in Edson AB.	None
10/22/2012	Email- Incoming	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	D. Daychief emailed team member to confirm a meeting at the band office on either November 5 or 9, 2012, or in Edmonton on November 6, 7, or 8, 2012. D. Daychief noted that SCFN had prepared the proposal and were waiting on Chief and Council to provide comments.	None
10/22/2012	Email- Incoming	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	D. Daychief emailed team member regarding finalizing dates for meeting with Chief S. Lagrelle.	None
10/22/2012	Email- Outgoing	Chief Stanley Lagrelle	Lowa Beebe (TERA)	Team member contacted Chief S. Lagrelle to confirm that a participant would meet the TEK facilitator on October 22, 2012 for the aquatics study on October 22-28, 2012.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/22/2012	In-Person	Community member	Justyna Matracki (TERA), Michelle Langfeldt (TERA)	<p>Aquatics crew #1 conducted an Aquatics study from October 22-28, 2012. One participant from Sunchild First Nation participated.</p> <p>A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - drying out of small drainages that contain fish and used as a water source for wildlife; - meadows that contain medicinal plants; - salvageable timber; - diamond willow fungus; - impacts to deer habitat during construction; - impacts to hunting and trapping; - diamond willow fungus on right-of-way; and - introduction of invasive species to the right-of-way. <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - fish salvage; - harvest medicinal and other useable plants prior to construction; - further studies will be conducted addressing wildlife concerns; - routing criteria and alignment with existing right-of-way to the extent feasible; and - reclamation and weed control measures. <p>Unresolved concerns/requests for follow up:</p> <ul style="list-style-type: none"> - community harvest salvageable timber. 	Environment - Cumulative Effects, Terrestrial - Freshwater Fish, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Water bodies
10/23/2012	Email-Outgoing	Chief Stanley Lagrelle	Angelina Silver (TERA)	<p>Team member emailed Chief S. Lagrelle to request available dates for a meeting with Chief and Council to formally introduce the proposed Project and discuss a TLU study. Team member suggested Chief S. Lagrelle November 1, 2012 for a possible meeting date.</p> <p>C. Bigchild emailed team member and proposed November 5, 2012 or November 6, 2012 for the meeting with Chief and Council.</p>	None
10/25/2012	Email-Outgoing	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	Team member emailed D. Daychief to ask if a date for the meeting with Chief and Council was finalized for either November 6 or 7, 2012.	None
10/25/2012	Email-Outgoing	Caroline Bigchild (Chief and Council Secretary)	Angelina Silver (TERA)	Team member emailed C. Bigchild and proposed November 6, 2012 to meet with Chief and Council and formally introduce the Project. Team member requested attendance numbers (including Elders) and a time for the meeting.	None
10/26/2012	Phone – Attempt Email – Incoming and outgoing	Chief Stanley Lagrelle	Angelina Silver (TERA)	<p>Chief S. Lagrelle phoned team member and proposed October 30, 2012 or November 2, 2012 for the introductory meeting and provided contact information for a return call.</p> <p>Team member phoned Chief S. Lagrelle and C. Bigchild and scheduled the introductory Project meeting for November 2, 2012 and requested attendance information and technology options available at the SCFN Band Office.</p> <p>C. Bigchild emailed team member and confirmed November 2, 2012 for the meeting with Chief and Council and informed team member that TLU participants would be present.</p> <p>Team member emailed C. Bigchild to confirm receipt of previous email and to confirm the date of the meeting as November 2, 2012.</p>	None
11/1/2012	Email-Incoming	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	D. Daychief emailed team member to inform him that they would be in Edmonton on November 6 and 7, 2012 if team member was available for a meeting.	None
11/2/2012	In-Person	Paul Bigchild (Councillor) Jonathon Frencheater (Councillor)	Jeff Smith (KMC)	Team members met with band Councillors P. Bigchild and J. Frencheater. The Chief was unable to attend. The group decided that the next meeting would take place in late November 2012, pending confirmation by P. Bigchild.	None
11/5/2012	Phone - Incoming	Chief Stanley Lagrelle	Lowa Beebe (TERA)	Chief S. Lagrelle phoned team member and requested details of the meeting on Friday, November 2, 2012. Team member informed him that Economic Development Officer from SCFN had attended the meeting and requested that Chief S. Lagrelle follow-up with team lead to get the details of the meeting and schedule the upcoming map review.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/6/2012	Email- Outgoing	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	Team member emailed D. Daychief to say the missed meeting on November 2, 2012 was set-up with C. Bigchild and Chief S. Lagrelle. He noted that a team member from TERA set it up and another team member planned to present information on the Project after which TERA would have a meeting about the TLU studies. Team member said they were unable to meet on November 14, 2012 and suggested either November 21 or 22, 2012.	None
11/6/2012	Phone - Attempt	Doreen Daychief (Consultation Manager)	Paul Anderson (TERA)	Team member called D. Daychief and left a voicemail with reception for meeting arrangements for November 13, 2012. Team member requested a call back to discuss meeting time and location.	None
11/7/2012	Email- Outgoing	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	Team member emailed D. Daychief and asked if Chief and Council reviewed the draft Letter of Understanding and said if they did not have any comments he can get the president of Kinder Morgan to sign it and can bring it to the meeting on November 21, 2012. Team member requested a time and place for the meeting D. Daychief emailed to say they would meet in Edmonton on the morning of November 21, 2012 and that she would email team member the correct address as soon as it is confirmed.	None
11/8/2012	Email- Incoming	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	D. Daychief emailed team member and requested a copy of the draft Letter of Understanding (LOU).	None
11/9/2012	Email- Outgoing	Caroline Bigchild (Chief and Council Secretary)	Angelina Silver (TERA)	Team member emailed C. Bigchild to confirm attendance for meeting on November 13, 2012. C. Bigchild confirmed meeting details and attendees list.	None
11/13/2012	Email- Outgoing	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	Team member emailed D. Daychief to confirm the time and place for the meeting on November 21, 2012 in Edmonton and noted that he and a KMC team member are planning on attending.	None
11/16/2012	Email- Outgoing	Doreen Daychief (Consultation Manager)	Angelina Silver (TERA)	Team member contacted D. Daychief to reschedule the map review meeting and confirm the meeting scheduled for November 21, 2012.	None
11/21/2012	In-Person	Chief Stanley Lagrelle	Regan Schlecker (KMC), Jeff Smith (KMC)	Team members met with D. Daychief, Chief S. Lagrelle, B. Brisson and J. Frencheater. Team members explained the background of the Project and field studies. SCFN explained that they would like to hold an Open House in January 2013. SCFN has been participating in the field studies and would like to undertake a TLU study. Chief Lagrelle explained that he felt that the funding offered was not acceptable and that a much larger number was expected.	None
1/10/2013	Letter - Outgoing	Chief Stanley Lagrelle	Regan Schlecker (KMC)	Team member sent a letter to S. Lagrelle to notify SCFN of KMC's future plans for the Trans Mountain Pipeline and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited S. Lagrelle to visit the Project's website.	None
1/10/2013	Email- Outgoing	Chief Stanley Lagrelle	Lowa Beebe (TERA)	Team member emailed Chief S. Lagrelle with information regarding the upcoming Aquatics study from February 4-14, 2013 and included a participation form for review.	None
1/16/2013	Email- Outgoing	Chief Stanley Lagrelle	Lowa Beebe (TERA)	Team member emailed Chief S. Lagrelle with information regarding the upcoming Aquatics study from February 4-14, 2013 and included a participation form for review.	None
1/17/2013	Email- Incoming	Doreen Daychief (Consultation Manager)	Lowa Beebe (TERA)	D. Daychief emailed team member requesting an update on the work TERA has done with SCFN.	None
1/22/2013	Email- Incoming	Doreen Daychief (Consultation Manager)	Lowa Beebe (TERA)	Team Member contacted D. Daychief and confirmed the SCFN participant attending the Aquatics study, February 4 – February 14, 2013. D. Daychief requested to know if more than one community member could participate in the study. Team member notified that only one participant was requested at this time.	
1/25/2013	Email- Outgoing	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	Team member emailed D. Daychief to inform her that field programs would be starting in the spring.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
2/6/2013	In-Person	Community member	Brian Bruzzese (TERA), Ian Swan (TERA), Romea Dennis (TERA)	<p>Aquatics crew #1 conducted an Aquatics study from February 6-10, 2013. One participant from Sunchild First Nation participated.</p> <p>A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - a particular watercourse was part of a traditional walking route; - pipeline breaks; - wildlife being unable to use the lake as a water source during construction; - impacts to medicinal plants; - reclamation and restoration effectiveness; - disturbing an "animal highway" along a stream and adjacent wetland; and - salvageable timber. <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - game trails will be left open/gaps left in pipeline and spoil; - timing of construction; - water quality monitoring; - geotechnical surveys and pipeline integrity; - soil survey and reclamation; - open cut and trenchless watercourse crossing methods; and - harvest medicinal and other useable plants prior to construction. <p>Unresolved concerns/requests for follow up:</p> <ul style="list-style-type: none"> - Elder to oversee construction, as well as offset rehabilitation for other areas if construction were to impact an area; and - community harvest salvageable timber. 	Environment - Rare Plants and Communities, Environment - Reclamation, Socio-Econ. Terrestrial - Economic Benefit/Impact, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Forest Health/Timber, Terrestrial - Mammals, Terrestrial - Soils, Terrestrial - Traditional Land Use, Terrestrial - Water bodies, Terrestrial - Land Spills - Environmental Impact, Terrestrial-Water Quality/Quantity
2/27/2013	Email-Outgoing	Doreen Daychief (Consultation Manager)	Lowa Beebe (TERA)	Team member emailed D. Daychief inviting a SCFN community member to participate in a Winter Wildlife study from March 5-11, 2013.	None
3/1/2013	Email-Outgoing	Doreen Daychief (Consultation Manager)	Lowa Beebe (TERA)	Team member emailed D. Daychief, enquiring whether a SCFN community member would participate in a Winter Wildlife study scheduled for March 5-11, 2013. Team member attached the Participation form for the study.	None
3/1/2013	Email-Outgoing	Doreen Daychief (Consultation Manager)	Lowa Beebe (TERA)	Team member emailed D. Daychief inviting a SCFN community member to participate in a Winter Wildlife study scheduled for March 5-11, 2013.	None
3/5/2013	In-Person	Community member	Michelle Langfeldt (TERA), Chelsea Clarke (TERA), Brad Lapham (TERA)	<p>Wildlife crew #1 conducted a Wildlife study from March 5-8, 2013. One participant from Sunchild First Nation participated.</p> <p>A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - impacts to medicinal plants; -construction might restrict access to the site; - disruption of a game trail and watercourse crossed by the Project flowing to a spring; <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - reclamation and replanting of native seeds and grasses; - routing along existing disturbances where possible; and - Crossing methods, water quality monitoring and reclamation. <p>Unresolved concerns/request for follow up:</p> <ul style="list-style-type: none"> - Project corridor be routed farther north or south of this trail to avoid interfering with the watercourse. 	Environment - Rare Plants and Communities, Environment - Reclamation, Terrestrial - Traditional Land Use, Terrestrial - Water bodies, Terrestrial-Water Quality/Quantity
3/22/2013	Letter - Outgoing	Jonathan Frencheater (Councillor)	Gary Youngman (KMC)	Team Member mailed J. Frencheater a letter notifying of permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). These permits would be filed with the National Energy Board (NEB) following a regulatory review and public hearing process (projected for completion in 2015).	None
3/27/2013	Email-Outgoing	Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	Team member emailed D. Daychief and provided copies of the ESA summary document and a list of permits that KMC intends to apply for and asked that the documents to be reviewed by April 19, 2013. Team member informed D. Daychief that two letters were sent to SCFN Chief S. Lagrelle identifying the list of permits KMC intend to apply.	None
3/28/2013	In-Person	Jonathan Frencheater (Councillor)	Jeff Smith (KMC), Georgia Dixon (KMC)	Team member met with J. Frencheater and provided a summary of the Project and summary of correspondence with SCFN regarding the Project. Team member discussed opportunities for SCFN to participate in TLU and TEK studies	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
4/2/2013	Phone- Outgoing Email- Outgoing	Byron Daychief, (Consultation Coordinator)	Angelina Silver (TERA)	Team member called B. Daychief to discuss SCFN's involvement in TEK and TLU studies. B. Daychief was interested in getting other community members involved. Team member will follow-up with an email regarding TLU study information. Team member emailed B. Daychief TEK and TLU study information, as well as field study information.	None
4/19/2013	Email- Outgoing	Byron Daychief, (Consultation Coordinator)	Lowa Beebe (TERA)	Team member emailed B. Daychief to notify SCFN of a tentative aquatics study and attached participation forms for: <ul style="list-style-type: none"> • Aquatics Crew 1: May 3-12, 2013 • Aquatics Crew 2: May 6-15, 2013 • Aquatics Crew 3: May 6-15, 2013 • Aquatics Crew 4: May 6-15, 2013 	None
4/30/2013	Email- Outgoing	Byron Daychief, (Consultation Coordinator)	Angelina Silver (TERA)	Team member emailed B. Daychief to follow-up on a potential TLU study and to schedule a map review. Team member attached TERA's Work and Confidentiality agreements and TLU Workplan.	None
4/30/2013	Phone - Outgoing	Byron Daychief, (Consultation Coordinator)	Angelina Silver (TERA)	Team member phoned B. Daychief and left a voicemail to follow up on TLU study Workplan.	None
5/3/2013	Email- Outgoing	Byron Daychief, (Consultation Coordinator)	Lowa Beebe (TERA)	Team member emailed B. Daychief to update SCFN of the Aquatics study scheduled between May 3-15, 2013. The study was rescheduled for May 7-15, 2013 and consisted of four crews.	None
5/3/2013	Phone - Incoming	Byron Daychief, (Consultation Coordinator)	Lowa Beebe (TERA)	B. Daychief phoned team member and left a voicemail requesting logistics for the upcoming Aquatics studies scheduled for May 7-15, 2013.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/7/2013	In-Person	Community member	Kristina Shrestha (TERA)	<p>Aquatics crew #2 conducted an Aquatics survey from May 7-14, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - continued avoidance of previously identified site; - disturbance to wetlands; - impacts to medicinal plants; - impacts to wildlife (specifically; invertebrates, nests, moose, beaver and calving areas); - pipeline breaks; - hunting sites; - mature forests (over 200 years old); - culverts/drainage ditches; - increased access; - proper reclamation of vegetation and wetlands; and - traplines. <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - avoidance; - winter construction; - timing of construction; - geotechnical surveys and pipeline integrity/emergency shut-off valves; - further field studies to assess invertebrate and wildlife concerns; - beavers harvested by local trappers (October or November to avoid harvesting the young); - emergency shut-off valves; - Spill Contingency Plan; - isolated open-cut crossings; - routing along existing disturbances where possible; - water quality monitoring; - reclamation and re-seeding of native plant species; - hunting blinds; - erosion controls; - trapper consultation; - site mapping to assess the area values to be placed on each side of water crossing; and - rare plant studies conducted in area. <p>Unresolved concerns/requests for follow up:</p> <ul style="list-style-type: none"> - First Nation monitor present pre, during and after construction. Effects; 	<p>Environment - Cumulative Effects, Environment - Rare Plants and Communities, Environment - Reclamation, Marine - Water Quality/Quantity, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Forest Health/Timber, Terrestrial - Mammals, Terrestrial - Soils, Terrestrial - Traditional Land Use, Terrestrial - Water bodies, Terrestrial - Land Spills - Environmental Impact</p>

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/7/2013	In-Person	Community member	Michelle Langfeldt (TERA), Andrew Little (TERA), Camila Castellon (TERA)	<p>Aquatics crew #1 conducted an Aquatics study from May 7-15, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - game trails; - impacts to wolf dens near the right-of-way; - pipeline breaks; - water quality; - water quantity; - fish and fish habitat; - re-planting of native plant species along the right-of-way; and - employment. <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - game trails will be left open/gaps left in pipeline and spoil; - timing of construction; - geotechnical surveys and pipeline integrity; - open cut and trenchless watercourse crossing methods; and - water quality monitoring; and - reclamation and replanting of native seeds and grasses. <p>Unresolved concerns/requests for follow up:</p> <ul style="list-style-type: none"> - none 	<p>Environment - Reclamation, Socio-Econ. Terrestrial - Economic Benefit/Impact, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Land Spills - Environmental Impact</p>
5/7/2013	In-Person	Community member	Chris Menzies (TERA), Rhea Solberg (TERA), Carrie Coe (TERA)	<p>Aquatics crew #6 conducted an Aquatics study from May 7-14, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - impacts to wildlife habitat (specifically; deer rubs, beaver, muskrat, wrens, squirrels, game trails, bear dens) - water quality and quantity; - chemical use on plants; - waste/garbage; - heavy machinery effects on vegetation (specifically; wild carrot); - pipeline leaks; and <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - hire local trappers to trap beavers; - water quality testing; - water crossing methods; - reclamation and re-seeding of native species; - bear den buffer zone; - harvesting plants prior to construction; - pipe stringing, leaving gaps in the pipe and wildlife bridges; and - geotechnical surveys and pipeline integrity. <p>Unresolved concerns/requests for follow up:</p> <ul style="list-style-type: none"> - HDD or beaver dam avoidance as opposed to trapping; - wild carrot be transplanted; and - First Nation monitors during construction. 	<p>Environment - Cumulative Effects, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Freshwater Fish, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Water bodies, Terrestrial - Land Spills - Environmental Impact, Terrestrial-Water Quality/Quantity</p>

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/7/2013	In-Person	Community member	Tess Espey (TERA), Tatiana Chorney (TERA), Christina Norris (TERA)	<p>Aquatics crew #5 conducted an Aquatics study from May 7-14, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - pipeline breaks; - medicinal plant/berry harvesting areas; - spawning areas; - wetlands; - herbicide use on the right-of-way; - water quality and quantity; - stream disturbance; - mature forest; - site/waste clean-up; - impacts to wildlife (moose/habitat, fish, dens, beavers, squirrel nests, frogs and bears, water fowl); - hunting; and - burial sites. <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - geotechnical surveys and pipeline integrity; - reclamation and re-seeding of native species; - soil testing; - water quality monitoring; - isolation/open cut water crossing methods; - First Nation consultation; - local trapper hired to trap beavers; - construction timing; - further wildlife studies conducted to assess wildlife needs; - game trails will be left open/gaps left in pipeline and spoil; - Traditional Land Use Sites Discovery Contingency Plan; - Cumulative Impact Assessment; - rare plant surveys; <p>Unresolved concerns/requests for follow-up:</p> <ul style="list-style-type: none"> - First Nation monitors during construction; - avoid disturbing beaver habitat; - taller berms at well-sites; 	<p>Environment - Cumulative Effects, Environment - Rare Plants and Communities, Environment - Reclamation, Nuisance - Noise, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Freshwater Fish, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Water bodies, Terrestrial - Land Spills - Safety, Terrestrial-Water Quality/Quantity</p>
5/8/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Karla Gervais (TERA)	Team member emailed B. Daychief and notified of an upcoming Archaeology study scheduled for May 13-22, 2013. Two participants were requested and the Participation form was attached.	None
5/8/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Angelina Silver (TERA)	Team member emailed B. Daychief and asked for a return call to discuss a schedule for TLU work.	None
5/9/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Karla Gervais (TERA)	Team member emailed B. Daychief to update SCFN on date changes made to the Archaeology study originally scheduled for May 13-22, 2013. It was rescheduled for May 21-30, 2013.	None
5/10/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator), Doreen Daychief (Consultation Manager)	Jeff Smith (KMC)	Team member emailed B. Daychief and D. Daychief to obtain confirmation that SCFN participation in field studies had been organized by TERA Environmental Consultants.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/11/2013	In-Person	Community member	Chris Menzies (TERA), Carrie Coe (TERA), Caitlin Alton (TERA)	Aquatics crew #7 conducted an Aquatics study from May 11-14, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - soil reclamation; - vegetation; - rare plants; - medicinal plants (flowering grass); and - wildlife habitat (deer, ducks, birds and beaver). Mitigation measures reviewed: - top soil salvage and transplantation; - reclamation and re-seeding of native species; - conduct nest sweeps to identify any active nests; - pipe stringing, leaving gaps in the pipe and wildlife bridges; and - hire local trappers to trap beaver. Unresolved concerns/requests for follow up: - First Nations to be consulted for transplantation of flowering grass if identified near the right-of-way.	Environment - Rare Plants and Communities, Environment - Reclamation, Terrestrial - Soils, Terrestrial - Vegetation/Ecosystem Mapping
5/13/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Karla Gervais (TERA)	Team member emailed B. Daychief and notified SCFN of an upcoming Vegetation study scheduled for May 20-22, 2013. One participant was requested and the Participation form was attached.	None
5/13/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	Team member emailed B. Daychief and notified SCFN of an upcoming TEM study scheduled May 18-27, 2013. Three participants were requested and the Participation form was attached.	None
5/15/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Karla Gervais (TERA)	Team member emailed B. Daychief and provided the tentative schedule for future studies: • TEM study May 18-27, 2013 - 3 participants • Archaeology study May 24-June 1, 2013 - 1 participant • Archaeology study May 22-30, 2013 - 1 participant • Vegetation study May 20-22, 2013 - 1 participant • Aquatics study May 22-29, 2013 - 2 participants • Aquatics study May 22-26, 2013 - 1 participant • Aquatics study June 4-14, 2013 - 2 participants • Wetlands study May 27-June 5, 2013 - 1 participant Team member attached the participation forms for the Aquatics studies.	None
5/18/2013	In-Person	Community member	Caitlin Alton (TERA), Leanne Ross (TERA)	TEM crew #1 conducted a TEM study from May 18-22, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - impacts to medicinal plants); - increased access; - animal population fluctuation caused by increased hunting; and - pipeline leaks. Mitigation measures reviewed: - reclamation and re-seeding of native species; - harvesting plants prior to construction; - hunting blinds; - geotechnical surveys and pipeline integrity/emergency shut-off valves; - routing along existing disturbances where possible; Unresolved concerns/requests for follow up: - none	Environment - Reclamation, Terrestrial - Birds, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial-Water Quality/Quantity, Environment - Cumulative Effects, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Traditional Land Use, Terrestrial - Land Spills - Environmental Impact

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/18/2013	In-Person	Community member	Camila Castellon (TERA), Carrie Coe (TERA)	<p>TEM crew #2 conducted a Terrestrial Ecosystem Mapping (TEM) study from May 18-26, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - impacts to vegetation (specifically; berries and diamond willow fungus and willow stand); - pipeline leaks; - impacts to wildlife (specifically; moose habitat , mineral licks, deer, rabbit and beavers); - wetlands; - reclamation; - water quality; - modification of landscape due to construction; and - willow stands (avoidance). <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - hire local trappers to trap beavers; - water quality testing; - trenchless/open cut water crossing methods; - reclamation and re-seeding of native species; - harvesting plants prior to construction; - pipe stringing, leaving gaps in the pipe and wildlife bridges; and - geotechnical surveys and pipeline integrity. <p>Unresolved concerns/requests for follow up:</p> <ul style="list-style-type: none"> - avoid willow stands. 	<p>Environment - Cumulative Effects, Environment - Rare Plants and Communities, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Forest Health/Timber, Terrestrial - Mammals, Terrestrial - Soils, Terrestrial - Traditional Land Use, Terrestrial - Water bodies, Terrestrial - Land Spills - Environmental Impact, Terrestrial-Water Quality/Quantity</p>
5/18/2013	In-Person	Community member	Kristina Shrestha (TERA), Fin Smith (TERA)	<p>TEM crew #3 conducted a TEM study from May 18-27, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed Mitigative measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - impacts to wildlife (specifically; bear dens, game trails, mineral licks, deer, moose, cougar, eagles, horses and squirrels) - berry harvesting areas; - medicinal plants (juniper); - cumulative impacts to the environment; - trees; - pipeline leaks; - sacred sites; - trapping; <p>Mitigative measures reviewed:</p> <ul style="list-style-type: none"> - bear den Mitigative; - Plant Species and Ecological Communities of Concern Discovery Contingency Plan; - pipe stringing, leaving gaps in the pipeline and wildlife bridges; - wildlife sweeps prior to construction; - timing of construction; - routing along existing disturbances where possible; - conduct nest sweeps to identify any active nests and stick bird nest surveys; - geotechnical surveys and pipeline integrity/emergency shut-off valves; - trappers consulted individually about traplines; <p>Unresolved concerns/requests for follow up:</p> <ul style="list-style-type: none"> - no further development to take place on the north side of the right-of-way; and - remove chicken wire when found to prevent animal injuries. 	<p>Environment - Rare Plants and Communities, Socio-Econ. Terrestrial - Heritage Resources - First Nations, Terrestrial - Birds, Terrestrial - Traditional Land Use, Terrestrial - Land Spills - Environmental Impact</p>
5/22/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Clare Peacock (TERA)	<p>Team member emailed B. Daychief and provided the Participation form for the Wetlands study scheduled May 27-June 5, 2013. The original notice was sent on May 15, 2013.</p>	

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/22/2013	In-Person	Community member	Aaron Curtis (TERA)	Aquatics crew #2 conducted an Aquatics study from May 22-29, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - de-limbing trees poorly a hazard to wildlife in the area; - pipeline breaks; - damage to springs; - fish bearing streams; - impacts to wildlife (specifically; game trails, fox dens and traplines) - construction along steep banks; Mitigation measures reviewed: - geotechnical surveys and pipeline integrity; - Spill Contingency Plan; - water quality monitoring and testing; - pipe stringing, leaving gaps in the pipe and wildlife bridges; - water crossing methods reviewed; - timing of construction; - routing along existing disturbances where possible; and - erosion control measures. Unresolved concerns/requests for follow up: - Clean up and de-limb trees properly; and - Horizontal Directional Drilling (HDD) requested at Hardisty Crossing.	Environment - Cumulative Effects, Environment - Rare Plants and Communities, Environment - Reclamation, Nuisance - Noise, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Freshwater Fish, Terrestrial - Traditional Land Use, Terrestrial - Water bodies, Terrestrial - Land Spills - Environmental Impact, Terrestrial-Water Quality/Quantity
5/22/2013	In-Person	Community member	Amber Lafontaine (TERA)	Aquatics crew #1 conducted an Aquatics survey from May 22-25, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - de-forestation; - impacts to vegetation (specifically; medicinal plants, mature forest and rare plants); - impacts to wildlife (specifically; moose habitat, game trails and hawks); - water crossings; - rare plants; - erosion; Mitigation measures reviewed: - reclamation and re-seeding of native species; - re-forestation; - harvesting plants prior to construction; - pipe stringing, leaving gaps in the pipe and wildlife bridges; - timing of construction; - water crossing methods; - routing along existing disturbances where possible; - re-routing south of existing right-of-way (aquatics crew recommended); - identify nest sites prior to construction; - erosion control measures/sediment capture; Unresolved concerns/requests for follow-up: - FN monitors upon request	Environment - Rare Plants and Communities, Environment - Reclamation, Terrestrial - Birds, Terrestrial - Soils, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial-Water Quality/Quantity

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/22/2013	In-Person	Community member	Brian Bruzzese (TERA), Andrew Little (TERA), Jessica Reimer (TERA)	<p>Archaeology crew #1 conducted an Archaeology study from May 22-June 1, 2013. One participant from participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - archaeological sites; - game trails; - rare plant areas; - medicinal plants; and - sacred site. <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - Heritage Resource Discovery Plan; - pipe stringing, leaving gaps in the pipeline and wildlife bridges; - avoid previously identified rare plant sites; - Plant Species and Ecological Communities of Concern Discovery Contingency Plan; - avoidance of sacred areas; and - further archaeology studies to be conducted to determine significance. <p>Unresolved concerns/requests for follow up:</p> <ul style="list-style-type: none"> - none. 	<p>Environment - Rare Plants and Communities, Socio-Econ. Terrestrial - Heritage Resources - First Nations, Terrestrial - Mammals, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping</p>
5/23/2013	In-Person	Community member	Andrew Little (TERA), Caitlin Alton (TERA)	<p>TEM crew #1 conducted a TEM study from May 23-27, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - the pipeline crossing waterways; - pipeline leaks; - unnatural reclamation (looks like a golf course where pipe was); - impacts to wildlife (specifically; birds/nesting and game trails); - increased sightlines; - impact to vegetation (specifically; medicinal plants and forest health); - proper waste disposal; - hunting; and - increased access. <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - watercourse crossing methods discussed; - water quality testing; - geotechnical surveys and pipeline integrity; - reclamation and reseeding of native seeds and grasses; - timing of construction; - conduct nest sweeps to identify any active nests and stick bird nest surveys; - line of sight breaks; - harvesting plants prior to construction; - restricted access to construction zones; - pipe stringing, leaving gaps in the pipe and wildlife bridges; and - Waste Management and Spill Contingency Plans. <p>Unresolved concerns/requests for follow up:</p> <ul style="list-style-type: none"> - natural reclamation, mulching to allow native growth time to regenerate; and - avoid construction during nesting season in May and June. 	<p>Environment - Cumulative Effects, Environment - Rare Plants and Communities, Environment - Reclamation, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Birds, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Water bodies, Terrestrial - Land Spills - Environmental Impact, Terrestrial-Water Quality/Quantity</p>

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/24/2013	In-Person	Community member	Romea Dennis (TERA), Chelsea Clarke (TERA), Brad Lapham (TERA)	Archaeology crew #1 conducted an Archaeology study from May 24-31, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - archaeological artifacts/sites; and - burial sites. Mitigation measures reviewed: - further archaeology studies to determine significance; - Traditional Land Use Sites Discovery Contingency Plan; Unresolved concerns/requests for follow up: - have a conversation with archivist to determine archaeological potential.	Socio-Econ. Terrestrial - Heritage Resources - First Nations, Terrestrial - Traditional Land Use
5/27/2013	Letter-Outgoing	Jonathan Frencheater (Councillor)	Gary Youngman	Team member mailed J. Frencheater and notified SCFN that the Project Description had been submitted to the NEB. It was explained that this preliminary document was used to signal the intent of TransMountain to submit a comprehensive Facilities Application. The submission of the Project Description follows an NEB decision, released on May 16, 2013, that approved the commercial aspects of the proposed expansion project.	None
5/27/2013	In-Person	Community member	Amber Lafontaine (TERA), Jenna Strang (TERA), Josh Prystae (TERA)	Wetlands crew #1 conducted a Wetlands study from May 27- June 1, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - impacts to red-tailed hawks, coyote dens and migratory birds - berry harvesting area; - medicinal plants; and - proper waste disposal. Mitigation measures reviewed: - conduct nest sweeps to identify any active nests and stick bird nest surveys prior to construction; - harvest plants prior to construction; - routing along existing disturbances where possible; and - reclamation, transplanted and reseeding of native seeds and grasses. Unresolved concerns/requests for follow up: - medicinal plants flagged on the right-of-way; and - an offering be made during a ceremony to ask for forgiveness for the impacts made during construction.	Environment - Cumulative Effects, Environment - Rare Plants and Communities, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Birds, Terrestrial - Soils, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Water bodies, Terrestrial - Wetlands, Terrestrial-Water Quality/Quantity
5/30/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Ermira Kusari (TERA)	Team member emailed B. Daychief and notified SCFN of an upcoming Archaeology study scheduled June 7-13, 2013. One participant was requested and the Participation form was attached.	None
5/30/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	Team member emailed B. Daychief and notified SCFN of an upcoming Archaeology study scheduled June 5-13, 2013. One participant was requested and the Participation form was attached.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/30/2013	In-Person	Community member	Kassia Ward (TERA), Rhea Solberg (TERA)	<p>Aquatics crew #3 conducted an Aquatics study from May 30-June 1, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below.</p> <p>Concerns raised:</p> <ul style="list-style-type: none"> - impacts to wildlife (specifically; beavers, moose, elk, displacement and hawks) - disturbance of medicinal plants such as sweet grass; - declining animal (moose, elk) health due to contaminants in the water; - contamination of water from spills or leaks (Athabasca River pollution); - sediments getting into the water during construction; - impact of watercourse crossing construction on fish; - impact on tree canopy from clearing as it is important habitat; - spot surface spill discovered off right-of-way on a game trail. <p>Mitigation measures reviewed:</p> <ul style="list-style-type: none"> - hire local trapper to harvest beaver; - protection of medicinal plants during construction, reseeded with native species; - open cut with pump/sediment control/fish salvage; - water quality testing; - shut off valves and spill response plans; - reclamation and reseeded of native plants and grasses; - pipe stringing, leaving gaps in the pipeline and wildlife bridges; - geotechnical surveys and pipeline integrity/emergency shut off valves; - timing of construction; - harvesting plants prior to construction; - conduct nest sweeps to identify any active nests and stick bird nest surveys; and - spot surface spill sent to soils for testing and aquatics for water testing. <p>Unresolved concerns/requests for follow up:</p> <ul style="list-style-type: none"> - further vegetation studies; - avoid sacred site identified during survey; - FNs involved in reclamation pre, post and during construction; and - archaeology to conduct further studies to investigate a sacred area's significance. 	<p>Environment - Rare Plants and Communities, Environment - Reclamation, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Birds, Terrestrial - Freshwater Fish, Terrestrial - Soils, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Land Spills - Environmental Impact, Terrestrial-Water Quality/Quantity</p>
6/3/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Jeff Smith (KMC)	<p>Team member emailed B. Daychief and provided the draft LOU and draft Workplan for Chief J. Frencheater to review. Team member informed B. Daychief that the Workplan has been adjusted to reflect June 1, 2013 as the start date. Team member explained that upon approval of the LOU draft by the SCFN Chief, the LOU will be finalized and prepared to be signed by Chief J. Frencheater and the President of KMC. Team member requested a copy of the SCFN traditional territory map.</p>	None
6/4/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Jeff Smith (KMC)	<p>Team member emailed B. Daychief and informed him that a finalized version of the LOU will be sent to for presentation to Chief J. Frencheater to obtain approval signature.</p>	None
6/5/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Jeff Smith (KMC)	<p>Team member emailed B. Daychief the finalized LOU. Team member requested two signed copies of the LOU to be sent back to team member along with two maps of the SCFN traditional territory.</p>	None
6/5/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	<p>Team member emailed B. Daychief and notified SCFN of an upcoming Wildlife study scheduled for June 17-28, 2013. One participant was requested and the Participation form was attached.</p>	None
6/5/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	<p>Team member emailed B. Daychief and notified SCFN of an upcoming Archaeology study scheduled June 10-19, 2013. One participant was requested and the Participation form was attached.</p>	None
6/7/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	<p>Team member emailed B. Daychief and notified SCFN of an upcoming Archaeology study scheduled June 25-July 5, 2013. One participant was requested and the Participation form was attached.</p>	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
6/7/2013	In-Person	Community member	Rhea Solberg (TERA), Jason Linklater (TERA), Kai Peetoom (TERA)	Vegetation crew #1 conducted a Vegetation survey of the Project from June 7-13, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - impacts to deer, bear and moose habitat, game trails, an abandoned badger den and nesting sites; - reclamation of construction area to original state; - berry harvesting areas; and - willow/poplar tree clearing along the right-of-way. Mitigation measures reviewed: - pipe stringing, leaving gaps in the pipeline and wildlife bridges; - reclamation and reseedling of native species; - routing along existing disturbances where possible; - water crossing methods; - timing of construction; and - conduct nest sweeps to identify any active nests. Unresolved concerns/requests for follow up: - den checked prior to construction to ensure it is still unoccupied; - goose berries planted as part of reclamation; and - plant willow trees along the right-of-way as part of reclamation.	Environment - Reclamation, Terrestrial - Birds, Terrestrial - Vegetation/Ecosystem Mapping
6/8/2013	In-Person	Community member	Paul Anderson (TERA), Amber Lafontaine (TERA), Alexandra Cooper (TERA)	Aquatics crew #1 conducted an Aquatics study from June 8-12, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - impacts to game trails; - hazard of deadfall for people and wildlife; and - impacts to medicinal plants and berry harvesting areas). Mitigation measures reviewed: - pipe stringing, leaving gaps in the pipeline and wildlife bridges; - reclamation and re-seeding of native species; and - site clean-up of existing debris and slash caused by construction. Unresolved concerns/requests for follow up: - none.	Environment - Rare Plants and Communities, Socio-Econ. Terrestrial - Heritage Resources - First Nations, Socio-Econ. Terrestrial - Non-Traditional Land and Resource Use, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Land Spills - Safety, Terrestrial-Water Quality/Quantity
6/10/2013	In-Person	Community member	Carrie Coe (TERA)	Archaeology crew #2 conducted an Archaeology study from June 10-19, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - water quality; - medicinal plants; - vegetation; - wildlife habitat; - game trails; - fox dens; Mitigation measures reviewed: - water crossing methods; - water quality testing; - reclamation and re-seeding of native species; - pipe stringing, leaving gaps in the pipeline and wildlife bridges; - further wildlife studies to determine fox den activity; Unresolved concerns/requests for follow up: - wants to accompany wildlife crew on fox den study	Environment - Rare Plants and Communities, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial-Water Quality/Quantity
6/12/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	Team member emailed B. Daychief and notified SCFN of an upcoming Aquatics study scheduled June 20-28, 2013. One participant was requested and the Participation form was attached.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
6/18/2013	In-Person	Community member	Rhea Solberg (TERA), Carrie Coe (TERA), Fin Smith (TERA)	Wildlife crew #1 conducted a Bird Survey from June 18-27, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - medicinal plants; - impacts to moose and elk habitat and beavers - tree clearing along the right-of-way; - oil leaks from equipment; and - noise. Mitigation measures reviewed: - harvest medicinal plants prior to construction; - pipe stringing, leaving gaps in the pipeline and wildlife bridges; - timing of construction; - hire a local trapper to harvest beaver prior to construction; - maintain equipment and free of fluid leaks; and - ensure that noise abatement equipment on machinery is in good working order. Unresolved concerns/requests for follow up: - First Nations monitors to ensure that commitments met by proponent; - underground water testing of water tables and aqua ducts; and - non-migratory animals to be relocated.	Environment - Rare Plants and Communities, Environment - Reclamation, Nuisance - Noise, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Land Spills - Safety, Terrestrial-Water Quality/Quantity
6/20/2013	In-Person	Community member	Carrie Coe (TERA)	Wildlife crew #1 conducted a Bird Study from June 20-27, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - medicinal plants; - beaver pond existing pollution from sewer seepage; - water quality; - wildlife habitat; and - cumulative effects. Mitigation measures reviewed: - reclamation and reseeding of native species; and - water quality testing. Unresolved concerns/requests for follow up: - none.	Environment - Cumulative Effects, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial-Water Quality/Quantity
6/24/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	Team member emailed B. Daychief and notified SCFN that all studies scheduled in Alberta for the remainder of June have been postponed until further notice, and noted that studies in July may also be postponed, but team member would update SCFN when studies were confirmed.	None
6/28/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	Team member emailed B. Daychief and notified SCFN of an upcoming Archaeology study scheduled July 2-11, 2013. One participant was requested and the Participation form was attached.	None
6/28/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	Team member emailed B. Daychief and notified SCFN of an upcoming Wildlife study scheduled July 4-9, 2013. One participant was requested and the Participation form was attached.	None
7/3/2013	In-Person	Community member	Aaron Curtis (TERA)	Archaeology crew #1 conducted an Archaeology survey from July 3-8, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - animal health; - possible grave sites. Mitigation measures reviewed: - visit during TLU study. Unresolved concerns/requests for follow-up: -none	Socio-Econ. Terrestrial - Heritage Resources - Archaeology
7/4/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	Team member emailed B. Daychief and notified SCFN of an upcoming Archaeology study scheduled July 17-31, 2013. One participant was requested and the Participation form was attached.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
7/5/2013	Email- Outgoing	Byron Daychief (Consultation Coordinator)	Jeff Smith (KMC)	Team member emailed B. Daychief and notified SCFN that he will be unable to meet until July 29, 2013 and that they will schedule a meeting for early August.	None
7/8/2013	Email- Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	Team member emailed B. Daychief and notified SCFN that the Archaeology study originally scheduled for July 17-31, 2013 was rescheduled to July 12-22, 2013.	None
7/17/2013	In-Person	Community member	Rhea Solberg (TERA)	Vegetation crew #5 conducted an Archaeology study from July 16-19, 2013. One participant from community participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - pipe being used as a culvert is causing pollutants in the water systems Mitigation measures reviewed: - pipe being used as a culvert will possibly be removed during construction Unresolved concerns/requests for follow-up: - Sunchild - request for elders to come to the site to give their own assessments	None
7/22/2013	Email- Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	Team member emailed B. Daychief and notified SCFN of an upcoming Vegetation study scheduled August 2-15, 2013. One participant was requested and the Participation form was attached.	
8/3/2013	In-Person	Community member	Andrew Little (TERA)	Vegetation crew #3 conducted a Vegetation survey from August 3-14, 2013. One participant from Sunchild First Nation participated. A summary of the concerns raised, the proposed mitigation measures reviewed for each of those concerns and any concerns that remain unresolved in the field is provided below. Concerns raised: - impact on coyote or wolf den - impact on traplines - safety concerns with maintenance of pipeline (exposed pipe identified) - impact on fish habitat from construction - removal of garbage after construction Mitigation measures reviewed: - timing of construction - trap line holder consultation - regular maintenance - watercourse crossing methods - clean up procedures Unresolved concerns/ requests for follow-up: None	Terrestrial - Freshwater Fish
8/08/2013	Letter- Outgoing	Chief Stanley Lagrelle	Regan Schlecker	Team member sent a letter to Chief S. Lagrelle which notified SCFN that capacity funding has been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
8/21/2013	In-Person	Byron Daychief (Consultation Coordinator), Edgar Bigchild (Councillor), James Frencheater (Councillor), Joni Daychief (Receptionist), Paul Bigchild (Councillor), Rosalyn Cahihoo	Jeff Smith (KMC), Jamie Andrews (KMC)	Team member met with B. Daychief, E. Bigchild, J. Frencheater, J. Daychief, P. Bigchild and R. Cahihoo from SCFN on August 21, 2013. Team member suggested a community open house to be held in September 2013. TMEP staff with routing expertise will address project routing concerns. B. Daychief expressed land access issues. Team member explained that routing maps will be provided to the Elders of the community. Team member discussed training needs of SCFN. SCFN expressed difficulties of finding meaningful employment with past training. Heavy equipment operating training is needed within SCFN. Chief J. Frencheater explained that Joint Venture Companies have expressed intentions of training SCFN members in brushing, clearing, and ironworks. Chief J. Frencheater informed team member that tobacco offerings were missing along the pipeline right-of-way and protocols need to be followed. Chief J. Frencheater explained that SCFN members would like to be present to witness the directional drilling near water crossings. Team member to send High Velocity Training information to B. Daychief. Team member to contact TERA and organize SCFN participation in field studies. Team member to contact J. Daychief to determine future meeting with TMEP staff and SCFN.	None
8/28/2013	Email-Outgoing	Edgar Bigchild (Councillor)	Jamie Andrews (KMC)	Team member emailed E. Bigchild and provided a link to the High Velocity Training website and requested a review.	
8/28/2013	Email-Outgoing	Joni Daychief (Receptionist)	Jamie Andrews (KMC)	Team member emailed J. Daychief and requested to confirm dates for a project presentation to the community.	None
9/12/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Sondra Baker (TERA)	Team member emailed B. Daychief and notified SCFN of an upcoming Archaeology study scheduled June 25-July 4, 2013. One participant was requested and the Participation form was attached.	None
9/12/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Jamie Andrews (KMC)	Team member emailed B. Daychief and requested availability for an Open House with SCFN. B. Daychief confirmed date and time of community Open House.	None
9/26/2013	Email-Outgoing	Byron Daychief (Consultation Coordinator)	Jamie Andrews (KMC)	Team member emailed B. Daychief and notified of the Community Open House/Information Session to be held on October 1, 2013.	None

APPENDIX A-2

**ABORIGINAL COMMUNITIES LOCATED IN THE
ALBERTA/BRITISH COLUMBIA BORDER TO KAMLOOPS REGION**

2-7 Neskonlith Indian Band

APPENDIX A-2-7
NESKONLITH INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
04/12/2012	Letter - Outgoing	Chief Judy Ann Wilson	Ian Anderson (KMC)	Team member sent a letter to Chief J. A. Wilson that notified Neskoniith Indian Band (NNIB) of the Trans Mountain Expansion Project (the Project). Team member stated that the Project was expected to be completed in 2017; during the interim period, KMC was committed to meaningfully engaging with Aboriginal communities along the Project route. KMC recognized the integral role of Aboriginal groups and understood that Aboriginal interests, responsibilities and concerns were critical to the Project's planning. Team member provided the preliminary project scope and stated that further engagement efforts were forthcoming. Also attached: <ul style="list-style-type: none"> • Project Backgrounder • Project Media Release 	None
5/29/2012	Letter - Outgoing	Chief Judy Ann Wilson	Ian Anderson (KMC)	Team member mailed follow-up notification letter regarding preliminary scope of Project, attachments (Project System Map and Project Schedule) and regulatory requirements to Chief and Council.	None
11/6/2012	Letter - Outgoing	Chief Judy Ann Wilson	Regan Schlecker (KMC)	Team member sent Chief J. A. Wilson a follow up to a notification letter sent on May 29, 2012, in which KMC emphasized its commitment to respectful, open, responsive and thorough engagement with Aboriginal groups. Team member referred Chief J. A. Wilson to the TMEP website for information, as well as enclosing latest copy of the Project newsletter. Team member encouraged Chief J. A. Wilson to contact KMC Aboriginal Engagement Team and provided contact information.	None
1/10/2013	Letter - Outgoing	Chief Judy Ann Wilson	Regan Schlecker (KMC)	Team member sent a letter to J. A. Wilson to notify NNIB of KMC's future plans for the Trans Mountain Pipeline and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited J. A. Wilson to visit the Project's website.	None
3/22/2013	Letter - Outgoing	Chief Judy Ann Wilson	Gary Youngman (KMC)	Team member mailed Chief J. A. Wilson a letter notifying of permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). These permits will be filed with the National Energy Board (NEB) following a regulatory review and public hearing process (projected 2015).	None
3/28/2013	Email-Incoming	Al Delisle	Gary Youngman (KMC)	A. Delisle emailed team member to request a meeting between NNIB and TMEP. Team member agreed to a meeting and notified that another team member would make the arrangements.	None
3/28/2013	Email-Outgoing	Al Delisle	Regan Schlecker (KMC)	Team member responded to A. Delisle's request for a meeting. Team member offered a number of dates within April 2013 and requested feedback on which date would be most suitable. Team member also inquired into the desired location for the meeting.	None
4/8/2013	Letter - Outgoing	Chief Judy Ann Wilson	Regan Schlecker (KMC)	Team member sent Chief J. A. Wilson a follow up to a notification letter sent in which KMC emphasized its commitment to keep all Aboriginal groups informed of changes and updates to the Project. Team member referred Chief J. A. Wilson to the TMEP website for information, as well as enclosing latest copy of the Project newsletter. Team member encouraged Chief J. A. Wilson to contact KMC Aboriginal Engagement Team and provided contact information.	None
4/18/2013	Email-Outgoing	Al Delisle	Regan Schlecker (KMC)	Team member advised A. Delisle that the time period for proposed meeting dates had passed and requested to be advised on a suitable date and location for a meeting.	None
5/24/2013	Email - Incoming	Al Delisle	Regan Schlecker (KMC)	A. Delisle emailed team member to make arrangements to meet with TMEP.	None
5/27/2013	Letter-Outgoing	Chief Judy Ann Wilson	Gary Youngman (KMC)	Team member mailed J. A. Wilson and notified NNIB that the Project Description had been submitted to the NEB. It was explained that this preliminary document was used to signal the intent of TransMountain to submit a comprehensive Facilities Application. The submission of the Project Description follows an NEB decision, released on May 16, 2013, that approved the commercial aspects of the proposed expansion project.	None
5/28/2013	Phone - Incoming	Al Delisle	Regan Schlecker (KMC)	A. Delisle phoned team member requested a meeting to discuss Project. It was requested that the meeting be held in Vancouver or in the community. A. Delisle acknowledged previous attempts at meeting arrangements but stated that Council was busy.	None
5/28/2013	Email-Incoming	Al Delisle	Regan Schlecker (KMC)	A. Delisle e-mailed as a follow-up from earlier phone call informing team member that Colleen Andrew (NNIB) would be forwarding possible meeting dates.	None
5/28/2013	Email-Outgoing	Al Delisle	Regan Schlecker (KMC)	Team member responded to A. Delisle and advised Team Member welcomed the opportunity to meet Chief J. Wilson and provide a presentation of the TMEP. Team member relayed proposed dates June 3, Jun 11 or June 14 for a future meeting.	None
5/29/2013	Email-Incoming	Al Delisle	Regan Schlecker (KMC)	A. Delisle emailed Team Member to advise that a meeting on June 11 would be suitable for Council.	None
5/29/2013	Email-Outgoing	Al Delisle	Regan Schlecker (KMC)	Team member acknowledged June 1, 2013 for meeting and asked for location and time.	None
5/29/2013	Email-Incoming	Al Delisle	Regan Schlecker (KMC)	A. Delisle inquired as to whether Chase or Kamloops at 10 am would work for the meeting.	None
5/30/2013	Email-Outgoing	Al Delisle	Regan Schlecker (KMC)	Team member emailed A. Delisle acknowledging meeting time and location. Team member also requested confirmation on the format and desired topics to be covered in the project presentation.	None
6/5/2013	Email-Outgoing	Al Delisle	Regan Schlecker (KMC)	Team member emailed A. Delisle to notify NNIB that team member was no longer able to meet with NNIB Chief and staff June 11, 2013 due to a scheduling conflict. Team member noted that the remaining team members would still be in attendance and encouraged NNIB to continue with the meeting as scheduled.	None
6/5/2013	Email-Incoming	Al Delisle	Regan Schlecker (KMC)	A. Delisle advised team member that Chief cannot attend meeting and proposed June 17th or 18th as new meeting dates.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
6/7/2013	Email-Incoming	Al Delisle	Regan Schlecker (KMC)	Team member confirmed that the proposed meeting date of June 18, 2013 would work and requested confirmation of place and time. A. Delisle confirmed meeting location and time.	None
6/14/2013	Email-Incoming	Al Delisle	Regan Schlecker (KMC)	A. Delisle emailed Team Member and confirmed meeting for June 18, 2013.	None
6/14/2013	Email-Incoming	Al Delisle	Regan Schlecker (KMC)	A. Delisle requested M. Carlin to assist team member with meeting details. Team member requested confirmation of meeting details.	None
6/17/2013	Email-Outgoing	Al Delisle, Michelle Carlin	Regan Schlecker (KMC)	Team member requested confirmation of location of June 18, 2013 meeting.	None
6/18/2013	Person	Councillor Arthur Anthony Councillor Karen August Councillor Randy Sam Michelle Carlin, Administrator	Regan Schlecker, Manager, Aboriginal Relations, KMC Georgia Dixon, AET, TMEP	Team members met with NNIB councilors to present Project information. Community Councilors requested the following information: - Environmental monitoring program - Job opportunities.	None
6/18/2013	Email-Outgoing	Michelle Carlin	Regan Schlecker (KMC)	Team member followed up on June 18, 2013 meeting with a link and attached copy of the Project description. Team member also relayed contact information for completion and delivery of data request waiver.	None
7/16/2013	Fax	Chief Judy Ann Wilson	Margaret Mears (KMC)	Team member faxed Chief J. A. Wilson the Notification of Commencement of the Archaeological Impact Assessment letter for NNIB for review.	None
8/08/2013	Letter-Outgoing	Chief Judy Ann Wilson	Regan Schlecker	Team member sent a letter to Chief J. Wilson which notified NNIB that capacity funding has been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None
8/28/2013	Email-Incoming	Michelle Carlin	Regan Schlecker (KMC), Georgia Dixon (KMC)	M. Carlin emailed team member requesting a meeting to discuss a field work, training and employment opportunities for band members.	None
8/29/2013	Email-Outgoing	Chief Judy Ann Wilson	Martha Matthew (KMC)	In response to an email from team member to introduce herself as a new member of the Trans Mountain Expansion Project team at KMC, Chief J. A. Wilson stated that NNIB was following up on referrals from the TMEP for environmental assessments. Chief J. A. Wilson stated that NNIB is one of 33 original Secwepemc communities for which Secwepemc holds collective Title and Rights, and therefore any development within Secwepemc Territory is subject to consultation and Secwepemc processes. Chief J. Wilson advised Team Member that NNIB has been working on training and employment and a job strategy that includes an HR inventory. Chief J. Wilson advised Team Member that NNIB will follow up on these matters with letters and further meetings.	None
8/30/2013	Email – outgoing	Michelle Carlin	Regan Schlecker (KMC), Georgia Dixon (KMC)	Team members and M. Carlin followed up on email sent August 28, 2013; a meeting on September 5, 2013 was confirmed. In preparation for the meeting, M. Carlin agreed to discuss employment opportunities further with Chief J. A. Wilson.	None
9/4/2013	Email-Incoming	Michelle Carlin	Georgia Dixon (KMC)	M. Carlin emailed team member, requested additional discussion on training opportunities and employment opportunities for Project	None
9/5/2013	In Person	Michelle Carlin, Band Manager Cora Anthony, Employment councillor Ruth Thomas, staff	Georgia Dixon, AET, TMEP Martha Mathew, AET, TMEP	Team members met with NNIB staff. Discussion on employment and training opportunities with TMEP, including construction.	None
9/9/2013	Email-Outgoing	Michelle Carlin	Georgia Dixon (KMC)	Team member emailed M. Carlin and provided KMC Foundation link.	None
9/9/2013	Email-Outgoing	Michelle Carlin	Martha Matthew (KMC)	Team Member emailed M. Carlin requested the contact information for the camp contract with BC Hydro for the Mica Creek Unit 5/6 construction Project.	None

APPENDIX A-4

**ABORIGINAL COMMUNITIES LOCATED IN THE HOPE TO BURNABY
TERMINAL/BURRARD INLET REGION**

4-9 Matsqui First Nation
4-14 Scowlitz First Nation
4-15 Seabird Island Band

APPENDIX A-4-09
MATSQUI FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/17/2011	Phone - Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Team member phoned Chief A. McKay to provide advance notice of the Open Season and the forthcoming information letter.	None
04/12/2012	Letter – Outgoing	Chief Alice McKay	Ian Anderson (KMC)	Team member sent a letter to Chief A. McKay that notified Matsqui First Nation (MIFN) of the Trans Mountain Expansion Project (the Project). Team member stated that the Project was expected to be completed in 2017; during the interim period, KMC was committed to meaningfully engaging with Aboriginal communities along the Project route. KMC recognized the integral role of Aboriginal groups and understood that Aboriginal interests, responsibilities and concerns were critical to the Project's planning. Team member provided the preliminary project scope and stated that further engagement efforts were forthcoming. Also attached: <ul style="list-style-type: none"> • Project Backgrounder • Project Media Release 	None
4/20/2012	Phone - Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Team member left a voice message for Chief A. McKay with regards to advance notice about a specific ROW issue that needs to be addressed. Team member to follow-up with further details.	None
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5/29/2012	Letter - Outgoing	Chief Alice McKay	Ian Anderson (KMC)	Team member mailed follow-up notification letter regarding preliminary scope of Project, attachments (Project System Maps and Project Schedule) and regulatory requirements to Chief and Council.	None
6/29/2012	Email- Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Team member emailed Chief A. McKay, informing Chief A. McKay of the filing of an application for National Energy Board (NEB) approval of the contract terms and toll structure for the Project.	None
7/31/2012	Letter - Outgoing	Chief Alice McKay	Gary Youngman (KMC)	Team member sent Chief A. McKay a letter to notify MIFN of the field study work beginning in August, 2012. As KMC had not yet had the opportunity to engage MIFN the letter acted as an invitation to participate in the studies and engage in dialogue about the Project. Team member requested that Chief A. McKay contact KMC to receive Project information and to discuss how the Community can best participate in the field study program.	None
9/18/2012	Email- Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Team member emailed Chief A. McKay a follow-up to KMC response letter of July 26, 2012 to confirm that staff is working on MIFN's request for a survey of the ROW.	None
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9/19/2012	Email- Incoming	Chief Alice McKay	Regan Schlecker (KMC)	Chief A. McKay emailed team member stating that MIFN anticipated meeting and noted that MIFN would respond to the letter sent July 31, 2012.	None
10/18/2012	Email- Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Team member emailed Chief A. McKay in regards to the Annual ROW Maintenance - Vegetation Management.	None
11/13/2012	Email- Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Team member emailed Chief A. McKay and noted that it was KMC understands that Tunbridge completed the legal survey of the Trans Mountain Pipeline Right-of-Way on November 1, 2012. Team member requested a meeting with Chief A. McKay and asked for possible meeting dates.	None
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11/20/2012	Email- Incoming	Chief Alice McKay	Regan Schlecker (KMC)	Chief A. McKay emailed team member, stating that MIFN would follow-up regarding a meeting.	None
11/28/2012	Letter - Incoming	Chief Alice McKay	Ian Anderson (KMC)	Chief A. McKay mailed a letter to team member that included the following points: -Survey of pipeline on MIFN reserve is completed and are waiting for the base plans from the surveyor. KMC representative refused to mark the depth of cover of the pipe, despite it being a mutually agreed upon terms of reference for the survey. - MIFN proposes an introductory meeting with KMC December 17, 18 or 19, 2012 to discuss the foundation for a working relationship moving forward.	None
12/7/2012	Letter - Outgoing	Chief Alice McKay	Ian Anderson (KMC)	Team member mailed a letter in response to Chief A. McKay's letter of November 28, 2012, to address each topic identified by Chief A. McKay and confirmed KMC's commitment to developing a positive working relationship with MIFN. Team member stated that availability for Chief A. McKay's proposed meeting dates of December 17-19, 2012 would be limited and suggested alternate meeting dates of January 8 and 9, 2013.	None
12/11/2012	Letter - Incoming	Chief Alice McKay	Ian Anderson (KMC)	Chief A. McKay mailed a letter in response to December 7, 2012 letter and indicated that the issues concerning the survey would be discussed at the upcoming meeting. Chief A. McKay confirmed the availability of MIFN Council for a meeting at the MIFN office on January 8, 2013 at 1:00 PM and noted a draft agenda would be provided in advance.	None
12/12/2012	Email- Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Team member emailed Chief A. McKay regarding the agenda and participants for the January 8, 2013 meeting.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/12/2012	Letter - Outgoing	Chief Alice McKay	Ian Anderson (KMC)	Team member mailed a letter in response to Chief A. McKay's letter of December 11, 2012, confirming the meeting between the Matsqui Governing Body (MGB) and KMC on January 8, 2013 at MGB offices. Team member provided a list of KMC team members attending the January 8, 2013 meeting.	None
12/20/2012	Email- Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Team member emailed Chief A. McKay requesting further information on the agenda for the January 8, 2013 meeting and also asked for a list of participants from MIFN.	None
12/21/2012	Email- Incoming	Bram Rogachevsky (Lawyer, Bram Rogachevsky Law Corporation)	Regan Schlecker (KMC)	B. Rogachevsky emailed team member on behalf of Chief A. McKay, indicating the draft agenda and names of participants for the January 8, 2013 meeting would be circulated.	None
12/29/2012	Email- Outgoing	Bram Rogachevsky (Lawyer, Bram Rogachevsky Law Corporation)	Regan Schlecker (KMC)	Team member emailed B. Rogachevsky regarding meeting agenda.	None
1/3/2013	Email- Incoming	Bram Rogachevsky (Lawyer, Bram Rogachevsky Law Corporation)	Regan Schlecker (KMC)	B. Rogachevsky emailed team member the January 8, 2013 meeting agenda on behalf of Chief A. McKay, reiterating the meeting was for introductory purposes only.	None
1/4/2013	Email- Outgoing	Bram Rogachevsky (Lawyer, Bram Rogachevsky Law Corporation)	Regan Schlecker (KMC)	Team member emailed B. Rogachevsky to confirm that the agenda had been received and there would be no changes.	None
1/8/2013	In-Person	Chief Alice McKay Brenda Morgan (Councillor) Stanley Morgan (Economic Development) Cynthia Collins (Lands Manager) Louis Julian (Councillor) Bram Rogachevsky (Lawyer, Bram Rogachevsky Law Corporation)	Ian Anderson (KMC), Gary Youngman (KMC), Peter Forrester (KMC) Regan Schlecker (KMC), Norman Marcy (KMC)	Team members met with Chief A. McKay, B. Morgan, S. Morgan, C. Collins, L. Julien and B. Rogachevsky to introduce the Project. Next Steps and Action Items: <ul style="list-style-type: none"> • KMC to provide Anomaly Record of existing pipeline through the MIFN territory • KMC to provide information on inspection/tool runs in the territory • KMC to provide survey information including depth of cover data • Outstanding engagement invoices <ul style="list-style-type: none"> - To be considered with Capacity Funding agreement • MIFN to define community engagement process and topics of interest <ul style="list-style-type: none"> - KMC available to meet as required 	Compensation, safety, contamination of water and fish habitat
1/10/2013	Email- Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Team member emailed Chief A. McKay regarding meeting on January 15, 2013 Team member attached a link and copy of KMC's news release and indicated that the information could not be disclosed at the January 8, 2013 meeting. Team member provided Chief A. McKay with contact information.	None
1/10/2013	Letter - Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Team member sent a letter to Chief A. McKay to notify MIFN of KMC's future plans for the Trans Mountain Pipeline and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited Chief A. McKay to visit the Project's website.	None
1/10/2013	Phone - Outgoing	Chief Alice McKay	Norman Marcy (KMC)	Team member called the Band office and left a message outlining the increase in the proposed expansion capacity and noted that though the Project will be enhanced, there is every commitment to continue to develop the relationship with MIFN and all issues that the parties may determine necessary to address in the future.	None
1/14/2013	Letter - Outgoing	Chief Alice McKay	Regan Schlecker (KMC)	Chief A. McKay mailed letter to team member regarding Capacity Funding.	None
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1/24/2013	Phone - Attempt	Stanley Morgan (Economic Development)	Norman Marcy (KMC)	Team member attempted to call S. Morgan to discuss next steps for engagement and was notified S. Morgan would be unavailable until week of January 28, 2013.	None

APPENDIX A-4-14
SCOWLITZ FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
04/12/2012	Letter – Outgoing	Chief Andy Phillips	Ian Anderson (KMC)	Team member sent a letter to Chief A. Phillips that notified Scowlitz First Nation (SZFN) of the Trans Mountain Expansion Project (the Project). Team member stated that the Project was expected to be completed in 2017; during the interim period, KMC was committed to meaningfully engaging with Aboriginal communities along the Project route. KMC recognized the integral role of Aboriginal groups and understood that Aboriginal interests, responsibilities and concerns were critical to the Project's planning. Team member provided the preliminary project scope and stated that further engagement efforts were forthcoming. Also attached: <ul style="list-style-type: none"> • Project Backgrounder • Project Media Release 	None
5/29/2012	Letter - Outgoing	Chief Andy Phillips	Ian Anderson (KMC)	Team member mailed follow-up notification letter regarding preliminary scope of the Project, attachments (Project System Map and Project Schedule) and regulatory requirements to Chief and Council.	None
10/4/2012	Phone - Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member called Chief A. Phillips and requested a meeting. Chief A. Phillips suggested the week of October 8 or 15, 2012. Chief A. Phillips also noted that Seabird Island Band (SIB) may wish to be included, and committed to speaking with SIB's Chief C. Seymour.	None
10/4/2012	Email- Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member sent email to Chief A. Phillips to follow-up on phone introduction and initial discussion of Trans Mountain Pipeline Expansion Project. Team member confirmed suggested meeting dates between October 8 and 15, 2012. Team member also noted the suggestion to arrange the meeting to include Seabird Chief Seymour on the same day and asked Chief A. Phillips to contact Chief Seymour with respect to a preferred meeting date.	None
11/5/2012	Phone - Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member called Chief A. Phillips to arrange a meeting. Meeting confirmed for November 7, 2012.	None
11/7/2012	In-Person	Chief Andy Phillips	Charles Littledale (KMC), Norman Marcy (KMC)	Team members met with Chief A. Phillips and C. Pennier. Team members introduced the Project and demonstrated intent to meet with SZFN and Sto:lo Nation (STN). Also discussed: <ul style="list-style-type: none"> • Capacity Funding agreement • TEK/TLU study programs • Capacity Funding Guidelines • Communication mechanics and protocols • Chief A. Phillips interested in opening up opportunities for all STN communities with KMC <ul style="list-style-type: none"> - Chief A. Phillips to work in conjunction with Sto:lo Tribal Council (STC) to provide further opportunities for engagement by KMC • Engagement with KMC needs to advance and support the values of the community through: <ul style="list-style-type: none"> - Restoration projects along the line - Commitment to Sto:lo heritage and Sto:lo society - Legacy of Longhouse and sports facilities in the area Action Items: <ul style="list-style-type: none"> • Team member to provide Website address and routing map for the Project • Chief A. Phillips to provide a draft engagement budget and to follow-up with STN communities 	None
11/11/2012	Email- Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member emailed Chief A. Phillips regarding the discussion on November 7, 2012. The Trans Mountain Pipeline Expansion Project website and a map of the current pipeline route as it traverses from Hope to Burnaby were attached. Team member encouraged Chief A. Phillips to consider the Capacity Funding Guidelines and next steps toward a capacity funding arrangement with Kinder Morgan Canada.	None
11/26/2012	Email- Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member emailed Chief A. Phillips regarding the meeting on November 7, 2012. Team member suggested the public information sessions being held as a good opportunity to see details of the Project and have questions answered by Kinder Morgan representatives and experts. Team member indicated the following sessions: -Chilliwack Info Session (27 November 2012); -Hope Info Session (28 November 2012); and -Abbotsford Info Session #2 (29 November 2012). Team member would be attending the information session in Hope, BC.	None
12/11/2012	Phone - Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member phoned Chief A. Phillips and reiterated the need to move on capacity agreements quickly, due to the narrow window from the present to May 31, 2013 to sign an agreement. Chief A. Phillips explained the issue of obtaining signatures of 6 of 8 Sto:lo Tribal Council First Nations. Team member indicated urgency in signing the agreement because there would be diminishing time and resources available. Chief A. Phillips mentioned that Cheam and Seabird would not join the group.	None
1/9/2013	Phone - Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member left message for Chief A. Phillips requesting information on availability for January 16 or 17, 2013. Senior Manager	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
1/9/2013	–Phone - Incoming	Chief Andy Phillips	Norman Marcy (KMC)	Chief A. Phillips called team member and discussed the need for flexibility in the funding required for engagement. Team member indicated that additional funding may be considered depending on the approach taken and suggested other approaches such as Community Meetings and Chief and Council considerations rather than hiring a specific person for the job of engagement. Chief A. Phillips committed to discussing this with the SZFN Senior Manager and may be available for a meeting either January 16 or 17, 2013.	None
1/10/2013	Letter - Outgoing	Chief Andy Phillips	Regan Schlecker (KMC)	Team member sent a letter to Chief A. Phillips to notify SZFN of KMC's future plans for the Trans Mountain Pipeline and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited Chief A. Phillips to visit the Project's website.	None
1/14/2013	Phone - Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member called Chief A. Phillips and confirmed meeting January 17, 2013.	None
1/17/2013	In-Person	Chief Andy Phillips	Paul Anderson (TERA), Norman Marcy (KMC)	Team members met with Chief A. Phillips to discuss next steps in the engagement process. Discussed: • Forestry • Hunting and gathering • Fishing and waterbodies • Legacy funding	None
1/17/2013	Email- Incoming	Chief Andy Phillips	Norman Marcy (KMC)	Chief A. Phillips emailed team member and attached an edited version of the proposal. The edits included time frame and deliverables.	None
1/29/2013	Phone - Incoming	Chief Andy Phillips	Norman Marcy (KMC)	Chief A. Phillips called team member to discuss the proposal for Letter of Understanding (LOU). Chief A. Phillips focused on the need to help youth break the cycle of depravity and violence. Comments on the approach to the Capacity LOU were debated including a perception that KMC was "nickel and diming" SZFN. Team member explained that discussions of Mutual Benefits would be possible, funding for which would be available in due course after the activities for this agreement and attached funding were achieved.	None
1/29/2013	Phone - Attempt	Chief Andy Phillips	Norman Marcy (KMC)	Team member left a voice mail message for Chief A. Phillips wanting to discuss approach to the LOU.	None
1/29/2013	Email- Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member emailed Chief A. Phillips regarding their discussion on the phone. Team member indicated if the document was agreed to, the LOU would be prepared and executed by the President of KMC. Team member requested the Vendor information for SZFN.	None
1/31/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member emailed C. Pennier, inviting SZFN monitors to participate in a TEK/TLU workshop taking place January 31, 2013. Team member attached the formal invitation, which contained further details on the workshop.	None
2/7/2013	Phone - Attempt	Chief Andy Phillips	Norman Marcy (KMC)	Team member left a message for Chief A. Phillips to follow up on the Letter of Understanding draft with SZFN.	None
2/8/2013	Email- Outgoing	Carrielynn Victor (Sto:lo Tribal Council)	Lowa Beebe (TERA)	Team member emailed C. Victor and inquired as to whether SZFN was interested in holding a TEK/TLU Workshop, facilitated by TERA.	None
2/12/2013	Phone - Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member called Chief A. Phillips, who was busy but indicated would return the call by the end of the day.	None
2/13/2013	Phone - Attempt	Chief Andy Phillips	Norman Marcy (KMC)	Team member phoned and left a voice mail message with Chief A. Phillips to set up a meeting to discuss the finalization of the Letter of Understanding.	None
2/14/2013	Phone - Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member called Chief A. Phillips to discuss next steps. Chief A. Phillips indicated that SZFN would consider the documents again. SZFN wanted to extend the term of the agreement and team member agreed that the agreement could be extended. Chief A. Phillips was concerned about many of the macro issues including competing pipelines, assurances that there would be discussion of benefits agreements and possibilities of working with other First Nations to create legacy from the Project. Chief A. Phillips indicated that a follow-up conversation would occur the week of February 18, 2013.	None
2/20/2013	Phone - Attempt	Chief Andy Phillips	Norman Marcy (KMC)	Team member phoned and left a message with Chief A. Phillips to set up a meeting and discuss the Letter of Understanding finalization.	None
2/24/2013	Email- Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member emailed Chief A. Phillips to proposed meeting in on February 26 or February 27, 2013. Team member indicated a desire to make progress toward concluding a capacity agreement. Team member notified Chief A. Phillips that the deadline for the activities anticipated in the present draft was approaching.	None
2/26/2013	Phone - Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member called Chief A. Phillips to discuss SZFN's intentions with regards to the draft Letter of Understanding. Chief A. Phillips indicated that Council had recommended that the document be sent for legal review. Any suggested changes would be forwarded to team member.	None
3/15/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member emailed C. Pennier and attached a Contact Letter describing the work that TERA is conducting for the Project, and requested SZFN participants join the studies as permitted.	None
3/22/2013	Letter - Outgoing	Chief Andy Phillips	Gary Youngman (KMC)	Team Member mailed Chief A. Phillips a letter notifying of permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). These permits would be filed with the National Energy Board (NEB) following a regulatory review and public hearing process (projected for completion in 2015).	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
3/29/2013	Email- Outgoing	Carrielynn Victor (Sto:lo Tribal Council)	Lowa Beebe (TERA)	Team member emailed C. Victor and notified SZFN of upcoming field studies in the SZFN territory: • Aquatics study: April 6, 2013 – April 16, 2013 • TEM study: April 20, 2013 – April 27, 2013 One participant per study was requested and the Participation forms were attached.	None
4/2/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member emailed C. Pennier and notified SZFN of the upcoming field studies: • Aquatics study: April 6, 2013 – April 16, 2013 • TEM study: April 20, 2013 – April 27, 2013 One participant was requested per study and the Participation forms were attached.	None
4/3/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member emailed C. Pennier and notified SZFN of updates to the Aquatics and TEM studies: • Aquatics study: April 8, 2013 – April 18, 2013 (BC Aquatics) • TEM study: April 12, 2013 – April 14, 2013 (BC TEM) Three participants were requested for the TEM study.	None
4/5/2013	Phone - Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member called C. Pennier to confirm the SZFN participant for the Aquatics study April 8, 2013 – April 18, 2013.	None
4/8/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member emailed C. Pennier regarding the absence of a SZFN participant on an Aquatics study on April 7, 2013. Team Member inquired as to whether the participant would be attending the rest of the study. Team member emailed C. Pennier and confirmed the replacement of a SZFN participant and sent logistical details for meeting the study crew. C. Pennier emailed team member indicating that the SZFN participant would not be available for the Aquatics study, but would be available as a participant on future studies. Another SZFN participant would be sent on the current Aquatics study. C. Pennier emailed team member and notified team member of a replacement participant who would join the Aquatics crew April 8, 2013 at 5 PM.	None
4/9/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member emailed C. Pennier to confirm contact information for the replacement participant joining the Aquatics study (April 8, 2013 – April 18, 2013). Two additional participants were requested.	None
4/9/2013	In-Person		Michelle Langfeldt (TERA), Carla McConnell (TERA), Jeff Kennedy (TERA)	Aquatics crew (BC Aquatics) conducted an aquatics study from April 9-17, 2013. One participant from SZFN participated. A summary of the concerns raised, the proposed mitigative measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - effects of construction on Fraser River and fishing - protection of wildlife Mitigative measures reviewed: - watercourse crossing methods - timing of construction - wildlife studies preconstruction - reclamation Unresolved concerns/requests for follow-up: - HDD the Fraser River	Terrestrial - Freshwater Fish, Terrestrial - Mammals
4/17/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member emailed C. Pennier and notified SZFN of an upcoming Aquatics study scheduled on May 3, 2013 (BC Triton Aquatics). One participant was requested and the participation form was attached.	None
4/19/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member emailed C. Pennier and notified him of two upcoming Aquatics studies: • Crew 3: April 25, 2013 – May 2, 2013 • Crew 4: April 25, 2013 – May 2, 2013 One participant was requested per study and the participation forms were attached.	None
4/22/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member emailed C. Pennier and requested participants for the Aquatics studies (April 25, 2013 – May 2, 2013). Original request sent April 19, 2013.	None
4/23/2013	Email- Incoming	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	C. Pennier emailed team member and confirmed participants for the Aquatics studies (April 25, 2013 – May 2, 2013).	None
4/25/2013	Voice Mail – Incoming	Carrielynn Victor (Sto:lo Tribal Council)	Lowa Beebe (TERA)	C. Victor left a voice mail for team member requesting information regarding biophysical studies occurring within SZFN traditional territory.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
4/25/2013	Phone - Outgoing	Carrielynn Victor (Sto:lo Tribal Council)	Lowa Beebe (TERA)	Team member returned C. Victors phone call and was informed that C. Pennier was the contact for TEK participation on biophysical studies. C. Victor provided team member with C. Pennier's contact information.	None
4/25/2013	In-Person		Brandy Mayes (TERA), Natalie Arad (TERA)	BC Triton Aquatics crew #1 conducted an aquatics study from April 25 - 28, 2013. One participant from SZFN participated. A summary of the concerns raised, proposed mitigative measures reviewed for each of the concerns and any concerns remaining unresolved in the field are provided below. Concern raised: - Fish and water quality - potential spills - disturbance to Red-tailed hawks nest Mitigative measures raised: - watercourse crossing methods - wildlife timing constraints and setbacks - water quality monitoring - pipeline coating, integrity testing and safety measures Unresolved concerns/requests for follow-up: - none	None
4/25/2013	In-Person		Stephen Roberts (TERA)	BC Triton Aquatics crew #2 conducted an aquatics survey from April 25 - 26, 2013. One participant from SZFN participated. A summary of the concerns raised, proposed mitigative measures reviewed for each of the concerns and any concerns remaining unresolved in the field are provided below. Concerns raised: - Silt and downstream contamination Mitigative measures reviewed: - open cut isolated dam - fish salvage - silt screens - turbidity and environmental monitoring Unresolved concerns/requests for follow-up: -None	Marine - Water Quality/Quantity
5/1/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Lowa Beebe (TERA)	Team member emailed C. Pennier and notified SZFN that due to land access issues, the aquatics study scheduled until May 3, 2013 would not be conducted as scheduled. Team member stated she would update SZFN on new dates upon land access confirmation.	None
5/8/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Maria Hoiss (TERA)	Team member emailed C. Pennier to schedule a Traditional Land Use (TLU) map review with SZFN. Team member proposed May 15, 2013 – May 17, 2013 and requested additional time be given to further discuss the TLU study with SZFN.	None
5/9/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Maria Hoiss (TERA)	Team member emailed C. Pennier to confirm details for the map review meeting on May 15, 2013 at 10:00 AM. Team member asked for confirmation of meeting location and SZFN attendance. Proposed TLU workplan and associated budget template were forwarded for review prior to the meeting. Team member called C. Pennier to follow up on May 8, 2013 email. The TLU map review was confirmed for May 15, 2013. Team member to provide further details by email.	None
5/10/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Maria Hoiss (TERA)	Team member emailed C. Pennier to request a TLU map review meeting be held at the SZFN Band office.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/13/2013	In-Person	Chief Andy Phillips Margaret Chapman (Councillor) Melvyn Pennier-Hall (Councillor)	Norman Marcy (KMC) Jamie Andrews (KMC)	Team members met with Chief A. Phillips, M. Chapman and M. Pennier-Hall. Team member presented scope of the Project and presented the standard Project presentation. Also discussed: <ul style="list-style-type: none"> • TEK/TLU programs and expectations • Project timeline • Depth of cover • KMC's incident history • Geological event incident history • Safety measures and precautions • Emergency Response plans and protocol • Pipeline operation and maintenance • Education and Training opportunities • Mutual Benefits Agreement (MBA) • National Energy Board's (NEB) role • Capacity funding opportunities • Consultation process Materials provided: <ul style="list-style-type: none"> • About our Pipelines 2012: Our Energy Connections. • About our Pipelines: Corrosion • About our Pipelines: Diluted Bitumen • About pipelines: Safe Pipeline Operations: Field Program Descriptions • About Pipelines: Emergency Response • About Pipelines: Diluted Bitumen in Pipeline • Project Update: Additional Customer Support Results in Scope Changes to the Proposed Trans Mountain Expansion Project • Scowlitz Territory Routing TMPL Copy • Slideshow presentation Action Items: <ul style="list-style-type: none"> • Team member to provides maps for KP range 986 – 1085 • Chief A. Phillips to follow-up with team member on future meeting dates 	None
5/13/2013	Email-Incoming	Colin Pennier (Senior Manager)	Maria Hoiss (TERA)	C. Pennier emailed team member and confirmed date and time for TLU study meeting as May 15, 2013 at 10:00 AM. C. Pennier confirmed SZFN meeting attendees.	None
5/14/2013	Email – Incoming	Colin Pennier (Senior Manager)	Maria Hoiss (TERA)	C. Pennier emailed team member and confirmed the address of the location for the TLU map review meeting.	None
5/15/2013	Email-Outgoing	Colin Pennier (Senior Manager)	Karla Gervais (TERA)	Team member emailed C. Pennier and notified SZFN of an upcoming Wildlife study (BC Wildlife – Amphibian) scheduled between May 23, 2013 and May 24, 2013. One SZFN participant was requested and the participation form was attached.	None
5/15/2013	Email-Outgoing	Colin Pennier (Senior Manager)	Maria Hoiss (TERA)	Team member emailed C. Pennier and notified SZFN of the TERA representatives attending the TLU map review meeting scheduled for May 16, 2013 at the SZFN Band office.	None
5/16/2013	Email-Outgoing	Colin Pennier (Senior Manager)	Karla Gervais (TERA)	Team member emailed C. Pennier and notified SZFN of an upcoming Vegetation study scheduled May 22, 2013. Three SZFN participants were requested and the participation form was attached.	None
5/16/2013	In-Person	Colin Pennier (Senior Manager) Judy Chapman (Councillor)	Brian Bruzzese (TERA), Mark Saunders (TERA), Amber Lafontaine (TERA)	TLU map review with Scowlitz First Nation (SZFN) of the Project area on May 16, 2013 within their traditional territory. Maps were provided to orient SZFN community members with the location of the Project. The goal of the map review was to document any information or concerns that SZFN may have regarding the Project and to identify any potential Project related impacts on current land use for traditional activities and on resources. Concerns raised: <ul style="list-style-type: none"> - construction impacting fishing habitat; - protection of burial and archaeological sites; - loss of traditional practices and land uses; - impacts to the Fraser River which many people depend on; - employment opportunities and appropriate training. 	Socio-Econ. Terrestrial - Employment/Training - First Nations, Socio-Econ. Terrestrial - Heritage Resources - First Nations, Terrestrial - Freshwater Fish, Terrestrial - Traditional Land Use
5/21/2013	Email-Outgoing	Colin Pennier (Senior Manager)	Karla Gervais (TERA)	Team member emailed C. Pennier and notified SZFN of an upcoming Aquatics study Crew 1 scheduled May 24, 2013 – May 30, 2013. One SZFN participant was requested and the Participation form was attached.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/21/2013	Email-Incoming	Colin Pennier (Senior Manager)	Karla Gervais (TERA)	C. Pennier emailed team member and stated that SZFN would not be able to arrange participants for the Vegetation study (May 22, 2013).	None
5/21/2013	Email-Incoming	Colin Pennier (Senior Manager)	Karla Gervais (TERA)	C. Pennier emailed team member and notified TERA of the participant attending the Aquatics study (May 24, 2013 – May 30, 2013).	None
5/22/2013	Email – Outgoing	Colin Pennier (Senior Manager)	Clare Peacock	Team member emailed C. Pennier to confirm logistics and contact information regarding the SZFN participating who was selected to accompany BC Aquatics Crew 1 between May 24, 2013 to May 30, 2013.	None
5/22/2013	Email – Incoming	Colin Pennier (Senior Manager)	Clare Peacock	C. Pennier emailed team member to provide contact information for SZFN participant who would be accompanying BC Aquatics Crew 1 (May 24, 2013 to May 30, 2013).	None
5/23/2013	Email-Outgoing	Colin Pennier (Senior Manager)	Clare Peacock (TERA)	Team member emailed C. Pennier and notified SZFN of an upcoming Wildlife study Crew 1 scheduled May 27, 2013 – June 7, 2013. One SZFN participant was requested and the participation form was attached.	None
5/23/2013	In-Person		Jeff Kennedy (TERA)	Wildlife crew #1 conducted a wildlife survey from May 23 - 28, 2013. One participant from SZFN participated. A summary of the concerns raised, proposed mitigative measures reviewed for each of the concerns and any concerns remaining unresolved in the field are provided below. Concerns raised: - Water crossing methods Mitigative measures reviewed: - Water crossing methods including open cut, dam and flume, diversion, HDD and aerial Unresolved concerns/requests for follow-up: -none	Terrestrial-Water Quality/Quantity
5/24/2013	In-Person		Chris Menzies (TERA)	Aquatics crew #1 conducted an aquatics study from May 24-29, 2013. One participant from SZFN participated. A summary of the concerns raised, proposed mitigative measures reviewed for each of the concerns and any concerns remaining unresolved in the field is provided below. Concerns raised: - impact on eagles and nests; - disturbance of bear dens; - impact of spills on Fraser River; - impact of construction disturbing fish and fish habitat in several creeks and rivers; - water quality; Mitigative measures reviewed: - conduct nest sweeps to identify any active nests and stick bird nest surveys; - bear den buffer zone; - geotechnical surveys and pipeline integrity; - isolation pump and dam; - fish salvage; - water quality monitoring; and - reclamation. Unresolved concerns/requests for follow-up: - funding provided to First Nations to assist the Elders in a yearly eagle viewing field trip.	Environment - Cumulative Effects, Environment - Rare Plants and Communities, Marine - Vegetation, Marine - Water Quality/Quantity, Terrestrial - Freshwater Fish, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Water bodies, Terrestrial - Land Spills - Environmental Impact
5/27/2013	Letter-Outgoing	Chief Andy Phillips	Gary Youngman	Team member mailed Chief A. Phillips and notified SZFN that the Project Description had been submitted to the NEB. It was explained that this preliminary document was used to signal the intent of TransMountain to submit a comprehensive Facilities Application. The submission of the Project Description follows an NEB decision, released on May 16, 2013, that approved the commercial aspects of the proposed expansion project.	None
5/31/2013	Email-Outgoing	Colin Pennier (Senior Manager)	Sondra Baker (TERA)	Team member emailed C. Pennier and notified SZFN of the upcoming Aquatics study June 7, 2013 – June 16, 2013. One SZFN participant was requested and the participant form was attached.	None
6/13/2013	Phone - Outgoing	Colin Pennier (Senior Manager)	Jamie Andrews (KMC)	Team member phoned C. Pennier. C. Pennier notified team member that SZFN would like a community meeting to take place and requested KMC to present the TMEP project. C. Pennier would speak to staff and identify potential meeting dates. C. Pennier notified team member that SZFN was unaware of any potential information gaps and would prefer to speak with Chief A. Phillips regarding SZFN's involvement with KMC and would communicate this to team member or team member.	None
6/19/2013	Phone - Attempt	Colin Pennier (Senior Manager)	Jamie Andrews (KMC)	Team member phoned C. Pennier and left a message to request a return call.	None
6/25/2013	Phone - Attempt	Colin Pennier (Senior Manager)	Jamie Andrews (KMC)	Team Member called C. Pennier and left a message to request a return call.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
6/26/2013	Phone - Attempt	Colin Pennier (Senior Manager)	Jamie Andrews (KMC)	Team member phoned C. Pennier and left a message to request a return call	None
7/9/2013	Phone - Attempt	Colin Pennier (Senior Manager)	Jamie Andrews (KMC)	Team member phoned C. Pennier and left a message to request a return call.	None
7/16/2013	Phone - Attempt	Colin Pennier (Senior Manager)	Jamie Andrews (KMC)	Team member phoned C. Pennier and left a message to request a return call.	None
8/08/2013	Letter- Outgoing	Chief Andy Phillips	Regan Schlecker	Team member sent a letter to Chief A. Phillips which notified SZFN that capacity funding has been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None
8/13/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Clare Peacock (TERA)	Team member emailed C. Pennier participation forms for crew members working on vegetation surveys in the area of Sumas to Westridge. Team member apologized for late notice and requested C. Pennier provide SZFN participant information if participating.	None
8/14/2013	Email- Incoming	Colin Pennier (Senior Manager)	Clare Peacock (TERA)	C. Pennier responded to team member and provided the name of A. Hall as the SZFN participant who would be attending the TMEP vegetation survey and would forward the completed participation form at a later time.	None
8/15/2013	Email- Outgoing	Colin Pennier (Senior Manager)	Clare Peacock (TERA)	Team member emailed fieldwork and accommodation information for SZFN participant A. Hall to C.Pennier.	None
8/19/2013	In-Person		Rhea Solberg (TERA)	Vegetation crew #1 conducted a rare plant survey from August 19-23, 2013. One participant from SZFN participated. A summary of concerns raised, proposed mitigative measures reviewed for each of the concerns and any concerns remaining unresolved in the field are provided below. Concerns raised: - contamination of water from chemicals leaking - removal of garbage after construction Mitigative measures reviewed: - Emergency response plans Unresolved concerns/requests for follow-up: -none	Terrestrial - Land Spills - Environmental Impact
9/10/2013	Phone - Outgoing	Colin Pennier (Senior Manager)	Norman Marcy (KMC)	C. Pennier informed team member by phone that SZFN was still in early stages of engagement activities. Team member inquired into progress of engagement activities contemplated by capacity LOU. Team member reminded C. Pennier of the LOU agreement and the schedule attached which outlined activities and deliverables. Team member also indicated personal availability for future meetings to discuss the matter.	None
9/11/2013	Email- Outgoing	Chief Andy Phillips, Colin Pennier (Senior Manager)	Norman Marcy (KMC)	Team member e-mailed LOU to C. Pennier as a follow up to the phone conversation from September 10, 2013. Team member specified that final payment will not be made unless deliverables are received but explained that KMC can formally extend the time period on the LOU if requested by SZFN.	None
9/11/2013	Phone – Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member called Chief A. Phillips and discussed proposed meeting dates, preparation and extension on the existing LOU, and a proposed date with team member with Sto:lo Tribal Council at a later date. Team member would follow-up the conversation with an email to Chief A. Phillips.	None
9/11/2013	Email- Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member e-mailed Chief A. Phillips and stated intent to work on the extension of the existing LOU and would be taking steps to arrange a meeting between Sto:lo Tribal Council and KMC President.	None
9/30/2013	Email – Outgoing	Fern Angus, Brian Jones, Chief Andy Phillips	Norman Marcy (KMC)	Team member emailed F. Angus, B. Jones and Chief A. Phillips to follow-up regarding a meeting between Chief Clem Seymour and team member. Team member explained that the Protocol Agreement would need to be finalized before a meeting between team member and Chief C. Seymour could occur. A. Phillips suggested October 9, 2013 as a date to meet and team member agreed that the morning would work but also suggested October 15, 2013 or October 18, 2013 as alternatives.	None
9/30/2013	Email – Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member emailed Chief A. Phillips to confirm the time of a meeting on October 9, 2013 and requested that Chief A. Phillips reply.	None

APPENDIX A-4-15
SEABIRD ISLAND BAND

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
10/10/2011	Phone - Outgoing	Chief Clem Seymour	Charles Littledale (KMC)	Team member phoned Chief C. Seymour to explain Open Season.	None
10/20/2011	Phone - Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member phoned Chief C. Seymour to explain Open Season.	None
2/21/2013	Email- Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour and provided a copy of the press release for the TransMountain Expansion Project (the Project).	None
3/6/2012	Phone - Incoming	Chief Clem Seymour	Regan Schlecker (KMC)	Chief C. Seymour called team member and inquired about update on Open Season; wanted clarification of rumors that KMC announced a project and requested an update by end of March 2012.	None
3/27/2013	Email- Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour and provided a copy of the extended press release for the TransMountain Expansion Project (the Project).	None
4/12/2012	Letter – Outgoing	Chief Clem Seymour	Ian Anderson (KMC)	Team member sent a letter to Chief. C. Seymour that notified Seabird Island Band (SIB) of the Trans Mountain Expansion Project (the Project). Team member stated that the Project was expected to be completed in 2017; during the interim period, KMC was committed to meaningfully engaging with Aboriginal communities along the Project route. KMC recognized the integral role of Aboriginal groups and understood that Aboriginal interests, responsibilities and concerns were critical to the Project's planning. Team member provided the preliminary project scope and stated that further engagement efforts were forthcoming. Also attached: <ul style="list-style-type: none"> • Project Backgrounder • Project Media Release 	None
5/22/2012	Phone - Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member left detailed voice message with Chief C. Seymour regarding a Media Release to announce Trans Mountain Finalizes Shipper Commitments for Pipeline Expansion. The Media Release was scheduled to be sent May 23, 2012.	None
5/23/2012	Phone - Incoming	Chief Clem Seymour	Regan Schlecker (KMC)	Chief C. Seymour called team member regarding May 23, 2012, KMC Media Release to announce Trans Mountain Finalizes Shipper Commitments for Pipeline Expansion; missed call. Team member returned Chief C. Seymour's call regarding May 23, 2012, KMC Media Release to announce Trans Mountain Finalizes Shipper Commitments for Pipeline Expansion. Chief C. Seymour also mentioned his conversation with KMC President regarding the need to understand KMC's process for consultation and looked forward to initiating this discussion.	None
5/23/2012	Email- Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour in follow-up to phone call regarding the KMC Media Release of May 23, 2012. Team member highlighted key aspects of the Media Release, specifically the increase barrels per day from 300, 000 bpd to 750, 000 bpd.	None
5/29/2012	Letter - Outgoing	Chief Clem Seymour	Ian Anderson (KMC)	Team member mailed follow-up notification letter regarding preliminary scope of Project, attachments (Project System Maps and Project Schedule) and regulatory requirements to Chief and Council.	None
5/30/2012	Email- Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour and followed up on previous conversation with the Chief, indicating an engagement letter would soon to be sent through e-mail. Team member also proposed a meeting date on June 7, 2012.	None
5/30/2012	Email- Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour updates on the engagement process, Project proposal and schedule.	None
6/4/2012	Email- Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour and confirmed upcoming meeting. Team member noted Chief C. Clem's request to meet at Sto:lo Tribal Council (STC) offices and that Grand Chief C.Pennier may also attend meeting.	None
6/29/2012	Email- Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour to inform of the filing of an application for National Energy Board (NEB) approval of the contract terms and toll structure for the Project.	None
8/8/2012	Phone - Incoming	Chief Clem Seymour	Regan Schlecker (KMC)	Chief C. Seymour called team member.	None
8/9/2012	Phone - Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member called Chief C. Seymour to discuss the Project, relay requests, and plan next steps for a meeting with CSP.	None
8/10/2012	Phone - Outgoing	Chief Clem Seymour	Charles Littledale (KMC)	Team member phoned Chief C. Seymour to follow up on an earlier discussion with KMC regarding arranging a meeting to discuss Seabird's engagement involving the Project. Meeting scheduled August 20, 2012.	None
8/20/2012	In-Person	Chief Clem Seymour Brian Jones (Economic Development Manager) Jay Hope (Research Director)	Charles Littledale (KMC)	Team member met with Chief C. Seymour, B. Jones (Economic Development Manager), and J. Hope (Research Director) at the SIB Administrative offices. Topics of discussion included: protocol agreement template; update on the status of the TMEP project since their last meeting in June 2012; environmental review; capacity funding; consultation strategy; and field programs. SIB expressed interest in hearing about all aspects of the project; capacity funding; participation in environmental review; and some form of benefit agreement.	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
9/28/2012	Phone - Outgoing	Chief Clem Seymour	Charles Littledale (KMC)	Team member called Chief C. Seymour to arrange and confirm meeting with KMC for October 9, 2012 and discussed that the nature of the meeting would be informal and provide an opportunity for KMC to visit the community.	None
9/29/2012	Email- Outgoing	Chief Clem Seymour	Charles Littledale (KMC)	Team member emailed Chief C. Seymour to confirm that KMC President and representative will visit Seabird in the morning of Oct 9, 2012 and provided details of arrival. Team member noted that this visit was something that had been discussed with KMC president and would be an informal visit for to show him around the Seabird community.	None
10/2/2012	Email- Outgoing	Fern Angus (Administrator)	Charles Littledale (KMC)	Team member emailed F. Angus about forwarding the email to Chief C. Seymour.	None
10/2/2012	Email- Incoming	Fern Angus (Administrator)	Charles Littledale (KMC)	F. Angus email team member and responded that Chief is out of town for the next couple of days and is due to return October 4, 2012.	None
10/4/2012	Phone - Attempt	Chief Clem Seymour	Charles Littledale (KMC)	Team member called Chief C. Seymour and left a message wishing to confirm meeting with KMC for October 9, 2012 and to confirm who would be present at the meeting as well as the nature of the meeting.	None
10/4/2012	Email- Outgoing	Chief Clem Seymour	Norman Marcy (KMC)	Team member sent email follow-up to phone message of introduction and to request engagement with Chief C. Seymour concerning the Project. Team member was prepared to attend meetings with Seabird Chief and Council, arrange for presentations or additional information as required, and discuss capacity and other arrangements that may facilitate dialogue.	None
10/4/2012	Phone - Attempt	Chief Clem Seymour	Norman Marcy (KMC)	Team member phoned Chief C. Seymour and left message of introduction and invitation to discuss TMEP project with SIB.	None
10/4/2012	Email- Incoming	Fern Angus (Administrator)	Norman Marcy (KMC)	F. Angus emailed team member and confirmed receipt of team member's telephone message to Chief C. Seymour and indicated that Chief C. Seymour was not in the office but was due back October 4, 2012 and would pass on the message and response as soon as possible.	None
10/9/2012	In-Person	Chief Clem Seymour, Brian Jones (Economic Development Manager) Tyrone McNeil (Vice President , STC) Darryl McNeil (Band Manager) Jay Hope (Aboriginal Rights & Title Research Director)	Ian Anderson (KMC), Regan Schlecker (KMC)	Team members met with Chief C. Seymour, B. Jones, T. McNeil, D. McNeil and J. Hope on October 9, 2012. Discussed: <ul style="list-style-type: none"> • Capacity Funding • Information sharing • KMC organization structure and issue escalation • SIB interested in entering into an Memorandum of Understanding (MOU)/Protocol Agreement <ul style="list-style-type: none"> - Community event to sign the MOU - Foster a stronger relationship between the community and KMC • SIB requested a Legacy Agreement • Education and Training opportunities • Economic development opportunities • SIB noted that it associated with STC but was its own governing entity • SIB participation encouraged in field work throughout SIB's Traditional Territory • Interest in a territory Overflight • Team members interested in attending a tour of community sites Action Items: <ul style="list-style-type: none"> • B. Jones to formally respond to Capacity Funding budget proposal • B. Jones to formally respond to MOU/Protocol agreement • Team member to follow-up on request for a territory overflight 	None
11/1/2012	Email- Outgoing	Brian Jones (Economic Development Manager)	Lowa Beebe (TERA)	Team member emailed B. Jones and provided notification of two upcoming Aquatics studies taking place in the area: <ul style="list-style-type: none"> • Aquatics crew 1 (November 3, 2012 – November 10, 2012) • Aquatics crew 2 (November 19, 2012 – November 30, 2012). One participant per study was requested and the Participation forms were attached.	None
11/1/2012	Phone - Outgoing	Brian Jones (Economic Development Manager)	Paul Anderson (TERA)	Team member called B. Jones (Economic Development Manager) to discuss interest in a TEK/TLU Workshop to be booked in the near future.	None
11/2/2012	Email- Outgoing	Brian Jones (Economic Development Manager)	Lowa Beebe (TERA)	Team member emailed B. Jones (Economic Development Manager) to discuss SIB participants on upcoming Aquatics studies (see email: November 1, 2012), indicating that multiple participants could be accommodated on each study. B. Jones provided participant information for those attending the Aquatics studies (November 3, 2012 – November 10, 2012; November 19 – November 30, 2012).	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
11/3/2012	In-Person	Community Member	Brian Bruzzese (TERA)	<p>Aquatics crew #2 conducted an aquatics study from November 3 - 8, 2012. One participant from community was present. A summary of the concerns raised, the proposed mitigative measures reviewed for each of those concerns and any concerns that remained unresolved in the field are provided below.</p> <p>Concerns raised: - water quality; - pollutants from machinery and materials during construction; - erosion; and - fish and fish habitat (spawning).</p> <p>Mitigative measures reviewed: - water quality monitors; - erosion controls; - machinery kept away from waterbodies during cleaning and maintenance; and - federal/provincial protection plan for fish spawning habitat.</p> <p>Unresolved concerns/requests for follow-up: - none.</p>	Terrestrial - Freshwater Fish, Terrestrial-Water Quality/Quantity
11/3/2012	In-Person	Community Member	Brandy Mayes (TERA)	<p>Aquatics crew #1 conducted an aquatics survey from November 3 to 9, 2012. One participant from Seabird Island Band was present. A summary of the concerns raised, the proposed mitigative measures reviewed for each of those concerns and any concerns that remained unresolved in the field are provided below.</p> <p>Concerns raised: - fish and fish habitat; and - water quality.</p> <p>Mitigative measures reviewed: - water quality monitoring during construction</p> <p>Unresolved concerns/requests for follow-up: - Participants suggested all creeks be monitored for water quality.</p>	Terrestrial - Freshwater Fish, Terrestrial-Water Quality/Quantity
11/7/2012	In-Person	Brian Jones (Economic Development Manager)	Norman Marcy (KMC), Charles Littledale (KMC)	<p>Team members met with B. Jones and reintroduced the Project. Team members repeated offer to assist with information or to discuss approach. B. Jones said there would be further consideration of the capacity funding needs of SIB over the next two weeks. The proposal had been prepared and was being reviewed internally by SIB. SIB would attempt to work more closely with other First Nations in the area on the Project and Engagement with KMC. B. Jones would welcome communications with other team members on procurement matters and on Archaeology / Traditional Use.</p>	None
11/14/2012	Email-Outgoing	Brian Jones (Economic Development Manager)	Lowa Beebe (TERA)	<p>Team member emailed B. Jones (Economic Development Manager) and provided notification of an upcoming Aquatics study taking place from November 19, 2012 – November 30, 2012. Two SIB participants were requested.</p>	None
11/14/2012	Email-Outgoing	Jay Hope (Research Director)	Lowa Beebe (TERA)	<p>Team member emailed J. Hope (Research Director) and provided notification of an upcoming Aquatics study taking place from November 19, 2012 – November 30, 2012, which required two SIB participants.</p>	None
11/14/2012	Email-Incoming	Brian Jones (Economic Development Manager)	Lowa Beebe (TERA)	<p>B. Jones (Economic Development Manager) emailed team member to notify that the Research Director of Aboriginal Rights and Title (SIB) would be leading consultation coordination going forward. Contact information provided.</p>	None
11/15/2012	Email-Incoming	Jay Hope (Research Director)	Lowa Beebe (TERA)	<p>B. Jones emailed Team member and requested logistical details for the upcoming Aquatics study (November 19, 2012 – November 30, 2012; Abbotsford, BC). Team member provided requested information. J. Hope provided completed Participation forms.</p>	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
11/20/2012	In-Person	Community Member	Brandy Mayes (TERA), Mark Saunders (TERA)	Aquatics crew #1 conducted an aquatics survey from November 20 to 21, 2012. One participant from Seabird Island Band participated. A summary of the concerns raised, the proposed mitigative measures reviewed for each of those concerns and any concerns that remained unresolved in the field are provided below. Concerns raised: - Culturally modified trees (CMT); - historical trails; - fish and fish habitat (spawning); and - water quality. Mitigative measures reviewed: - water quality monitoring; - management of fish habitat; and - further archeaology studies to classify CMTs. Unresolved concerns/requests for follow-up: - First Nations be involved throughout the water quality monitoring and trenching activity during construction.	Terrestrial - Freshwater Fish, Terrestrial - Traditional Land Use, Terrestrial-Water Quality/Quantity
11/23/2012	Email- Outgoing	Brian Jones (Economic Development Manager)	Lowa Beebe (TERA)	Team member emailed B. Jones to inform SIB that the Aquatics study scheduled from November 19, 2012 – November 30, 2012 had finished early due to land access issues.	None
12/4/2012	Phone - Attempt	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member left message for B. Jones inquiring about clearance of draft agreement or Seabird Proposal with Chief and Council.	None
12/11/2012	Email- Outgoing	Daryl McNeil (Band Manager)	Lowa Beebe (TERA)	Team member emailed D. McNeil information on a proposed TEK/TLU Workshop.	None
12/11/2012	Phone - Attempt	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member left message for B. Jones who would not be in the office until tomorrow.	None
12/12/2012	Email- Outgoing	Brian Jones (Economic Development Manager)	Lowa Beebe (TERA)	Team member emailed B. Jones information on a proposed TEK/TLU Workshop. Team member attached a document that contained further information on the workshop, and notified B. Jones that the workshop takes approximately four hours.	None
12/12/2012	Phone - Outgoing	Daryl McNeil (Band Manager)	Lowa Beebe (TERA)	Team member called D. McNeil to follow up on an earlier email regarding a TEK/TLU workshop (December 11, 2012). Team member had been advised to contact D. McNeil to schedule the meeting.	None
12/14/2012	Email- Incoming	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	B. Jones emailed team member regarding an attached Draft Protocol Agreement for review. B. Jones indicated that it was in their best interest to start this Project with a good understanding and the agreement hopefully spelled that out.	None
12/17/2012	Email- Outgoing	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	Team member emailed B. Jones regarding the draft agreement and indicated the team looked forward to reviewing it. Comments would be provided in the new year.	None
1/7/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Lowa Beebe (TERA)	Team member emailed B. Jones regarding a TEK/TLU meeting with SIB (see email: December 12, 2012)	None
1/9/2013	Phone - Attempt	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member called B. Jones and left a voicemail message indicating review of the draft Protocol agreement was underway and requested an opportunity to meet and discuss it. Team member indicated availability for January 16 or 17, 2013.	None
1/10/2013	Email- Incoming	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	B. Jones emailed team member regarding availability to meet on January 17, 2013.	None
1/10/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed B. Jones and agreed to meet January 17, 2013 and included some thoughts about the Protocol Agreement that could be considered prior to the meeting.	None
1/10/2013	Email- Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour and provided a link and copy of KMC's news release had been attached. Contact information was also supplied.	None
1/10/2013	Letter - Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member sent a letter to Chief C. Seymour to notify SIB of KMC's future plans for the Trans Mountain Pipeline and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited Chief C. Seymour to visit the Project's website.	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
1/17/2013	In-Person	Chief Clem Seymour, Brian Jones (Economic Development Manager) Jay Hope (Research Director)	Paul Anderson (TERA), Norman Marcy (KMC)	Team members met with Seabird representatives Chief C. Seymour, B. Jones and J. Hope Introductions were made, discussions regarding the Protocol ensued and KMC gave a brief presentation of the Project. Team members committed to obtaining a set of initial custom maps and discussed Traditional Ecological Knowledge (TEK) and Traditional Use Study. SIB had already been working on the TEK and had good experience with the Project thus far. Team members agreed to try to have a Letter of Understanding for Capacity and funding in place prior to having Chief C. Seymour and the President come together again.	None
1/20/2013	Phone - Attempt	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member left phone message for J. Hope indicating availability to meet to discuss documents to conclude the agreements.	None
1/29/2013	Email- Outgoing	Brian Jones (Economic Development Manager) Jay Hope (Research Director)	Norman Marcy (KMC)	Team member emailed B. Jones and J. Hope indicating review of the Protocol agreement was completed and accepted the Agreement in its present state. Team member noted that as discussed at the last meeting, there is hope that a Letter of Understanding (LOU) and funding schedule for initial Project engagement can be brought forward for execution by Chief C. Seymour and the President of KMC at their next meeting. Team members requested a letter on letterhead that sets out: Official Name of First Nation / Band; Mail address; Tax number; and Name of contact and phone number for Accounts at the First Nation.	None
2/6/2013	Phone - Attempt	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member called B. Jones and left message inquiring about review and next steps for Protocol and Capacity agreement.	None
2/13/2013	Phone - Incoming	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	B. Jones called team member and confirmed that J. Hope was working on the tasks required. Team member reiterated that if a meeting was required in the next two weeks to conclude the arrangements he would be available to meet.	None
2/13/2013	Phone - Attempt	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member left message for B. Jones inquiring about the status of draft Protocol and agreement.	None
2/13/2013	Phone - Outgoing	Brian Jones (Economic Development Manager) Jay Hope (Research Director)	Norman Marcy (KMC)	Team member called J. Hope who indicated that the agreement was in front of Seabird Chief and Council on February 12, 2013 and now had instructions for drafting that he was working on.	None
2/19/2013	Phone - Attempt	Brian Jones (Economic Development Manager) Jay Hope (Research Director)	Norman Marcy (KMC)	Team member left phone message for J. Hope indicating availability to meet to discuss documents to conclude the agreements.	None
2/23/2013	Email- Outgoing	Brian Jones (Economic Development Manager) Jay Hope (Research Director)	Norman Marcy (KMC)	Team member emailed J. Hope indicating availability on either February 26, 2013 February 27, 2013 to discuss either of the Draft Agreements in person.	None
3/15/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Lowa Beebe (TERA)	Team member emailed B. Jones and attached an info sheet on the Project and notification of upcoming Aquatics studies. Team member noted that more information would be provided as Aquatics studies were confirmed.	None
3/21/2013	Email- Incoming	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	B. Jones emailed team member to confirm that B. Jones is still waiting to hear back from the Chief and Council regarding the documents presented by KMC. Team member emailed B. Jones and requested an exchange on the draft Protocol and Capacity Funding agreement. Team member provided contact information and availability.	None
3/22/2013	Email- Incoming	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	B. Jones emailed team member to confirm that Chief C. Seymour is still in the office and provided the names of the two new council members. Stakeholder also mentioned that the Council wishes to present the MOU to the community for direction and that stakeholder will provide the results to KMC afterwards	None
3/22/2013	Letter - Outgoing	Chief Clem Seymour	Gary Youngman (KMC)	Team member mailed Chief C. Seymour a letter notifying of permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). These permits would be filed with the National Energy Board (NEB) following a regulatory review and public hearing process (projected for completion in 2015).	None
3/26/2013	Phone - Attempt	Jay Hope (Research Director)	Norman Marcy (KMC)	Team member phoned J. Hope and left a message enquiring about next steps and requested an opportunity to meet on the Letter of Understanding.	None
3/29/2013	Email- Outgoing	Jay Hope (Research Director)	Lowa Beebe (TERA)	Team member emailed Jay Hope and notified SIB of upcoming Aquatics and Terrestrial Ecosystem Mapping (TEM) studies. • Aquatics (April 6 – April 16, 2013) • TEM (April 20 – April 27, 2013) One participant was requested per study and the Participation forms were attached.	None
4/3/2013	Email- Outgoing	Jay Hope (Research Director)	Lowa Beebe (TERA)	Team member emailed J. Hope in regards to participants in TEM and Aquatics Studies. J. Hope was notified of a change of dates for the TEM study. Team member emailed J. Hope in regards to participants in TEM and Aquatics Studies. J. Hope was notified of a change of dates for the TEM study.	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
4/3/2013	Email-Outgoing	Jay Hope (Research Director)	Lowa Beebe (TERA)	Team member emailed J. Hope to indicate a change of dates for the upcoming studies, and requested confirmation of SIB participants for each: • TEM (April 12 – April 14, 2013) • Aquatics (April 8 – April 18, 2013)	None
4/4/2013	Email-Incoming	Jay Hope (Research Director)	Lowa Beebe (TERA)	J. Hope emailed team member to provide participation forms for the upcoming Aquatics and TEM studies. SIB participant contact information provided. J. Hope inquired about additional Personal Protective Equipment (PPE) needed for SIB participants. J. Hope requested clarification on logistical details.	None
4/5/2013	Email-Outgoing	Jay Hope (Research Director)	Lowa Beebe (TERA)	Team member emailed J. Hope with requested logistical details for participants joining the upcoming Aquatics and TEM studies.	None
4/8/2013	Email-Outgoing	Jay Hope (Research Director)	Lowa Beebe (TERA)	Team member emailed J. Hope indicating that most required PPE would be provided on-site, but participants should bring as much PPE as possible.	None
4/9/2013	Email-Outgoing	Jay Hope (Research Director)	Lowa Beebe (TERA)	Team member emailed J. Hope regarding accommodation dates and mobilization site details for participants for the upcoming TEM and Aquatics studies.	None
4/9/2013	In-Person	Community Member	Michelle Langfeldt (TERA), Carla McConnell (TERA), Jeff Kennedy (TERA)	Aquatics crew #3 conducted an aquatics study from April 9-17, 2013. One participant from Seabird Island Band participated. A summary of the concerns raised, the proposed mitigative measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - effects of construction on Fraser River and fishing - protection of wildlife Mitigative measures reviewed: - watercourse crossing methods - timing of construction - wildlife studies preconstruction - reclamation Unresolved concerns/requests for follow-up: - HDD the Fraser River	Marine - Fish, Marine - Mammals
4/12/2013	In-Person	Community Member	Brian Bruzzese (TERA), Christina Norris (TERA)	Vegetation crew #1 conducted a vegetation survey from April 12-15, 2013. One participant from Seabird Island Band participated. A summary of the concerns raised, the proposed mitigative measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - pipeline leaks impacting water quality; - increased sediment in watercourses from construction impacting fish habitat; - destruction of archaeological sites such as pithouses Mitigative measures reviewed: - HDD water crossing methods, isolation dam and fish salvage, open cut; - shut off valves and construction quality checks; - avoidance of archaeological sites Unresolved concerns/requests for follow-up: -none	Marine - Fish, Marine - Water Quality/Quantity, Socio-Econ. Terrestrial - Heritage Resources - Archaeology, Terrestrial - Land Spills - Environmental Impact

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
4/12/2013	In-Person	Community Member	Kim Yarmuch (TERA), Chris Menzies (TERA)	TEM crew #2 conducted a terrestrial ecosystem mapping study from April 12 to 14, 2013. One participant from Seabird Island Band participated. A summary of the concerns raised, the proposed mitigative measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concerns raised: - cedar removal and waste of cedar timber; - impact on fishing in the Fraser River which is a source of income and important traditional activity; - declining health of fish populations - impact of spill on watercourse quality; - impact on deer hunting grounds; - erosion on hillsides if trees are cleared; - human safety as predators are displaced and may move toward communities. Mitigative measures reviewed: - timber option to First Nations; - watercourse crossing methods; - route selection takes into account wildlife critical habitat; - wildlife crossings; - soil salvage; - construction timing; - wildlife studies of predator movement. -reclamation and erosion control measures Unresolved concerns/requests for follow-up: - prayer offered to bless cedars before removal; - contact regarding timber removal; - information on mudslide incidence in relation to pipeline construction.	Marine - Fish, Socio-Econ. Terrestrial - Human Health, Terrestrial - Freshwater Fish, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Land Spills - Environmental Impact
4/17/2013	Email-Outgoing	Brian Jones (Economic Development Manager), Jay Hope (Research Director) Jay Hope (Research Director) (Research Director)	Lowa Beebe (TERA)	Team member emailed B. Jones and notified SIB of an upcoming Aquatics study scheduled, May 3, 2013. One participant requested and the Participation form was attached.	None
4/19/2013	Email-Outgoing	Jay Hope (Research Director) Jay Hope (Research Director) (Research Director)	Lowa Beebe (TERA)	Team member emailed J. Hope and notified SIB of an upcoming Aquatics study (Crew 4) scheduled, April 25, 2013 – May 2, 2013. One participant was requested and the Participation form was attached.	None
4/22/2013	Email-Incoming	Jay Hope (Research Director) Jay Hope (Research Director) (Research Director)	Lowa Beebe (TERA)	J. Hope emailed team member and notified of the SIB participant joining the Aquatics study April 25, 2013 – May 2, 2013	None
4/25/2013	Email-Outgoing	Brian Jones (Economic Development Manager)	Angelina Silver (TERA)	Team member emailed stakeholder and attached: • TLU Cover Letter • 3rd-party Socio-Economic/TLU Workplan	None
4/25/2013	In-Person	Community Member	Brandy Mayes (TERA), Natalie Arad (TERA)	Aquatics crew #1 conducted an aquatics study from April 25 - 28, 2013. One participant from Seabird Island Band participated. A summary of the concerns raised, the proposed mitigative measures reviewed for each of those concerns and any concerns that remained unresolved in the field is provided below. Concern raised: - Fish and water quality - potential spills - disturbance to red-tailed hawks nest Mitigative measures raised: - watercourse crossing methods - wildlife timing constraints and setbacks - water quality monitoring - pipeline coating, integrity testing and safety measures Unresolved concerns/requests for follow-up: - none	Marine - Birds, Marine - Fish, Marine - Water Quality/Quantity
4/29/2013	Email-Incoming	Brian Jones (Economic Development Manager)	Lowa Beebe (TERA)	B. Jones emailed team member and notified of the participant joining the Aquatics study scheduled, May 3, 2013.	None
5/13/2013	Email-Outgoing	Evelyn Peters (Cultural Heritage Coordinator)	Regan Schlecker (KMC)	Team member emailed E. Peters and expressed interest in cultural workshops in relation to KMC.	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
5/17/2013	Email-Outgoing	Evelyn Peters (Cultural Heritage Coordinator)	Regan Schlecker (KMC)	E. Peters emailed team member in response to email sent May 13, 2013 and inquired about Project time frame and possible dates for upcoming workshops. It was expressed that these be answered sooner rather than later while there is still availability.	None
5/24/2013	Email-Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour and provided a brief summary of the Project Description. Project Description was attached.	None
5/24/2013	Phone - Attempt	Chief Clem Seymour	Regan Schlecker (KMC)	Team member called C. Seymour to follow up on Project Description sent in a previous e-mail. Team member requested a call back at earliest convenience.	None
5/25/2013	Email-Outgoing	Evelyn Peters	Regan Schlecker (KMC)	Team member emailed E. Peters in response to an email dated May 17, 2013. Team member noted that the timeframe for the Cultural Workshop was not urgent and it had been suggested by Chief C. Seymour to potentially include it as part of the signing of the Protocol Agreement community event.	None
5/27/2013	Letter-Outgoing	Chief Clem Seymour	Gary Youngman	Team member mailed Chief C. Seymour and notified SIB that the Project Description had been submitted to the NEB. It was explained that this preliminary document was used to signal the intent of TransMountain to submit a comprehensive Facilities Application. The submission of the Project Description follows an NEB decision, released on May 16, 2013, that approved the commercial aspects of the proposed expansion project.	None
6/13/2013	Email-Outgoing	Brian Jones (Economic Development Manager) Fern Angus (Administrator) Jay Hope (Research Director)	Norman Marcy (KMC)	Team member e-mailed J. Hope, F. Angus, B. Jones to inform about an operational incident along the existing Pipeline, in the Kingsvale area southwest of Merritt, B.C.	None
6/14/2013	Phone - Attempt	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member called B. Jones and left a voice message inquiring as to status update for both Protocol agreement and draft Letter of Agreement (LOA).	None
6/14/2013	Phone - Attempt	Jay Hope (Research Director)	Norman Marcy (KMC)	Team member call J. Hope and left message inquiring as to status update for both Protocol agreement and draft LOA	None
6/20/2013	Phone - Outgoing	Brian Jones (Economic Development Manager), Jay Hope (Research Director)	Norman Marcy (KMC)	Team member called B. Jones and left messages stating that KMC is prepared to enter the draft Protocol agreement as prepared by SIB. Furthermore, KMC is ready to proceed with the draft Capacity agreement. Team member requested a call-back to provide an update on SIB's considerations in these matters.	None
6/23/2013	Phone - Outgoing	Jay Hope (Research Director)	Norman Marcy (KMC)	Team member called J. Hope but was unable to leave a message.	None
6/25/2013	Phone - Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member called B. Jones and discussed SIB engagement; B. Jones indicated there had been efforts to consult with the community and FN council to make a decision about engagement. Team member and B. Jones made arrangements to meet June 27, 2013.	None
6/25/2013	Phone - Attempt	Fern Angus (Administrator)	Norman Marcy (KMC)	Team member called F. Angus and left a message concerning next steps for Protocol and Capacity agreement. Chief & Council to review.	None
6/26/2013	Email-Incoming	Fern Angus (Administrator)	Norman Marcy (KMC)	Community Contact emailed Team member and acknowledged receipt of the phone message left by Team member and promised to deliver it to SIB's Chief.	None
6/27/2013	In-Person	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member met with B. Jones to discuss progress toward conclusion of a Protocol and Capacity agreement. B. Jones stated that Chief & Council have given consideration to the matter and have provided direction for further community engagement by KMC. B. Jones also noted that SIB's legal counsel have reviewed the documents and will likely provide suggested changes. Team member demonstrated understanding of the community's situation but noted that KMC might move forward with the Project and filing with the NEB and tension may arise if SIB is not formally engaged with. Team member requested a map of SIB's Traditional Territory; B. Jones stated that the map would be of the Sto:lo Traditional Territory as they are a Sto:lo nation. B. Jones also noted that questions had arisen from community members requiring answers from KMC; Team member directed B. Jones to the Project's official website as a source for information but if B. Jones had specific questions at the ready, Team member could answer them right away.	None
7/15/2013	Phone - Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member called B. Jones and discussed efforts by SIB to address the engagement process with Chief & Council as they are aware of the Project but have not taken further action with regards to it. These efforts were complicated further by the beginning of the important fishery season and engagement would prove difficult during this period. Team member stated willingness to engage with SIB in whatever methods necessary and suggested a meeting with SIB Chief and KMC President.	None
7/15/2013	Phone - Attempt	Jay Hope (Research Director)	Norman Marcy (KMC)	Team member called J. Hope and left a message requesting a call back to discuss next steps in engagement process.	None
7/25/2013	Email-Outgoing	Daryl McNeil (Band Manager), Terry Andow (Executive Assistant)	Clare Peacock (TERA)	Team member emailed D. McNeil and T. Andow and notified SIB of an upcoming Archaeology study scheduled, August 2 – August 11, 2013. One participant was requested and the Participation form was attached.	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
7/31/2013	Email-Outgoing	Daryl McNeil (Band Manager), Terry Andow (Executive Assistant)	Clare Peacock (TERA)	Team member emailed D. McNeil and T. Andow and notified SIB that the Archaeology study (August 2 – August 11, 2013) was on hold and that SIB would be contact once new assessment dates had been confirmed.	None
8/7/2013	Email-Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour and attached a link to the Project update document (August, 2013). Team member stated that KMC was anticipating hearing from SIB on the status of draft agreements and September signing ceremony.	None
8/08/2013	Letter-Outgoing	Chief Clem Seymour	Regan Schlecker	Team member sent a letter to Chief C. Seymour which notified SIB that capacity funding had been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None
8/9/2013	Email-Incoming	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	B. Jones emailed Team member and attached the draft Protocol Agreement for SIB. Stakeholder Contact noted changes had been applied to the document since its last draft.	None
8/12/2013	Email-Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed B. Jones and notified that KMC had undertaken a review of stakeholder's latest drafting and attached the document.	None
8/13/2013	Email-Outgoing	Brian Jones (Economic Development Manager), Jay Hope (Research Director)	Clare Peacock (TERA)	Team member emailed Stakeholders to notify SIB of an upcoming Vegetation study, scheduled August 19 – August 23, 2013. One participant was requested and the Participation form was attached.	None
8/13/2013	Letter - Outgoing	Chief Clem Seymour	Margaret Mears (KMC)	Team member sent a letter to Chief C. Seymour. This letter served as a follow-up to the letter received from BC Parks in late July 2013 regarding the revised application for a Research and Education Park Use Permit to undertake research sampling in Coquilla Summit recreation area. The proposed undertaking involves minimal intrusion and includes: <ul style="list-style-type: none"> • Watercourse Assessment Surveys • Terrestrial Ecosystem Mapping Surveys • Soils Surveys • Archaeological and Palaeontological Surveys 	None
8/14/2013	Email-Outgoing	Jay Hope (Research Director)	Clare Peacock (TERA)	J. Hope emailed Team member and notified TERA of the SIB participant joining the Vegetation study scheduled August 19 – August 23, 2013.	None
8/18/2013	Phone - Attempt	Fern Angus (Administrator)	Norman Marcy (KMC)	Team member called F. Angus and left a voicemail suggesting October 9 or October 15, 2013 as an appropriate date for a meeting between Chief C. Seymour and KMC Preseident to execute a Protocol Agreement. Team member also indicated that a meeting with Sto:lo Tribal Council would be desirable at the same trip. Team member indicated trying to be in touch with B. Jones of SIB on this matter.	None
8/19/2013	In-Person	Community Member	Rhea Solberg (TERA)	Vegetation crew #1 conducted a rare plant survey from August 19-23, 2013. One participant from Seabird Island Band participated. A summary of concerns raised, the proposed mitigative measures reviewed for each of those concerns and any concerns that remain unresolved in the field is provided below. Concerns raised: - contamination of water from chemicals leaking - removal of garbage after construction Mitigative measures reviewed: - Emergency response plans Unresolved concerns/requests for follow-up -none	Terrestrial - Land Spills - Environmental Impact
8/21/2013	Email-Outgoing	Jay Hope (Research Director)	Clare Peacock (TERA)	Team member emailed J. Hope and notified SIB of an upcoming Wildlife survey, scheduled September 9 – September 10, 2013. One participant was requested and the Participation form was attached which contained further information pertaining to participant logistics. Stakeholder indicated SIB would be very interested in participating in this survey and would forward participant details as they are confirmed.	None
9/5/2013	Email-Incoming	Jay Hope (Research Director)	Clare Peacock (TERA)	J. Hope emailed team member and requested logistical details for the participant from SIB that would be attending the Wildlife survey scheduled September 9 – September 10, 2013.	None
9/6/2013	Email-Outgoing	Jay Hope (Research Director)	Clare Peacock (TERA)	Team member emailed J. Hope and provided the logistical details for the SIB participant attending the Wildlife survey scheduled September 9 – September 10, 2013. Information requested by email, September 5, 2013.	None
9/9/2013	In-Person	Community Member	Rhea Solberg (TERA)	Wildlife crew #1 conducted a spotted owl survey from September 9 – September 10, 2013. One participant from Seabird Island Band participated. No concerns were identified by participants on this study but a participant did request that community members be allowed to visit the Burnaby Kinder Morgan plant to see the final processes of oil manufacturing.	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
9/10/2013	Phone - Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member called B. Jones to review protocol and draft LOU prior to meeting on October 7, 2013 between KMC and SIB	None
9/11/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	B. Jones responded confirming that it was very likely the Protocol agreement would be signed at an October meeting. B. Jones requested a date for the October meeting from team member. Team member responded to B. Jones's email requesting to see the Protocol agreement prior to meeting October 7, 2013 so as to better prepare for discussion.	None
9/11/2013	Phone - Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member called B. Jones to review Protocol and draft LOU prior to meeting in October between KMC and SIB	None
9/12/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed B. Jones and re-sent the draft Protocol agreement as requested.	None
9/18/2013	Email- Incoming	Fern Angus (Administrator)	Norman Marcy (KMC)	F. Angus emailed team member and notified team member that two key community members were out of the office, and would not be returning until September 19, 2013 at the earliest.	None
9/18/2013	Email- Outgoing	Brian Jones (Economic Development Manager), Fern Angus (Administrator)	Norman Marcy (KMC)	Team member emailed B. Jones to discuss the Protocol agreement with SIB. Team member noted that the Protocol agreement had been sent August 12, 2013 and once again the week of September 8, 2013; KMC awaited notification of changes to this Agreement. Team member expressed interest in organizing a meeting with STC during the same period as the signing (October 7, 2013). B. Jones informed Team member that the Protocol agreement had been submitted to PB Legal Counsel for review and was anticipating comments shortly.	None
9/18/2013	Phone - Attempt	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member called B. Jones and left a voicemail notifying that October 9 and October 15, 2013 were available as alternative dates to meet with Chief Seymour to execute Protocol agreement. Team member requested a call back and also committed to follow up with an email.	None
9/19/2013	Email- Incoming	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	B. Jones emailed Team member and sent a list of questions related to the Project. Stakeholder also noted that SIB was looking at dates for the Protocol agreement signing.	None
9/20/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed B. Jones and notified SIB that the concerns and questions raised in Stakeholder's email to another KMC Team member would be addressed by September 23, 2013. B. Jones's original email sent September 19, 2013.	None
9/20/2013	Email- Outgoing	Jay Hope (Research Director)	Clare Peacock (TERA)	Team member emailed J. Hope and attached a notice for an upcoming Archaeology Impact Assessment; this assessment to commence October 1, 2013 within SIB's consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013.	None
9/21/2013	Email- Incoming	Jay Hope (Research Director)	Clare Peacock (TERA)	J. Hope emailed Team member and requested to know if Participation forms would be sent for the Archaeological Impact Assessment (AIA). The AIA notice had been emailed to SIB September 20, 2013.	None
9/23/2013	Email- Outgoing	Chief Clem Seymour	Natalie Loban (KMC)	Team member emailed Chief C. Seymour to notify SIB of scheduled maintenance activities in the Coquihalla area. Team member outlined the measures taken in these activities as well as the dates scheduled. Team member provided details on the Pipeline Integrity Program. Team member attached the maps of the discussed area.	None
9/24/2013	Email- Outgoing	Brian Jones (Economic Development Manager) Fern Angus (Administrator) Jay Hope (Research Director)	Norman Marcy (KMC)	Team member emailed B. Jones and answered questions in regards to the Project and KMC's engagement process. Questions were in relation to: • Community engagement along the Project's proposed line • Impact Benefits Agreement (IBA) • Mutual Benefits agreement (MBA) • The communities in negotiation phases with KMC • Capacity Funding agreement • Traditional Land Use studies planned • Group applications • Litigation measures	None
9/24/2013	Email- Outgoing	Jay Hope (Research Director)	Clare Peacock (TERA)	Team member emailed J. Hope and notified SIB that the AIA work would not be utilizing TEK participants; however, SIB was welcome to send an Archaeology crew member to join while the study was operating in the SIB Traditional Territory.	None
9/27/2013	Email- Incoming	Jay Hope (Research Director)	Clare Peacock (TERA)	J. Hope emailed team member and notified of SIB participation in upcoming field work with regards to the AIA.	None
9/30/2013	Email- Outgoing	Brian Jones (Economic Development Manager), Fern Angus (Administrator)	Norman Marcy (KMC)	Team member emailed B. Jones and F. Angus and requested to arrange a meeting with Chief C. Seymour. This meeting would involve the exchange of draft Protocol Agreements which needed to be finalized prior to the meeting as they will execute these as the first stage of engagement. Team member requested October 9, 2013 as potential meeting date. Team member then mentioned meeting STC leaders on the same day.	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
9/30/2013	Phone - Incoming	Chief Clem Seymour	Norman Marcy (KMC)	Chief C. Seymour called team member to discuss meeting October 9, 2013. Team member reminded Chief C. Seymour that the Protocol document would still need to be finalized. Team member asked Chief C. Seymour to discuss this finalization with B. Jones and to provide team member with documents as soon as possible for finalization and preparation.	None

APPENDIX A-5

ABORIGINAL COMMUNITIES LOCATED IN THE MARINE CORRIDOR

5-1 Cowichan Tribes
5-4 Hwiltsum First Nation
5-12 Sechelt Indian Band
5-15 Songhees Nation
5-17 T'Sou-ke First Nation
5-18 Tsartlip First Nation

APPENDIX A-5-01
COWICHAN TRIBES

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
04/12/2012	Letter - Outgoing	Chief Harvey Alphonse	Ian Anderson	Team member sent a letter to Chief Harvey Alphonse that notified Cowichan Tribe (CT) of the Trans Mountain Expansion Project (the Project). Team member stated that the Project was expected to be completed in 2017; during the interim period, KMC was committed to meaningfully engaging with Aboriginal communities along the Project route. KMC recognized the integral role of Aboriginal groups and understood that Aboriginal interests, responsibilities and concerns were critical to the Project's planning. Team member provided the preliminary project scope and stated that further engagement efforts were forthcoming. Also attached: <ul style="list-style-type: none"> • Project Backgrounder • Project Media Release 	None
5/29/2012	Letter - Outgoing	Chief Harvey Alphonse	Ian Anderson (KMC)	Team member mailed team member a follow-up notification letter regarding preliminary scope of Project, attachments (Project System Map and Project Schedule) and regulatory requirements.	None
1/10/2013	Letter - Outgoing	Chief Harvey Alphonse	Regan Schlecker (KMC)	Team member sent a letter to H. Alphonse to notify CT of KMC's future plans for the Trans Mountain Pipeline and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited H. Alphonse to visit the Project's website.	None
1/10/2013	Email- Outgoing	Helen Reid, Referrals Coordinator	John Kafka (Cornerstone Planning)	Team member emailed H. Reid indicating that he would not be present at the Saltspring Island Information Session on Saturday but that if H. Reid introduced herself then the team member at the event could introduce the Project Director or another team member who heads KMC's marine initiatives.	None
1/11/2013	Email- Outgoing	Helen Reid, Referrals Coordinator	Norman Marcy (KMC)	Team member emailed H. Reid and stated that he looked forward to speaking with her at the Salt spring Island Information Session.	None
1/14/2013	Email- Outgoing	Helen Reid, Referrals Coordinator	Norman Marcy (KMC)	Team member emailed H. Reid reiterating that it was good to meet at the Saltspring Open house session. Team member indicated that some wrong information was given about the number of current tankers in the Strait of Juan de Fuca and committed to updating the data and providing accurate number as soon as possible.	None
1/14/2013	Email- Outgoing	Helen Reid, Referrals Coordinator	Norman Marcy (KMC)	Team member emailed H. Reid apologized for an error on the hand out document and provided correct information regarding the number of Tankers currently in the vicinity and their destinations.	None
1/21/2013	Email- Incoming	Helen Reid, Referrals Coordinator	John Kafka (Cornerstone Planning)	H. Reid emailed team member and indicated that the LOU was ready to be signed.	None
1/21/2013	Phone - Incoming	Helen Reid, Referrals Coordinator	John Kafka (Cornerstone Planning)	H. Reid phoned team member and asked for clarification on a couple of technical issues: Q1. Will there be a diluents line as with Enbridge? Response: No. Q2. Does the current pipeline transport heavy crude? Response: Yes.	None
1/21/2013	Phone - Outgoing	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	Team member called H. Reid and requested attendance of Cowichan Tribes representatives at a TERA-run meeting regarding a Traditional Marine Use study. Team member suggested January 24, 2013 and H. Reid said she would check community member availability on that date.	None
1/22/2013	Email- Outgoing	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	Team member emailed H. Reid indicating the voicemail that was left January 21, 2013 and stated that she would in the their area the upcoming Thursday January 24 or 25 th , 2013 and requested a date that works with H. Reid	None
1/23/2013	Email- Outgoing	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	Team member emailed H. Reid and confirmed a meeting to discuss the Traditional Marine Use study.	None
1/24/2013	In-Person	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	Team member met with H. Reid at her offices and discussed the proposed Project and explained TERA Environmental role and participation in the Environmental studies. Team member discussed the Traditional Marine Resource Use study and how the community will have the opportunity to share, engage and gather information for the Environmental application.	None
1/28/2013	Signed Agreement	Chief Harvey Alphonse	Ian Anderson (KMC)	Letter of Understanding signed by KMC president and Cowichan Tribes Chief H. Alphonse on January 28, 2013. Schedule A Workplan included.	None
2/27/2013	Email- Incoming	Helen Reid, Referrals Coordinator	Max Nock	H. Reid emailed team member requesting further information regarding the TMRU study and what was expected from the community.	None
3/7/2013	Phone- Incoming	Helen Reid, Referrals Coordinator	Max Nock	H. Reid called team member indicating that she would like further information regarding the TMRU studies including a work plan. Team member indicated that he would send the information to the Team Members handling the studies.	None
3/11/2013	Email- Outgoing	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	Team member emailed H. Reid to coordinate a meeting to discuss conducting a Traditional Land Use (TLU) study for Cowichan Tribes and to discuss any outstanding questions the community may have.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
3/11/2013	Email-Incoming	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	H. Reid emailed team member and requested a phone call concerning the TLU study for Cowichan Tribes.	None
3/11/2013	Email-Outgoing	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	Team member emailed H. Reid to schedule a phone call for the following day.	None
3/11/2013	Email-Incoming	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	H. Reid emailed team member confirming their phone appointment for the following morning.	None
3/12/2013	Phone - Outgoing	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	Team member telephoned H. Reid to discuss the Project, the ESA, and the extent of the work TERA and Cowichan Tribes (CT) will be doing together. H. Reid mentioned that CT may contract a 3rd party to conduct a TLU study, but could not confirm. CT work plan and Project budgeting were discussed.	None
3/20/2013	Email-Incoming	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	H. Reid emailed team member to discuss the template for a Marine TUS.	None
3/21/2013	Email-Outgoing	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	Team member emailed H. Reid to provide a cost estimate and work plan for Cowichan Tribes to review.	None
3/22/2013	Letter - Outgoing	Chief Harvey Alphonse	Gary Youngman (KMC)	Team member mailed Chief H. Alphonse a letter notifying of permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). These permits will be filed with the National Energy Board (NEB) following a regulatory review and public hearing process (projected 2015).	None
4/18/2013	Email-Incoming	Jack Smith, Community Consultant	Ellen Frisch (KMC)	J. Smith emailed team member and indicated unavailability at the proposed meeting time but noted that he was planning to work on the file early the following week and he would contact both KMC and TERA team members afterwards.	None
4/29/2013	Email-Outgoing	Jack Smith, Community Consultant	Ellen Frisch (KMC)	Team member emailed J. Smith and inquired when the meeting with Elders and/or Council had been scheduled.	None
5/1/2013	Email-Incoming	Jack Smith, Community Consultant	Ellen Frisch (KMC)	J. Smith emailed team member and responded that meeting was possible in the beginning of June. J. Smith noted that the budget had not yet been finalized. Team member emailed J. Smith and indicated availability to meet in the beginning of June, stating that the dates in the LOU needed to be extended.	None
5/9/2013	Email-Outgoing	Jack Smith, Community Consultant	Ellen Frisch (KMC)	Team member emailed J. Smith and requested that a time be scheduled to discuss the LOU work plan and its various components. J. Smith offered team member to join the meeting with TERA team member on May 14, 2013.	None
5/9/2013	Phone - Incoming	Jack Smith, Community Consultant	Ellen Frisch (KMC)	J. Smith phoned team member to set a time to discuss the LOU and deliverables.	None
5/22/2013	In-Person	Helen Reid, Referrals Coordinator, Bernette Lalaiberte	Michael Davies (KMC), Lexa Hobenshield (KMC), Stephanie Snider (Lizette Parsons Bell & Associates), Theresa Lane (KMC)	<p>Team members held a workshop with H. Reid and B. Lalaiberte on May 22, 2013.</p> <p>Topics discussed during this workshop were:</p> <ul style="list-style-type: none"> •Response from participants: appreciated the opportunity for input, interest in more information and further dialogue. •Main interests discussed: <ul style="list-style-type: none"> • Characteristics of diluted bitumen and how it behaves in the environment • National Energy Board application and review process • ESA study methods, study areas, indicators and key interests, including selection of marine bird, fish and mammal species • Traffic growth assumptions • Cumulative effects • Traditional and recreational uses and effects of increased traffic or spill on these activities • Risks and emergency response capability • Oil tanker traffic adherence to environmental compliance • Risk modelling site selection and methodology • Opportunities for collaboration and benefits for First Nations communities 	<p>Engagement Process - Aboriginal, Marine - Air Emissions/GHG, Marine - Birds, Marine - Contaminated Sediments, Marine - Ecological Risk Assessment, Marine - Fish, Marine - Mammals, Marine - Species at Risk/of Concern, Marine - Water Quality/Quantity, Regulatory - NEB process, Terrestrial - Soils, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Wetlands</p>

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/23/2013	In-Person	Bernette Lalaiberte, Helen Reid, Referrals Coordinator	Ellen Frisch (KMC)	Team member met with H. Reid and B. Laliberte at the Vancouver Island Marine Workshop. H. Reid and B. Lalaiberte expressed a strong interest in a robust spill response plan as well as an integrated approach to viewing culture and resources.	None
5/27/2013	Letter-Outgoing	Chief Harvey Alphonse	Gary Youngman	Team member mailed H. Alphonse and notified CT that the Project Description had been submitted to the NEB. It was explained that this preliminary document was used to signal the intent of TransMountain to submit a comprehensive Facilities Application. The submission of the Project Description follows an NEB decision, released on May 16, 2013, that approved the commercial aspects of the proposed expansion project.	None
6/11/2013	Email-Incoming	Pamela Williams, Technical Coordinator	Wanda Lewis (TERA)	P. Williams emailed team member and confirmed that P. Williams would be handling the technical details of the TMRU study for Cowichan Tribes (CT). P. Williams requested a shapefile showing the proposed tanker route as well as a shapefile which illustrated where the pipeline crosses the Fraser River (for use by CT GIS). P. Williams inquired if this request could be handled by TERA or if the request needed to go through KMC.	None
6/11/2013	Email-Incoming	Pamela Williams, Technical Coordinator	Wanda Lewis (TERA)	P. Williams emailed team member and confirmed role with regards to managing the technical details of the TMRU for CT. P. Williams requested a shapefile showing the proposed tanker route as well as a shapefile which illustrated where the pipeline crosses the Fraser River for use in CT GIS. P. Williams asked if this could be handled by TERA or if the request needed to go through KMC.	
6/13/2013	Email-Outgoing	Pamela Williams, Technical Coordinator	Angelina Silver (TERA)	Team Member emailed P. Williams and attached the GIS waiver form that would need to be completed and sent to KMC GIS Manager, who would send along the requested shapefiles.	
6/21/2013	Email-Outgoing	Helen Reid, Referrals Coordinator, Bernette Lalaiberte		An E-Blast was emailed to H. Reid and B. Lalaiberte, to attended to May 22, 2013marine workshop in Vancouver, BC and the May 23, 2013 marine workshop in Victoria, to thank them for their feedback, offer login details to provide further feedback, and ask them to complete all additional feedback by June 27, 2013.	None
6/25/2013	Phone - Incoming	Helen Reid, Referrals Coordinator	Ellen Frisch (KMC)	H. Reid phoned team member to follow-up on June 20, 2013 ESA workshop questions.	None
6/26/2013	Phone - Attempt	Helen Reid, Referrals Coordinator	Ellen Frisch (KMC)	Team member phoned H. Reid to return her earlier call and left a message.	None
7/3/2013	Email-Outgoing	Helen Reid, Referrals Coordinator	Wanda Lewis (TERA)	Team member emailed H. Reid and attached the Work Agreement, requesting that it be signed and returned in order to facilitate participation in the TMRU study.	None
7/4/2013	Email-Outgoing	Helen Reid, Referrals Coordinator	Ellen Frisch (KMC)	H. Reid asked team member to clarify if the Approach to ESA has been submitted to the NEB. Team member noted that they were asking another team member for clarification. Team member also clarified previous events that had occurred between team and Cowichan Tribes, as the team member and H. Reid had only connected recently.	None
7/12/2013	Email-Outgoing	Helen Reid, Referrals Coordinator	Angelina Silver (TERA)	Team member emailed H. Reid and attached the TMRU Workplan.	None
7/16/2013	Email-Outgoing	Pamela Williams, Technical Coordinator	Maria Hoiss (TERA)	Team member emailed P. Williams and attached the 3rd-party TMRU Work Agreement.	None
7/31/2013	Email-Outgoing	Helen Reid, Referrals Coordinator	Karen Baylis (TERA)	Team member emailed H. Reid and attached the edited 3rd-party TMRU Work Agreement. H. Reid requested some changes to be made to the Agreement and so the amended Agreement was sent back to Cowichan Tribes.	None
8/2/2013	Email-Incoming	Melissa Charlie, Administrator	Ellen Frisch (KMC)	M. Charlie emailed team member and forwarded a copy of the letter outlining Cowichan Tribes' response to the TMEP. Team member emailed M. Charlie and confirmed receipt of email.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
8/08/2013	Letter-Outgoing	Chief Harvey Alphonse	Regan Schlecker	Team member sent a letter to Chief H. Alphonse which notified CT that capacity funding has been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None
9/20/2013	Letter-Outgoing	Chief Harvey Alphonse	Wanda Lewis (TERA)	Team member mailed H. Alphonse a notice for an upcoming Archaeology Impact Assessment; this assessment commenced October 1, 2013 within Cowichan Tribes' consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013.	None
9/20/2013	FAX	Chief Harvey Alphonse	Wanda Lewis (TERA)	Team member faxed H. Alphonse a notice for an upcoming Archaeology Impact Assessment; this assessment commenced October 1, 2013 within Cowichan Tribes' consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013.	None
9/20/2013	Email-Outgoing	Chief Harvey Alphonse	Clare Peacock (TERA)	Team member emailed H. Alphonse and attached a notice for an upcoming Archaeology Impact Assessment; this assessment commenced October 1, 2013 within Cowichan Tribes' consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013.	None
10/4/2013	Email-Outgoing	Harvey Alphonse	Sondra Baker (TERA)	Team member emailed H. Alphonse and attached a notice for an upcoming Archaeology Impact Assessment; this assessment commenced October 1, 2013 within Cowichan Tribes' consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued 07/03/2013.	None

APPENDIX A-5-04
HWLITSUM FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/29/2012	Letter - Outgoing	Chief Raymond (Rocky) Wilson	Ian Anderson (KMC)	Team member mailed notification letter regarding preliminary scope of Project, attachments (Project System Map and Project Schedule) and regulatory requirements to Chief and Council.	None
6/1/2012	Email- Outgoing	Chief Raymond (Rocky) Wilson	Regan Schlecker (KMC)	Team member emailed R. Wilson an attachment of the engagement letter from May 29, 2012. The engagement letter informed R. Wilson of the proposed expansion of the existing Trans Mountain Pipeline system. R. Wilson proposed further discussion on the project. Team member acknowledged previous e-mail from R. Wilson.	None
9/5/2012	Phone - Incoming	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove called team member and said there were concerns regarding increased tanker traffic. It was indicated that HFN must be revenue neutral in engaging in consultation and would the proponent provide funds for engagement. A. Grove said he would let Chief R. Wilson know. Team member sent a follow up email with suggested meeting dates. Team member had indicated there was no mandate yet, and suggested getting together along with KMC to discuss concerns and possible solutions. An agreement was made to meet, and it was suggested Chief R. Wilson attend.	None
9/5/2012	Phone - Attempt	Alan Grove (Consultant)	John Kafka (KMC)	Team member called A. Grove and left a voicemail message with regards to the Project and to schedule a meeting to discuss further.	None
9/6/2012	Email- Outgoing	Alan Grove (Consultant)	John Kafka (KMC)	Team member sent a series of emails to A. Grove and had agreed to meet at 8:30 am Monday September 17, 2012.	None
9/17/2012	In-Person	Alan Grove (Consultant)	John Kafka (KMC)	Team member met with A. Grove and provided him with the TMEP Project overview. A. Grove provided his initial concerns and comments. Team member agreed to summarize the discussion in an email, which was to be shared with Chief R. Wilson. A. Grove stated that the project was to be discussed at the next meeting of the Cowichan Nation Alliance.	None
9/18/2012	Email- Outgoing	Alan Grove (Consultant), Chief Raymond (Rocky) Wilson	John Kafka (KMC)	Team member sent a follow up email to A. Grove thanking him for the meeting regarding the proposed TMEP, and provided a summary of their discussions, concerns and future plans. Follow up expected from A. Grove in late September 2012.	None
9/27/2012	Email- Outgoing	Alan Grove (Consultant)	John Kafka (KMC)	Team member emailed follow up to A. Grove and E. Gaunt regarding TMEP discussion at Tuesday's meeting of the Cowichan Nation Alliance and the planned meeting of the Chiefs on October 11, 2012 to discuss the approach they will take regarding engagement. Team member indicated willingness to discuss the project with others prior to the meeting.	None
10/12/2012	Phone - Attempt	Alan Grove (Consultant)	John Kafka (KMC)	Team member left a message for A. Grove asking him to call back regarding the outcome of the All Chiefs meeting held yesterday.	None
10/13/2012	Email- Incoming	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove sent an email asking team member to call him re: KMC.	None
10/13/2012	Phone - Outgoing	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove called team member and said that the communities of Hwilitsum, Cowichan Tribes, Penelakut, Halalt and Stz'uminus have decided to work together in engaging in consultation with KMC. A. Grove noted that the primary area of concern was the Fraser River Crossing, the Westridge Terminal, and the increase of tanker traffic through their waters. A. Grove said that A. Grove and team member should get together soon to discuss capacity funding requirements. A. Grove said a critical issue is ensuring that the Coastal First Nations have confidence that their critical resource areas are protected. Team member agreed that there should be a meeting to discuss the next steps.	None
10/26/2012	Email- Outgoing	Alan Grove (Consultant)	John Kafka (KMC)	Team member emailed A. Grove to confirm that the next steps discussed included meeting with the Cowichan Nation Alliance Negotiating Committee to discuss what they wanted to achieve, what KMC can offer, and how to get there. Team member requested possible dates to meet.	None
11/30/2012	Email- Outgoing	Alan Grove (Consultant)	John Kafka (KMC) Carrie Dunn (TERA)	Team member emailed A. Grove, and TERA team member sharing contact information so that they could coordinate on Traditional Marine Use Study	None
12/3/2012	Email- Outgoing	Alan Grove (Consultant)	John Kafka (KMC)	Team member sent an email to A. Grove to let team member know in advance if anyone was planning to attend the Information Session so that team member could then ensure team member's attendance to personally introduce HFN to some of the key KMC personnel. Team member provided a website address with the information on the times and the locations for the four Vancouver Island Info Sessions.	None
12/3/2012	Email- Incoming	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove emailed team member to say A. Grove would be attending the Cedar Hill session on Wednesday, December 5, 2012.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/4/2012	Email-Outgoing	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove emailed team member to invite KMC to attend the Hwilitsum membership meeting on January 13, 2013. A. Grove noted there would be 1 hour scheduled for team member's presentation, and asked team member what time would work best.	None
12/5/2012	Email-Incoming	Alan Grove (Consultant)	John Kafka (KMC)	Team member emailed A. Grove and Chief R. Wilson to confirm Kinder Morgan Canada's attendance on Sunday January 13, 2013. Team member asked what would be preferred a PowerPoint presentation or just a verbal presentation. Team member suggested 25 minutes maximum for the presentation allowing the rest of the time for questions.	None
12/5/2012	Email-Outgoing	Alan Grove (Consultant)	Carrie Dunn (TERA)	Team member emailed A. Grove to discuss the Traditional Marine Resource Use (TMRU) study. Team member notified A. Grove that if Hwfn was interested in conducting the study through TERA, Team member could give A. Grove further information on TERA's approach.	None
12/5/2012	Email-Outgoing	Alan Grove (Consultant)	Carrie Dunn (TERA)	Team member emailed A. Grove stating that for filing purposes, the TMRU study report would need to be completed and submitted to TERA by August 31, 2012.	None
12/5/2012	Email-Incoming	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove emailed team member stating that the 25-minute PowerPoint presentation and questions would be the preferred method. A. Grove noted that the meeting would be held in Ladner, B.C.	None
12/7/2012	Email-Outgoing	Alan Grove (Consultant), Chief Raymond (Rocky) Wilson	John Kafka (KMC)	Team member emailed A. Grove and Chief R. Wilson a copy of LOU, in regards to the Trans Mountain Pipeline Expansion for review. Team member noted that if acceptable, a final document for execution would be provided.	None
12/7/2012	Email-Incoming	Alan Grove (Consultant)	Carrie Dunn (TERA)	A. Grove emailed team member and notified team member that Hwfn would not be utilizing TERA as staffing for the study. A. Grove stated that Hwfn wished to speak with team member soon, but that A. Grove would be out of the office December 9 – December 13, 2012.	None
12/7/2012	Phone - Incoming	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove phoned team member stating that the LOU had been discussed with Chief R. Wilson and has been accepted. A. Grove asked team member to forward the signed KMC document to Chief R. Wilson. A. Grove also agreed that Hwfn could use the Workplan to share with other members of the Cowichan Nation Alliance.	None
12/11/2012	Email-Outgoing	Alan Grove (Consultant), Chief Raymond (Rocky) Wilson	John Kafka (KMC)	Team member emailed A. Grove, and Chief R. Wilson a copy of the LOU for signing.	None
12/11/2012	Signed Agreement	Chief Raymond (Rocky) Wilson	Ian Anderson (KMC)	Team member mailed the Letter of Understanding (LOU) signed by KMC President, and Hwilitsum Chief R. Wilson on December 11, 2012. Schedule A Workplan was included.	None
12/11/2012	Email-Incoming	Chief Raymond (Rocky) Wilson	John Kafka (KMC)	Chief R. Wilson emailed team member a copy of the signed LOU	None
12/19/2012	Email-Outgoing	Alan Grove (Consultant), Chief Raymond (Rocky) Wilson	John Kafka (KMC)	Team member emailed A. Grove and Chief R. Wilson stating that the Capacity Funding cheque from Kinder Morgan Canada (KMC) had been received, but the amount wasn't consistent with the Letter of Understanding. Team member stated that the cheque would be sent back to be reissued. Team member noted that the next cheque run by Kinder Morgan Canada (KMC) would be in the first week of January 2013. Team member also asked if Hwilitsum had a projector and a screen for the PowerPoint presentation at the January 13, 2013 session.	None
1/8/2013	Email-Incoming	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove emailed team member a copy of the meeting agenda.	None
1/8/2013	Phone - Incoming	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove phoned team member to confirm attendance at community meeting and discuss timing and logistics.	None
1/10/2013	Letter - Outgoing	Chief Raymond (Rocky) Wilson	Regan Schlecker (KMC)	Team member sent a letter to R. Wilson to notify Hwfn of KMC's future plans for the Trans Mountain Pipeline and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited R. Wilson to visit the Project's website.	None
1/10/2013	Phone - Attempt	Alan Grove (Consultant)	John Kafka (KMC)	Team member phoned A. Grove and left a voicemail advising of the TMEP announcement and asking A. Grove to call team member if there were any questions or concerns.	None
1/11/2013	Email-Outgoing	Alan Grove (Consultant), Chief Raymond (Rocky) Wilson	John Kafka (KMC)	Team member emailed A. Grove and Chief R. Wilson stating a couriered cheque was sent the same day from Calgary and should arrive on Monday, January 14, 2013.	None
1/11/2013	Email-Outgoing	Alan Grove (Consultant)	Carrie Dunn (TERA)	Team member emailed A. Grove and informed A. Grove that the manner to which TERA is involved in Hwfn's TMRU study is entirely at the Community's discretion.	None
1/11/2013	Email-Incoming	Alan Grove (Consultant)	Carrie Dunn (TERA)	A. Grove emailed Team member and attached the draft Workplan for TMRU. A. Grove stated that within the Workplan Hwfn had conditionally included TERA, and requested Team member advised as to how TERA wished to be utilized in this study.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
1/11/2013	Email-Incoming	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove emailed team member confirming receipt of email and confirming the meeting on Sunday, January 13, 2013.	None
1/13/2013	In-Person	Alan Grove (Consultant)	Michael Davies (KMC), John Kafka (KMC)	KMC team members presented at a community meeting hosted by Hwlitsum and attended by approximately 50 community members. Band members asked a number of questions ranging from pipeline integrity to protection of the marine environment. A. Grove highlighted four areas or issues that need to be addressed and discussed with KMC: 1) capacity of Western Canada Marine Response Corporation to deal with a potential spill; 2) concerns regarding remediation responsibility and method; 3) lack of guarantee that First Nations would be compensated for loss to their food fishery; and 4) job opportunities.	None
1/28/2013	Email-Outgoing	Alan Grove (Consultant)	John Kafka (KMC)	Team member emailed A. Grove a summary of the scope of studies contained in the document entitled Summary of the Environmental and Socio-Economic Assessment for the Pipeline and Facilities, and Marine Transportation Components of the Trans Mountain Expansion Project for review. Team member noted that the information provided was identified in the LOU and as well as the Workplan – items D (Review of Project Information by the First Nation) and E (Comment on Project Information). Team member requested a meeting, that could be ideally coordinated by the Cowichan Alliance, to scope out the best way to coordinate the agreed upon activities as set out in the Work Plan.	None
2/28/2013	Email-Outgoing	Alan Grove (Consultant)	Wanda Lewis (TERA)	A. Grove emailed team member and stated that A. Grove would forward the TMRU draft Workplan shortly.	None
3/22/2013	Letter - Outgoing	Chief Raymond (Rocky) Wilson	Gary Youngman (KMC)	Team member mailed Chief R. Wilson a letter notifying of permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). These permits will be filed with the National Energy Board (NEB) following a regulatory review and public hearing process (projected 2015).	None
4/4/2013	Phone - Incoming	Alan Grove (Consultant)	John Kafka (KMC)	A. Grove phoned team member requesting a meeting. Both team member and A. Grove agreed to meet on April 11, 2013 following team member's meeting with E. Gaunt, scheduled for April 10, 2013.	None
4/18/2013	In-Person	Chief Raymond (Rocky) Wilson, Alan Grove (Consultant),	Ellen Frisch (KMC), Wanda Lewis (TERA)	Team member met with Hwlitsum Chief and Council on April 18, 2013 in which DFO was discussed including spill response and management. Washington State regulations discussed and suggested. NEB process touched upon and explained further. Community TMRU study discussed including contracts and payment process regarding the community study.	None
4/26/2013	Email-Incoming	Alan Grove (Consultant)	Ellen Frisch (KMC)	A. Grove emailed team member looking for a budget template to finalize the TMRU study budget. Team member stated that a phone call and email had been sent to TERA enquiring about the budget template.	None
4/27/2013	Email-Incoming	Alan Grove (Consultant)	Ellen Frisch (KMC)	A. Grove emailed team member and stated that contact had been made with TERA, and there should be an Agreement by next week.	None
5/13/2013	Email-Outgoing	Alan Grove (Consultant)	Ellen Frisch (KMC)	Team member e-mailed A. Grove to stating that Hwlitsum had been invited to the Lower Mainland session, and that A. Grove could also attend the May 23rd Vancouver Island session. A. Grove replied stating that A. Grove would be attending both sessions	None
5/22/2013	In-Person	Alan Grove (Consultant)	Michael Davies (KMC), Kristin Faucett (Cocker Fennessy), Lexa Hobenshield (KMC), Chris Tupper (Global Public), Terry Antonuik (Salmo Consulting), Bikram Kanjilal (KMC), Dean Monteray (KMC)	Marine Studies Workshop held in North Vancouver, British Columbia on May 22, 2013 was attended by A. Grove on behalf of Hwlitsum First Nation.	Marine - Air Emissions/GHG, Marine - Birds, Marine - Contaminated Sediments, Marine - Ecological Risk Assessment, Marine - Fish, Marine - Mammals, Marine - Water Quality/Quantity, Nuisance - Noise, Regulatory - NEB process, Safety - Emergency Response, Socio-Econ. Marine - Human Health, Marine - Tanker traffic, Marine - Tanker details (size, number etc)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
5/24/2013	Email-Outgoing	Alan Grove (Consultant)	Ellen Frisch (KMC)	Team member emailed A. Grove stating that the Trans Mountain Expansion Project Description had been submitted to the National Energy Board (NEB).	None
5/27/2013	Letter-Outgoing	Rocky Willson	Gary Youngman	Team member mailed R. Wilson and notified HWFN that the Project Description had been submitted to the NEB. It was explained that this preliminary document was used to signal the intent of TransMountain to submit a comprehensive Facilities Application. The submission of the Project Description follows an NEB decision, released on May 16, 2013, that approved the commercial aspects of the proposed expansion project.	None
5/27/2013	Email-Incoming	Alan Grove (Consultant)	Wanda Lewis (TERA)	A. Grove emailed team member, and stated that HWFN was scheduling the first study trip for June 17 – June 19, 2013. A. Grove noted that HWFN was awaiting further instructions on when to proceed.	None
6/17/2013	In person	Dr. Bill Angelback, Dr Bruce Miller, Richard Wilson, Raymond Wilson, Alan Grove (Consultant) (Managing Partner Alan Lloyd Group Consulting) Captain Tom	Wanda Lewis (TERA)	Wanda Lewis (TERA) was invited to take part in the first round of marine reconnaissance for the community in which they departed from Ladner Harbour in Delta, British Columbia. The community was identifying sturgeon and sockeye areas and examining them. Spots such as Cowichan River were visited. Community asked if the NEB hearing will deal with tanker spills and does the process ensure that promises and conditions are kept.	Post construction monitoring.
6/18/2013	In person	Dr. Bill Angelback, Dr Bruce Miller, Richard Wilson, Raymond Wilson, Alan Grove (Consultant) (Managing Partner Alan Lloyd Group Consulting) Captain Tom	Wanda Lewis (TERA)	<ul style="list-style-type: none"> Community visited Enterprise Bay where it was stated that long-line fishing and swimming were activities that were traditionally done by the community and the area was also where scallops were found. Georgison Bay community representatives shared that there have been many canoe crossings done however near canoe pass fishing cannot occur as there are too many ferries and too little fish for this to take place. Gossip Island there is a Spirit Rock and from there one is able to see all Hwilitsum Traditional territory. Community representatives voiced concern about oil and fears that it may ruin traditional harvesting areas. 	
6/19/2013	In Person	Dr. Bill Angelback, Dr Bruce Miller, Richard Wilson, Raymond Wilson, Alan Grove (Consultant) (Managing Partner Alan Lloyd Group Consulting) Captain Tom	Wanda Lewis (TERA)	Wanda Lewis (TERA) was invited to take part in the last round of marine reconnaissance for the community in which the importance of Kuper Island was shared. Community discussed medicinal plants and the benefits associated with them including cherry, willow fungus which is used like diamond willow. Cedar is used to help with colds and celery seeds were burned at ceremonies.	
6/26/2013	Email-Outgoing	Alan Grove (Consultant)	Ellen Frisch (KMC)	Team member updated A. Grove on the Merritt spill	None
6/28/2013	Email-Outgoing	Alan Grove (Consultant)	Maria Hoiss (TERA)	Team member emailed A. Grove and attached the Work Agreement drafted by another team member, and also provided that team member's contact information, to which A. Grove can direct any questions or concerns regarding the Work Agreement.	None
6/28/2013	Email-Outgoing	Alan Grove (Consultant)	Maria Hoiss (TERA)	Team member emailed A. Grove and attached the corrected Work Agreement.	None
6/28/2013	Email-Incoming	Alan Grove (Consultant)	Maria Hoiss (TERA)	A. Grove emailed team member and noted several edits to implement into the Work Agreement.	None
7/31/2013	Email-Incoming	Alan Grove (Consultant)	Angelina Silver (TERA)	A. Grove contacted team member and said that the fax that was promised for Chief R. Wilson did not arrive.	None
8/1/2013	Email-Outgoing	Alan Grove (Consultant)	Ellen Frisch (KMC)	Team member e-mailed A. Grove to confirm availability for a meeting to discuss legacy and IBA. Team member wanted to discuss also Hwilitsum ideas around the type of community benefits and opportunities of interest.	None
8/6/2013	Email-Incoming	Alan Grove (Consultant)	Ellen Frisch (KMC)	A. Grove e-mailed team member, asking for a convenient time to discuss section G of the LOU.	None
8/7/2013	Email-Outgoing	Alan Grove (Consultant)	Maria Hoiss (TERA)	Team member sent a confidentiality agreement to Chief R. Wilson for him to sign, and they discussed where to send the fax of the signed Agreement.	None
8/08/2013	Letter-Outgoing	Chief Raymond (Rocky) Wilson	Regan Schlecker	Team member sent a letter to Chief R. Wilson which notified HWFN that capacity funding has been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
8/9/2013	Email-Outgoing	Alan Grove (Consultant), Chief Raymond (Rocky) Wilson	Maria Hoiss (TERA)	A. Grove emailed team member stating that A. Grove received the confidentiality agreement faxed by team member. Team member responded by asking for information regarding the First Nation's Worker's Compensation Board coverage. A. Grove emailed team member asking for team member's phone number so that A. Grove and team member could discuss the issue.	None
8/12/2013	Email-Outgoing	Alan Grove (Consultant)	Ellen Frisch (KMC)	Team member e-mailed A. Grove with varying times and dates that team member was available to discuss section G of the LOU as per A. Grove's request.	None
8/12/2013	Email-Outgoing	Alan Grove (Consultant)	Maria Hoiss (TERA)	Team member emailed A. Grove the telephone number team member could be reached at.	None
8/12/2013	Phone - Incoming	Alan Grove (Consultant)	Maria Hoiss (TERA)	A. Grove called team member regarding team member's email request for proof of insurance. A. Grove explained who worked on the study and under whose insurance they were covered. A. Grove indicated that a conversation with another team member regarding Hwilitsum's proof of insurance had occurred.	None
8/12/2013	Phone - Incoming	Alan Grove (Consultant)	Angelina Silver (TERA)	A. Grove left a message for team member providing contact information, and asking team member to call back.	None
8/12/2013	Email-Incoming	Alan Grove (Consultant)	Ellen Frisch (KMC)	A. Grove emailed team member and relayed details of the August 26, 2013 meeting with team member.	None
8/26/2013	In-Person	Chief Raymond (Rocky) Wilson	Ellen Frisch (KMC)	Team member met with Chief and Council to discuss the LOU Extension terms.	None
9/18/2013	Email-Outgoing	Alan Grove (Consultant)	Ellen Frisch (KMC)	Team member emailed A. Grove and provided the draft LOU amendment.	None
9/22/2013	Email-Outgoing	Alan Grove (Consultant)	Ellen Frisch (KMC)	Team member emailed A. Grove of the Cowichan Nation Alliance regarding Notice of Commencement of Fieldwork associated with the Archeological Impact Assessment. Team member stated that the email originally had gone to a more generic inbox, and inquired if there was a more specific route that could be used to provide notice.	None

APPENDIX A-5-12
SECHELT INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
04/12/2012	Letter - Outgoing	Chief Garry Feschuk	Ian Anderson (KMC)	Team member sent a letter to Chief G. Feschuk that notified Sechelt Indian Government District (SIGD) of the Trans Mountain Expansion Project (the Project). Team member stated that the Project was expected to be completed in 2017; during the interim period, KMC was committed to meaningfully engaging with Aboriginal communities along the Project route. KMC recognized the integral role of Aboriginal groups and understood that Aboriginal interests, responsibilities and concerns were critical to the Project's planning. Team member provided the preliminary project scope and stated that further engagement efforts were forthcoming. Also attached: <ul style="list-style-type: none"> • Project Backgrounder • Project Media Release 	None
5/29/2012	Letter - Outgoing	Chief Garry Feschuk	Ian Anderson (KMC)	Team member mailed follow-up notification letter regarding preliminary scope of Project, attachments (Project System Map and Project Schedule) and regulatory requirements to Chief and Council.	None
11/9/2012	Letter - Outgoing	Chief Garry Feschuk	Regan Schlecker (KMC)	Team member sent Chief G. Feschuk a follow-up letter to the notification letter sent on May 29, 2012, re-emphasizing KMC's commitment to a respectful, open, responsive and thorough engagement with Aboriginal groups. The team member referred Chief G. Feschuk to the TMEP website for information and enclosed the latest copy of the Project newsletter. The team member encouraged Chief G. Feschuk to contact the KMC Aboriginal Engagement Team and provided the contact information.	None
1/10/2013	Letter - Outgoing	Chief Garry Feschuk	Regan Schlecker (KMC)	Team member sent a letter to G. Feschuk to notify SIGD of KMC's future plans for the Trans Mountain Pipeline and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited G. Feschuk to visit the Project's website.	None
3/22/2013	Letter - Outgoing	Chief Garry Feschuk	Gary Youngman (KMC)	Team member mailed Chief G. Feschuk a letter notifying Chief G. Feschuk of the permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). The letter stated that the permits would be filed with the National Energy Board (NEB), following a regulatory review and public hearing process (projected for completion in 2015).	None
5/27/2013	Letter - Outgoing	Chief Garry Feschuk	Gary Youngman (KMC)	Team member mailed G. Feschuk and notified SIGD that the Project Description had been submitted to the NEB. It was explained that this preliminary document was used to signal the intent of TransMountain to submit a comprehensive Facilities Application. The submission of the Project Description follows an NEB decision, released on May 16, 2013, that approved the commercial aspects of the proposed expansion project.	None
8/08/2013	Letter- Outgoing	Chief Garry Feschuk	Regan Schlecker	Team member sent a letter to Chief G. Feschuk which notified SIGD that capacity funding has been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None

APPENDIX A-5-15
SONGHEES NATION

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
4/29/2013	Letter – Outgoing	Chief Robert Sam	Ian Anderson (KMC)	Team member sent a letter to Chief R. Sam that notified Songhees First Nation (SSFN) of the Trans Mountain Expansion Project (the Project). Team member stated that the Project was expected to be completed in 2017; during the interim period, KMC was committed to meaningfully engaging with Aboriginal communities along the Project route. KMC recognized the integral role of Aboriginal groups and understood that Aboriginal interests, responsibilities and concerns were critical to the Project's planning. Team member provided the preliminary project scope and stated that further engagement efforts were forthcoming. Also attached: <ul style="list-style-type: none"> • Project Backgrounder • Project Media Release 	None
5/29/2012	Letter - Outgoing	Chief Robert Sam	Ian Anderson (KMC)	Team member mailed follow-up notification letter regarding preliminary scope of Project, attachments (Project System Map and Project Schedule) and regulatory requirements to Chief and Council.	None
9/4/2012	Email- Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	Team member emailed follow up to K. Cossey regarding a previous conversation and included a letter from KMC to Chief R. Sam from May 2012. Team member asked if SSFN was interested in the Project and would welcome an indication on how to proceed and offered to present further information.	None
9/4/2012	Phone - Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	Team member phoned K. Cossey following up on a letter that was sent. K. Cossey had not seen the letter and asked for copy. K. Cossey stated that once the letter was reviewed a decision would be made regarding who should be involved and follow up.	None
9/25/2012	Email- Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	Team member emailed K. Cossey regarding how to proceed with discussions.	None
10/1/2012	Email- Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	Team member followed up to K. Cossey along with requested attachment.	None
10/1/2012	Email- Incoming	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	K. Cossey sent return email to team member indicating team member will be in touch.	None
10/1/2012	Email- Incoming	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	K. Cossey emailed team member regarding resending the letter, and email that had been previously sent.	None
10/2/2012	Email- Incoming	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	K. Cossey emailed team member to schedule a meeting to discuss Project.	None
10/2/2012	Phone - Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	Team member called K. Cossey who suggested meeting on October 15, 2012.	None
10/15/2012	Email- Incoming	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	K. Cossey emailed team member and provided a copy of SSFN's referral check list and stated that A. Livingston would like to follow up on the map of the Traditional Territory as requested.	None
10/15/2012	In-Person	Ken Cossey (Director of Lands and Real Estate Operations),	John Kafka (Cornerstone Planning)	K. Cossey met with team member and indicated that a completed referral check list will be reviewed and presented to Council on November 13, 2012. K. Cossey noted that the community would likely require capacity funding to review the Project, and would be seeking funds to identify traditional marine use and in particular the harvesting areas requiring protection. K. Cossey noted that a meeting with Western Canada Marine Response Corporation (WCMRC) would be also valuable as well as being able to review the spill response assessment. Team member presented and provided Coastal Communities with the presentation. Team member requested that K. Cossey send a map of the Traditional Area.	None
11/7/2012	Email- Outgoing	Ken Cossey (Director of Lands and Real Estate Operations) A. Livingston	John Kafka (Cornerstone Planning)	Team member emailed K. Cossey and A. Livingston and notified of the Project website, and Information Sessions scheduled on Vancouver Island for early December. Team member noted that advance meeting and information viewing could be arranged for members of Council prior to the Public information sessions	None
11/8/2012	Email- Incoming	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	K. Cossey replied to team member's email and notified that a response would be provided.	None
11/16/2012	Email- Incoming	Ken Cossey (Director of Lands and Real Estate Operations) Frank George, (Councillor)	John Kafka (Cornerstone Planning)	F. George emailed team member and indicated that team member's email address had been provided to the council.	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
11/20/2012	Email- Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	Team member emailed K. Cossey and requested follow-up information from the Council meeting November 13, 2012. Team member inquired if the Project had been discussed and if there was any information regarding SSFN's interest in engagement.	None
11/20/2012	Phone - Incoming	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	K. Cossey phoned team member and notified that SSFN (SSFN) Band Manager (J. Albany) was no longer with the band office, which has created some delays and that the Project had not yet been discussed with Council. K. Cossey indicated that team member would be updated when discussion has occurred.	None
12/11/2012	Email- Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	Team member emailed K. Cossey and indicated interest in scheduling a meeting to discuss if and how SSFN would like to be engaged in the Project.	None
12/11/2012	Phone - Incoming	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	K. Cossey called team member and indicated that there are no updates to provide. The Project will likely not be on the Council agenda until January 2013. Team member noted that timing is of concern given that if the community is interested in conducting a Traditional Marine Use Study (TMRU), the process should begin as soon as possible. Team member also noted that participation in the TMRU or use of capacity funding does not indicate support for the Project. K. Cossey acknowledged information provided and indicated that updates would be provided once further instructions are received.	None
1/10/2013	Letter - Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	Regan Schlecker (KMC)	Team member sent a letter to K. Cossey to notify SSFN of KMC's future plans for the Trans Mountain Pipeline and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited K. Cossey to visit the Project's website.	None
1/11/2013	Phone - Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	Team member called K. Cossey who indicated that the Project had not yet been discussed but would be on the Council meeting agenda either January 22, 2013 or January 29, 2013. K. Cossey had received feedback from one Councilor indicating that the community opposes the Project and would not engage with KMC, but K. Cossey indicated that direction from Council as a whole is required. Team member noted KMC's interest in engagement. K. Cossey indicated that updates would be provided once further instructions are received.	None
2/6/2013	Email- Incoming	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	K. Cossey emailed team member and provided a copy of the SSFN Land and Water Referral Checklist, and requested that team member review page 4 of the checklist referral. K. Cossey thanked team member for taking the time to meet with the nation on this issue.	None
2/6/2013	Phone - Incoming	Ken Cossey (Director of Lands and Real Estate Operations)	John Kafka (Cornerstone Planning)	K. Cossey phoned team member and notified that an email had been sent regarding the Project, and that the SSFN had decided not to engage. K. Cossey indicated appreciation in the effort made to meet and attempt engagement.	None
3/22/2013	Letter - Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	Gary Youngman (KMC)	Team member sent K. Cossey a letter notifying of permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). These permits will be filed with the National Energy Board (NEB) following a regulatory review and public hearing process (projected 2015).	None
3/22/2013	Letter - Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	Ian Anderson (KMC)	Team member sent (KMC) President's letter to K. Cossey and cc'd SSFN's Chief and Council, expressing disappointment that SSFN/SSFN are not interested in meeting to learn more about the Project. KMC noted that if the community's position changed and meeting with the Project team could be schedule KMC would meet. KMC would continue to send information on the Project.	None
4/2/2013	Phone- Attempt	Ken Cossey	Georgia Dixon (KMC)	Team member called K. Cossey to introduce Team member as new representative for the Aboriginal Engagement team and TMEP.	None
4/2/2013	Mail- Incoming	Ken Cossey	Ian Anderson (KMC)	K. Cossey wrote Team member to reiterate that SSFN is opposed to the TMEP, and requested no further contact with SSFN unless requested and authorized by the SSFN Chief and Council. K. Cossey advised that the March 22, 2013 information was being returned to KMC and requested that the contact with SSFN would not be considered consultation.	None
4/5/2013	Phone - Attempt	Ken Cossey (Director of Lands and Real Estate Operations)	Georgia Dixon (KMC)	Team member called K. Cossey to follow up on February 6, 2013 correspondence. K. Cossey out of office until April 8, 2013.	None
4/8/2013	Phone- Attempt	Ken Cossey (Director of Lands and Real Estate Operations)	Georgina Dixon (KMC)	Team member called K. Cossey to request a meeting to discuss the TMEP.	None
4/11/2013	Phone- Attempt	Ken Cossey (Director of Lands and Real Estate Operations)	Georgina Dixon(KMC)	Team member called K. Cossey to request a meeting to discuss the TMEP.	None
4/11/2013	In-Person	Ken Cossey (Director of Lands and Real Estate Operations)	Georgina Dixon (KMC)	Team member visited K. Cossey's office and requested a meeting with K. Cossey.	None
4/16/2013	Phone- Attempt	Ken Cossey (Director of Lands and Real Estate Operations)	Georgina Dixon (KMC)	Team member left message for K. Cossey.	None
4/24/2013	Email- Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	Georgia Dixon (KMC)	Team member emailed K. Cossey and notified SSFN of available Capacity Funding if the community agreed to sign a LOU to participate in consultation for the Project. Team member noted that additional funds were available to conduct TMRU studies through TERA Environmental. This funding was available provided an agreement was reached between SSFN and TERA. Team member informed SSFN that the planned filing date with the NEB would be in October 2013 and upon its approval, construction would be scheduled for 2016.	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
4/25/2013	Email-Incoming	Ken Cossey (Director of Lands and Real Estate Operations)	Georgia Dixon (KMC)	K. Cossey emailed team member and notified that the information from team member's April 24, 2013 email would be presented to the SSFN Council. K. Cossey requested that KMC not send any further information, as stated in the April 4, 2013 letter. K. Cossey attached the letter for reference.	None
4/25/2013	Email-Outgoing	Ken Cossey	Georgia Dixon (KMC)	Team member acknowledged receipt of letter of April 24, 2013, in which SSFN requested KMC not contact SSFN or send any further information unless requested by the Chief and Council of SSFN.	None
5/22/2013	Email-Outgoing	Ken Cossey (Director of Lands and Real Estate Operations)	Georgia Dixon (KMC)	K. Cossey emailed team member and that Council met to discuss information provided by Team member in April 25, 2013 email. K. Cossey noted that the Council motion was to reaffirm original position on the issue of LOU and Capacity Funding. K. Cossey attached a copy of the Council's original referral report submitted to Cornerstone.	None
8/08/2013	Letter-Outgoing	Chief Robert Sam	Regan Schlecker	Team member sent a letter to Chief R. Sam which notified SSFN that capacity funding has been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None

APPENDIX A-5-17
T'SOU-KE FIRST NATION

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
5/29/2012	Letter - Outgoing	Chief Gordon Planes	Ian Anderson (KMC)	Team member mailed notification letter regarding preliminary scope of Project, attachments (Project System Map and Project Schedule) and regulatory requirements to Chief and Council.	None
9/4/2012	Phone - Attempt	Chief Gordon Planes	John Kafka (Cornerstone Planning)	Team member called T'Sou Ke First Nation (TUFN) office and left a message with the receptionist for Chief G. Planes to follow up on the May 29, 2012 letter from KMC and to discuss possible interest in the Project.	None
10/12/2012	Phone - Attempt	Chief Gordon Planes	John Kafka (Cornerstone Planning)	Team member called TUFN office and the receptionist said Chief G. Planes was not in but could be provided with a message. Team member referenced letter from KMC May 29, 2012, followed up to confirm receipt and determined if there was an interest in meeting or learning more about the Project.	None
10/12/2012	Phone - Incoming	Chief Gordon Planes	John Kafka (Cornerstone Planning)	Chief G. Planes returned call from Team member and requested information on benefits of First Nations involvement in the Project. Team member informed Chief G. Planes that the purpose of the proposed meeting was to share information about the Project and understand and address any concerns from TUFN. Chief G. Planes stated concerns for the environment, noted that salmon is critical to TUFN and requested information on how the Project will protect critical areas. Team member suggested a meeting and Chief G. Planes indicated that internal discussion with Council had to happen prior. Chief G. Planes requested a letter with information about the Project be sent for Council's consideration.	Salmon; Environment.
10/16/2012	Letter - Outgoing	Chief Gordon Planes	John Kafka (Cornerstone Planning)	Team member followed up on October 12, 2012 telephone conversation with Chief G. Planes about the Project and reiterated KMC's desire to meet with Chief and Council to provide further information and to learn about TUFN interests. The Team member attached requested information on the Project to share with Council.	None
11/7/2012	Phone - Attempt	Chief Gordon Planes	John Kafka (Cornerstone Planning)	Team member called TUFN office left message with receptionist for Chief G. Planes requesting a return call.	None
11/13/2012	Phone - Attempt	Chief Gordon Planes	John Kafka (Cornerstone Planning)	Team member called TUFN office left message with receptionist for Chief G. Planes requesting a return call.	None
11/30/2012	Phone - Attempt	Chief Gordon Planes	John Kafka (Cornerstone Planning)	Team member called TUFN office left message with receptionist for Chief G. Planes requesting a return call.	None
12/10/2012	Email - Outgoing	Michelle Thut (Band Manager)	John Kafka (Cornerstone Planning)	Team member called TUFN office. M. Thut, the Band Manager, asked for information about the proposed Project, requested that the Team member re-send the same before December 12, 2012, and asked to have the proposed Project on the Chief and Council's meeting agenda.	None
12/10/2012	Phone - Outgoing	Michelle Thut (Band Manager)	John Kafka (Cornerstone Planning)	Team member emailed M. Thut regarding the information requested. Team member attached two letters with the email: a) The May 29, 2012 letter from the President of KMC introducing the Project and an invitation for dialogue; and b) The October 16, 2012 letter requesting an opportunity to meet and including background information. Team member indicated that additional background information, including the newsletters referenced, could be found on the TMEP website.	None
12/18/2012	Email - Outgoing	Michelle Thut (Band Manager)	John Kafka (Cornerstone Planning)	Team member emailed M. Thut, to indicate that a meeting was scheduled with Chief G. Planes of Beecher Bay Indian Band on January 8, 2013 in Beecher Bay. The Team member extended an invitation to Chief G. Planes to attend the meeting.	None
1/7/2013	Phone - Outgoing	Michelle Thut (Band Manager)	John Kafka (Cornerstone Planning)	Team member called Band office and spoke with receptionist. M. Thut and Chief G. Planes were not available. Team member noted that Beecher Bay had set up a meeting and was to invite TUFN and wanted to know if it was in TUFN's calendar. Receptionist indicated not being able to help and did not know if the meeting was going ahead or not.	None
1/10/2013	Letter - Outgoing	Chief Gordon Planes	Regan Schlecker (KMC)	Team member sent a letter to Chief G. Planes which notified TUFN about KMC's future plans for the Project and provided information specific to an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited Chief G. Planes to visit the Project's website.	None
1/11/2013	Email - Outgoing	Michelle Thut (Band Manager)	John Kafka (Cornerstone Planning)	Team member emailed M. Thut and requested to arrange a meeting. Team member supplied details for the Information Session being held that evening (January 11, 2013) at Sooke Community Hall.	None
1/11/2013	Phone - Outgoing	Michelle Thut (Band Manager)	John Kafka (Cornerstone Planning)	Team member called M. Thut and discussed Chief G. Planes' absence at Beecher Bay meeting, informing TUFN of an Information Session being held in Sooke that evening. M. Thut was not available to attend the evening Information Session. The Team member requested that a meeting be scheduled with Chief G. Planes to discuss the Project and capacity funding opportunities. M. Thut would pass the information to Chief G. Planes.	None
3/22/2013	Letter - Outgoing	Chief Gordon Planes	Gary Youngman (KMC)	Team member mailed G. Planes a letter notifying of permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). These permits would be filed with the National Energy Board (NEB) following a regulatory review and public hearing process (projected for completion in 2015).	None
4/2/2013	Phone - Attempt	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	Team member left message for M. Thut and provided team member's contact information.	None

Event Date	Event Type	Community Contacts	Team members	Details	Concerns
4/8/2013	Phone-Attempt	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	Team member left message M. Thut and provided team member's contact information.	None
4/17/2013	Email - Outgoing	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	Team member emailed M. Thut to provide an introduction as the new Project contact. The Team member indicated updated Project information including timing, scope, environmental studies and Capacity Funding for engagement consultation and proposed a meeting to discuss the same.	None
4/23/2013	Phone-Attempt	Christine George	Georgia Dixon (KMC)	Team member left message for M. Thut with C. Georgia and provided Team member's contact information.	None
4/24/2013	Phone-Attempt	Chief Gordon Planes	Georgia Dixon (KMC)	Team member left voice message for Chief G. Planes and team member's contact information.	None
5/9/2013	In-Person	Chief Gordon Planes	Georgia Dixon (KMC)	Team member visited the T'sou-ke First Nation Office and left contact information for Chief G. Planes and M. Thut.	None
5/16/2013	Phone-Attempt	Christine Georgia	Georgia Dixon (KMC)	Team member left message with C. Georgia for M. Thut.	None
5/22/2013	Phone-Attempt	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	Team member left message for M. Thut.	None
5/27/2013	Letter-Outgoing	Chief Gordon Planes	Gary Youngman	Team member mailed Chief G. Planes to notify TUFN that the Project Description was submitted to the NEB and provided an explanation that this preliminary document was used to signal the intent of Trans Mountain and to submit a comprehensive Facilities Application. The submission of the Project Description follows an NEB decision, released on May 16, 2013, that approved the commercial aspects of the proposed expansion project.	None
6/18/2013	Phone-Attempt	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	Team member left message for M. Thut requesting if M. Thut would like to hear updated information about the TMEP.	None
6/24/2013	Phone-Attempt	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	Team member left message for M. Thut requesting if M. Thut would like to hear updated information about the TMEP.	None
6/26/2013	In-Person	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	Team member visited T'sou-ke First Nation Office and spoke to C. George who advised the M. Thut was not available.	None
7/12//2013	In-Person	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	Team member visited T'sou-ke First Nation Office and spoke to C. George who advised the M. Thut was not available.	None
8/08/2013	Letter-Outgoing	Chief Gordon Planes	Regan Schlecker	Team member sent a letter to Chief G. Planes which notified TUFN that capacity funding has been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None
8/26/2013	Email-Outgoing	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	Team member emailed M. Thut to advise M. Thut of an upcoming invitation from KMC to meet the Salish Sea Chiefs regarding the TMEP. Team member provided tentative meeting dates.	None
8/26/2013	Email-Incoming	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	M. Thut emailed team member that the T'sou-ke Chief and Council were interested in setting up a meeting with KMC.	None
8/29/2013	Phone-Incoming	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	M. Thut phones team member and requests a meeting with Team member, date to be determined.	None
9/9/2013	Email-Outgoing	Michelle Thut (Band Manager)	Georgia Dixon (KMC)	Team member emailed M. Thut to provide information on the engagement process with First Nations. Team member attached: <ul style="list-style-type: none"> • Project description • Information regarding environmental studies • Territory and routing maps • Marine Supplement information • Capacity Funding guidelines. 	None

APPENDIX A-5-18
TSARTLIP FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
04/12/2012	Letter - Outgoing	Chief Wayne Morris	Ian Anderson (KMC)	Team member sent a letter to Chief W. Morris that notified Tsartlip First Nation (TRFN) of the Trans Mountain Expansion Project (the Project). Team member stated that the Project was expected to be completed in 2017; during the interim period, KMC was committed to meaningfully engaging with Aboriginal communities along the Project route. KMC recognized the integral role of Aboriginal groups and understood that Aboriginal interests, responsibilities and concerns were critical to the Project's planning. Team member provided the preliminary project scope and stated that further engagement efforts were forthcoming. Also attached: <ul style="list-style-type: none"> • Project Backgrounder • Project Media Release 	None
5/29/2012	Letter - Outgoing	Chief Wayne Morris	Ian Anderson (KMC)	Team member mailed follow-up notification letter regarding preliminary scope of Project, attachments (Project System Map and Project Schedule) and regulatory requirements to Chief and Council.	None
9/28/2012	Phone - Outgoing	Chief Wayne Morris	John Kafka (Cornerstone Planning)	Team member called Chief W. Morris regarding possible interest in further information on TMEP. A general discussion took place regarding NEB involvement, what an engagement was and what TRFN's interest might be. Team member suggested a meeting to discuss further. Chief W. Morris requested a return call in two weeks.	None
10/12/2012	Phone - Attempt	Chief Wayne Morris	John Kafka (Cornerstone Planning)	Team member called Chief W. Morris and left a voicemail referencing the phone conversation of September 28, 2012 expressing interest in discussing the Project with Chief W. Morris soon. Team member left telephone number to call back.	None
11/9/2012	Letter - Outgoing	Chief Wayne Morris	Regan Schlecker (KMC)	Team member sent Chief W. Morris a follow up to a notification letter sent on May 29, 2012, in which KMC emphasized its commitment to respectful, open, responsive and thorough engagement with Aboriginal groups. Team member referred Chief W. Morris to the TMEP website for information, as well as enclosing latest copy of the Project newsletter. Team member encouraged Chief W. Morris to contact KMC Aboriginal Engagement Team and provided contact information.	None
1/10/2013	Letter - Outgoing	Chief Wayne Morris	Regan Schlecker (KMC)	Team member sent a letter to Chief W. Morris and notified of KMC's future plans for the Project and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited W. Morris to visit the Project's website.	None
3/22/2013	Letter - Outgoing	Chief Wayne Morris	Gary Youngman (KMC)	Team member mailed Chief W. Morris a letter notifying of permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). These permits will be filed with the National Energy Board (NEB) following a regulatory review and public hearing process (projected 2015).	None
4/8/2013	In-Person	Karen Harry	Georgia Dixon (KMC)	Team member visited the administration office of TRFN to meet the Administrator, K. Harry and make introductions. K. Harry was unavailable and the receptionist advised the Team member to contact K. Herry by email.	None
4/9/2013	Email- Outgoing	Karen Harry, (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry to notify that Team Member was privy to updated Project information pertaining to Capacity Funding. Team member wished to discuss this information with TRFN soon.	None
4/9/2013	Email- Outgoing	Chief Wayne Morris	Georgia Dixon (KMC)	Team member emailed the Chief W. Morris and notified that team member had visited TRFN office to make introductions as the new contact person for the Project, and provided updated information for the Project.	None
4/24/2013	In-Person	Karen Harry	Georgia Dixon (KMC)	Team member visited TRFN and requested a meeting with K. Harry to provide an overview of the TMEP and the Aboriginal engagement process for the TMEP.	None
5/16/2013	In-Person	Karen Harry, Administrator Gordon Elliot, Councillor Al Sam, Councillor	Georgia Dixon (KMC)	Team Member met with K. Harry, G. Elliot, and A. Sam and discussed: <ul style="list-style-type: none"> • Project Overview • Marine Traffic • Tsartlip Traditional Territory and Rights • Capacity Funds • Federal Government Duty to Consult • Oil Spill and Responsibility • Engagement Next Steps TRFN advised Team Member that TRFN would review the information and draft agreements and then advise the Team Member.	None
5/27/2013	Letter- Outgoing	Chief Wayne Morris	Gary Youngman	Team member mailed W. Morris and notified TRFN that the Project Description had been submitted to the NEB. It was explained that this preliminary document was used to signal the intent of TransMountain to submit a comprehensive Facilities Application. The submission of the Project Description follows an NEB decision, released on May 16, 2013, that approved the commercial aspects of the proposed expansion project.	None
05/28/2013	Phone- Attempt	Karen Harry	Georgia Dixon (KMC)	Team Member left message for K. Harry to advise that the project description had been submitted to the NEB.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
8/08/2013	Letter- Outgoing	Chief Wayne Morris	Regan Schlecker	Team member sent a letter to Chief W. Morris which notified TRFN that capacity funding has been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None
9/9/2013	Letter - Outgoing	Sencot'en Alliance	Howard Heffler (KMC)	Team member sent a letter to the Sencot'en Alliance which described the TMEP, provided links to additional information about the project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that the Sencot'en Alliance may have about the Project.	None
9/10/2013	In-Person	Simon Smith, Jr.	Ian Anderson (KMC) Regan Schlecker (KMC) Gary Youngman (KMC) Georgia Dixon (KMC)	Councilor Simon Smith, Jr, Tsartlip Team Member attended meeting at Tsawout First Nation office for an introduction of KMC President to the WSANEC Chiefs and to hear an overview of the TMEP, and marine issues and the Project. Concerns discussed were; <ul style="list-style-type: none"> • a long term relationship with the FNs • KMC to address the FN interests. Tsartlip, Tseycum and Tsawout agree to work together and will try to include Malahat and Pauquachin First Nations.	None
9/23/2013	In-Person	Karen Harry	Georgia Dixon (KMC)	Team Member visited TRFN Office to follow up the meeting of September 10, 2013 and request a meeting with K. Harry regarding the coordination of the WSANEC Chiefs to engage with KMC.	None
9/30/2013	Letter - Outgoing	Sencot'en Alliance	Howard Heffler (KMC)	Team member sent a letter to the Sencot'en Alliance which described the TMEP, provided links to additional information about the Project, supplied the information for further KMC contact and asked to discuss any questions or concerns that the Sencot'en Alliance may have about the Project.	None

APPENDIX A-6

ASSOCIATIONS, COUNCILS AND TRIBES

Ts'elxweyeqw Tribes Management Limited (TTML)

TS'ELXWEYEQW TRIBES MANAGEMENT LIMITED (TTML)

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
04/12/2012	Letter - Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper	Ian Anderson (KMC)	Team member sent a letter to President O. Jasper that notified Ts'elxweyeqw Tribes Management Limited (TTML) of the Trans Mountain Expansion Project (the Project). Team member stated that the Project was expected to be completed in 2017; during the interim period, KMC was committed to meaningfully engaging with Aboriginal communities along the Project route. KMC recognized the integral role of Aboriginal groups and understood that Aboriginal interests, responsibilities and concerns were critical to the Project's planning. Team member provided the preliminary project scope and stated that further engagement efforts were forthcoming. Also attached: <ul style="list-style-type: none"> • Project Backgrounder • Project Media Release 	None
4/20/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper	Regan Schlecker (KMC)	Team member phoned President O. Jasper to provide advance notice that Project had a specific ROW issue that needs to be addressed and that KMC will be sending a letter this week with further details.	None
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5/29/2012	Letter - Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper	Ian Anderson (KMC)	Team member mailed follow-up notification letter regarding preliminary scope of Project, attachments (Project System Map and Project Schedule) and regulatory requirements to Chief and Council.	None
6/4/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper	Regan Schlecker (KMC)	Team Member notified O. Jasper of meeting scheduled with Seabird Island & request that meeting take place in Stó:lō Tribal Council Offices. O, Jasper asked that KMC consider the fact that Bands in which TMPL traverse their reserve land have more authority to speak at Project than those Bands in which TMPL traverses traditional territory only. O.	None
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6/18/2012	In-Person	Ts'elxweyeqw Tribes	President Otis Jasper	Regan Schlecker (KMC), Wanda Lewis (TERA), Jeff Smith (KMC)	Team members involved in an introductory meeting with Ts'elxweyeqw Tribes on June 8, 2012. Team members discussed Kinder Morgan's history, and shared that the Project is still in early stages and will depend on readiness to meet the deadline. TERA recognizes asserted Traditional Territory. O. Jasper asked if the routing is still undetermined. To which KMC representative responded that the goal is to stay within the existing right-of-way and that there is no route determined as of yet because KMC is still in the process of getting out to communities and finding out concerns etc. O. Jasper would like to be sent priority areas and map with KPs.	None
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6/24/2012	Email- Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper	Charles Littledale (KMC)	Team member emailed O. Jasper to thank him for the meeting last week. In follow up to the meeting, team member updated O. Jasper on	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					three action items: - Team member is working on getting the field program information to O. Jasper as soon as possible. - Another team member is working on a budget for O. Jasper. - Team member is working on getting a detailed route map to O. Jasper as soon as possible.	
6/26/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	John Kafka (KMC)	Team member called C. Archibald to discuss capacity funding.	None
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7/1/2012	In-Person	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate), President Otis Jasper	Paul Anderson (TERA)	Team member was involved in meeting with Ts'elxweyeqw Tribes on July 7, 2012. All parties agreed it would be beneficial for a workshop that would provide an explanation of the NEB process and information on TEK/TLU studies. After an NEB information session TERA could provide more detail on what is needed to accomplish all of the field programs and scheduling. TTML's partners include Triton, Stó:lō Research and Resource Management Centre (SRRMC), who could possibly work with TERA on the environmental/archaeology/cultural heritage issues / studies.	Environmental; traditional land use.
7/6/2012	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	John Kafka (KMC)	Team member emailed C. Archibald to follow up on their June 26, 2012 conversation. Team member indicated that the Capital Funding Guidelines were in the process of being approved, but that most components remain unchanged from what was discussed.	None
7/25/2012	In-Person	Ts'elxweyeqw Tribes	President Otis Jasper, Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team Member met with TTML president O. Jasper and C Archibald, consultant to TTML. Topics included: • Update on the status of the project • National Energy Board process • Extent of TTML's involvement • Other First Nations approached by TTML • Capacity Funding and Guidelines -- C. Archibald indicated that she would have a draft Capacity Funding Proposal soon.	None
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8/1/2012	In-Person	Ts'elxweyeqw Tribes	President Otis Jasper, Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC), Wanda Lewis (TERA)	Team members from KMC, CPG and TERA met with TTML President O. Jasper and C. Archibald, consultant to TTML. Discussed: • Capacity Funding agreement	None
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8/13/2012	Email- Incoming	Ts'elxweyeqw Tribes	President Otis Jasper	Regan Schlecker (KMC)	O. Jasper emailed team member proposed budget.	None
8/14/2012	Email- Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper	Regan Schlecker (KMC), Charles Littledale (KMC)	Team member emailed O. Jasper notifying that the proposal had been forwarded for review.	None
8/25/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member called C. Archibald to discuss possible dates for the proposed workshop with TERA and discuss an upcoming meeting with the KMC Aboriginal Engagement team. TTML	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					capacity funding proposal was also discussed.	
9/5/2012	Phone - Attempt	Ts'elxweyeqw Tribes	President Otis Jasper, Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member called O. Jasper and C. Archibald to make arrangements for a meeting. Meeting scheduled September 6, 2012.	None
9/6/2012	In-Person	Ts'elxweyeqw Tribes	President Otis Jasper	John Kafka (KMC), Charles Littledale (KMC)	<p>KMC Team members met with O. Jasper and J.Kafka, Natural Resource and Lands Officer for TTML, to discuss the capacity funding budget and field programs.</p> <p>O. Jasper emphasized the importance of TTML being involved in the field programs and they are prepared to work with TERA directly but they have yet to see the field schedule.</p> <p>O. Jasper mentioned the existence of the Strategic Engagement Agreement program– the goal is have the group to work together in engaging on this project.</p> <p>Team member mentioned the idea of holding a workshop to sort out how TTML would meaningfully work with TERA on the field programs and committed to schedule the workshop with C. Archibald.</p> <p>There was a general discussion about the categories in the TTML budget and deliverables .</p> <p>Team members committed to be in touch with C. Archibald about reworking the budget and finalizing an agreement to provide capacity funding.</p>	None
9/10/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member phoned C. Archibald to discuss TTML capacity funding proposal, plans for a workshop between TERA and TTML and to discuss field programs.	None
9/11/2012	Phone - Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	C. Archibald phoned Team member to discuss the Ts'elxweyeqw Tribes' capacity funding proposal, the plans for a workshop between TERA and TTML to discuss the field programs.	None
9/11/2012	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Wanda Lewis (TERA)	Team member emailed stakeholder and provided the Project's tentative field study schedule. She also noted that she was available to meet with Chief stakeholder and discuss TLU/TEK study participation for Stó:lō Nation.	None
9/13/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member phoned C. Archibald to further discuss the how TERA and Ts'elxweyeqw Tribes will work together in the field programs.	None
9/14/2012	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member followed up a phone call to C. Archibald with an email to further discuss how TERA and TTML would work together on the field programs.	None
9/16/2012	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member sent C. Archibald a revised budget. Team member noted that the Letter of Agreement (LOA) was being drafted.	None
9/17/2012	Email- Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	C. Archibald emailed team member and requested a phone call to discuss the budget.	None
9/17/2012	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed C. Archibald and stated that team member had spoken with TERA and how TTML and KMC might be able to move forward.	None
9/18/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member phoned C. Archibald to discuss the TTML capacity funding proposal.	None
9/19/2012	Email- Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Wanda Lewis (TERA)	Stakeholder emailed team member and requested to hold a meeting to discuss Stó:lō participation in TEK/TLU study and provided September 24, -October 1, 2013 as potential meeting dates. Meeting as yet unconfirmed due to scheduling conflicts.	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
9/19/2012	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	C. Archibald sent an email to team member and stated that TTML would like to train 10-12 crew members and techs, with a minimum of 5-6, and requested funding for ATV training.	None
9/20/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member called C. Archibald to find out details of a Strategic Engagement Agreement (SEA) meeting (group of FNs that include Ts'elxweyeqw Tribes with other Stó:lō FNs) that KMC was requested to attend. C. Archibald suggested calling J. Morrison of the Stó:lō Research and Resource Management Centre (SRRMC).	None
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9/21/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member called C. Archibald to update her on the arrangements made to meet with the Strategic Engagement Agreement (SEA) Board.	None
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9/21/2012	Phone - Incoming	Ts'elxweyeqw Tribes	Jessica Morrison (PRRO Referrals Coordinator)	Charles Littledale (KMC)	J. Morrison called team member and provided more information about the September 25, 2012 meeting, The meeting was to be a session for the Strategic Engagement Agreement (SEA) board (although all Stó:lō First Nations were invited to attend) on TMEP; SEA would be briefed by staff about KMC and TMEP in the morning; and then in the afternoon KMC to provide a presentation on TMEP and be available to answer questions. Team member asked if the meeting could be rescheduled as KMC may have difficulty getting technical staff on short notice to attend and J. Morrison recommended that KMC attend as this board meeting had been planned and members invited to be prepared to discuss the TMEP project.	None
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9/21/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Wanda Lewis (TERA)	Team member emailed stakeholder and stated that she would be available to meet in Chilliwack on September 24, 2012 or September 25, 2012 if that was agreeable.	None
9/22/2012	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Wanda Lewis (TERA)	Stakeholder emailed team member and stated that unfortunately Stó:lō Research and Resource Management Centre (SRRMC) would be unavailable to meet September 24, 2012 or September 25, 2013 was requested by team member (September 21, 2013). He suggested meeting in October, 2013.	None
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10/5/2012	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	C. Archibald emailed team member a spreadsheet of costs based on the scope of work within Stó:lō Traditional Territory (about 100 stream crossings),	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
10/6/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member thanked C. Archibald and requested the timeline be double checked.	None
10/6/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed C. Archibald to ask about the budget.	None
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10/10/2012	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	C. Archibald emailed team member and asked if the contract was ready to be finalized.	None
10/10/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member told C. Archibald that notification of finalization had not come back from KMC yet but team member would check in again and requested a time talk October 11, 2013.	None
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10/11/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	C. Archibald emailed C. Littledale and requested a call for October 11, 2013.	None
10/14/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member requested a meeting between C. Archibald, KMC and TERA to discuss the budget proposal and asked for any dates available. Team member also mentions setting up a meeting with TERA and the Stó:lō Research and Resource Management Centre regarding the Traditional Ecological Knowledge, Traditional Land Use components, as well as noting that he is currently working on the capacity funding Letter of Agreement.	None
10/16/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member called C. Archibald to discuss how to move forward regarding a contract for involving TTML in the Field Program and informed that TTML needed to make those arrangements with TERA. Team member committed to arrange a conference call between C. Archibald and TERA. The draft LOA was also discussed and it was agreed that a call should be scheduled with O. Jasper, president of TTML re: the LOA – Team member to make arrangements.	None
10/16/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed C. Archibald and attached a draft Letter of Agreement for review along with the updated budget and a map. Team member request an opportunity to meet and discuss after TTML had reviewed the documents.	None
10/19/2012	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	C. Archibald emailed team member and discussed budgets.	None
10/25/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Jason Smith (TERA)	Team member called C. Archibald to discuss field program schedule. C. Archibald mentioned other studies being conducted on Stó:lō Traditional Territory and indicated that she would share the schedule with team member. Team member offered to meet with TTML to review the environmental program and the NEB process. C. Archibald agreed to meeting.	Marine - Fish, Socio-Econ. Terrestrial - Heritage Resources - Archaeology, Terrestrial - Freshwater Fish, Terrestrial - Wetlands
10/29/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed C. Archibald to confirm that there was a conference call that morning between KMC, Triton, and O. Jasper and that the field work is to start the following day. Team member asked if it was required to let the other TTML bands in the area (Hope to Abbotsford) know that there will be field crews in the area.	None
10/29/2012	Email-	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and	Charles Littledale	Team member emailed C. Archibald to say that KMC has not	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
	Outgoing		Associate)	(KMC)	contacted the Stó:lō Nation Society (SNS) and that a number of the Ts'elxweyeqw Tribes' members are SNS. Team member asked C. Archibald what would be the best way to approach SNS.	
10/29/2012	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	C. Archibald emailed team member to tell him that O. Jasper would be informing some of the Chiefs today at an upcoming all leadership meeting. C. Archibald suggested that team member send a letter to SNS to introduce KMC and the Project.	None
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11/8/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed C. Archibald and notified that O. Jasper did not attend pre-meeting and meeting with Tzeachten First Nation as was expected, so therefore C. Archibald should call team member in order for team member to provide an update on the meeting as well as more on the Triton field work that is starting with Cheam First Nation and Seabird Island Band.	None
11/12/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed O. Jasper and C. Archibald with information on an upcoming public open house November 17, 2012 in Abbotsford, which would provide an opportunity to gain additional knowledge about the Trans Mountain Expansion Pipeline Project as well as an opportunity for individualized questions and answers and to meet some of the folks who are most knowledgeable about the project. Team member would be attending and would be able to provide introductions to others on the project team.	None
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11/21/2012	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed C. Archibald a copy of the updated PowerPoint presentation and noted that slide 12 outlines the schedule (construction hoped to be complete by 2017, which provides the requested timeline. Team member also said that regarding a Final Investment Decision date, the team member was told there would be a tolling milestone at the end of May 2013, and then the National Energy Board process, but other than that the Project will move forward. Team member would provide an updated field schedule.	None
11/25/2012	Email-Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper, Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed O. Jasper and C. Archibald to provide them with a list of dates, times, and locations of some upcoming community information sessions on the Project. Team member noted that the sessions are quite informative and there were TMEP staff able to answer questions on all aspects of the Project. Team member asked them to pass the information along to those that would be interested in attending these sessions.	None
11/25/2012	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	C. Archibald emailed team member and notified that the budgets were through the winter field programs and requested the budgets be provided to Triton.	None
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12/7/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member phoned C. Archibald to be sure to set a date (December 12, 2012) to meet to discuss the Letter of	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					Understanding (LOU) and to provide a summary of the topics to be discussed.	
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12/12/2012	Phone - Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	C. Archibald called team member and indicated availability along with O. Jasper to meet and discuss the LOU. Team member indicated he would drive to Vancouver to meet with them.	None
12/12/2012	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed C. Archibald to say he had reviewed the Letter of Understanding edits provided, and noted that KMC had some input that the team member would like to go over with C. Archibald.	None
12/12/2012	In-Person	Ts'elxweyeqw Tribes	President Otis Jasper, Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member met with C. Archibald and O. Jasper on December 12, 2012 to discuss the Letter of Understanding (LOU). It was agreed that team member would redraft the LOU and then send the revised version to TTML.	None
12/12/2012	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member phoned TTML – C. Archibald to discuss potential dates for a TTML/TERA/SRRMC workshop regarding National Energy Board overview and deciding how TERA/TTML/SRRMC would work together on the cultural/heritage components of the field programs. C. Archibald suggested that January 21, 2013 as a potential Workshop date and team member committed to checking with KMC and TERA and provide an agenda.	None
1/10/2013	Letter - Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper	Regan Schlecker (KMC)	Team member sent a letter to O. Jasper to notify TTML of KMC's future plans for the Trans Mountain Pipeline and to provide information about an announcement sent January 10, 2013 regarding the change in scope for the Project. KMC welcomed First Nations' comments, questions and concerns and invited O. Jasper to visit the Project's website.	None
1/10/2013	Email- Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper	Regan Schlecker (KMC)	Team member emailed O. Jasper and requested to speak over the phone. Team member included a digital copy of KMC's news release, as well as a URL to the document on the Project's website.	None
1/17/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed C. Archibald with the agenda for TERA's Field Program Workshop scheduled January 21, 2013 and requested that if it was approved to forward it to all concerned parties. The agenda included: <ul style="list-style-type: none"> • A presentation of the National Energy Board process and information/reporting requirements (that lead to filing the application). • TERA to provide presentation on the TMEP field programs and topics that include: Traditional Ecological Knowledge (TEK) – Traditional Land Use (TLU) - Socio Economic. • TERA, TTML and SRRMC discuss how to work together regarding TEK and TLU Team member noted that the format and approach to this workshop would be informal to encourage collaboration.	None
1/21/2013	In-Person	Ts'elxweyeqw Tribes	President Otis Jasper, Corry Archibald (Consultant - Archibald and Associate), David Schaepe (SRRMC - Director / Senior Archaeologist), Jessica Morrison (PRRO Referrals Coordinator)	Regan Schlecker (KMC), Paul Anderson (TERA), Charles Littledale (KMC), Wanda Lewis (TERA)	Team members met with O. Jasper, C. Archibald, D. Schaepe and J. Morrison on January 21, 2013. Team member clarified TERA's role as consultants, and explained the Environmental process and NEB requirements. TERA encourages community participation during the TEK/TLU process. Team member discussed the Archaeology permit. TTML wanted to know who the Archaeology lead was. Team member provided information on the Archaeological permit holder. TTML requested statutes as	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					well as past TERA TEK reports for review, and more information regarding the scope and what is involved during studies. D. Schaepe requested a list of field studies and objectives, confirmed that TTML would like to be involved in all future TEK field studies.	
1/22/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Charles Littledale (KMC)	Team member emailed C. Archibald the updated presentation, dated January 22, 2013.	None
1/28/2013	Email-Incoming	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Paul Anderson (TERA), Wanda Lewis (TERA)	K. Ardell emailed team members and requested: <ul style="list-style-type: none"> • a copy of the Field Schedule • detail of Field Programs • Terms of Reference for the Kinder Morgan project 	None
1/29/2013	Email-Incoming	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator), Matt Wealick (TTML - COO)	Regan Schlecker (KMC), Mike Horn (KMC)	K. Ardell emailed team member to discuss the most recent right of way location and details of the shape files required. A presentation for the Board was confirmed for February 13, 2013.	None
1/29/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Regan Schlecker (KMC)	Team member emailed K. Ardell and confirmed meeting on February 13, 2013 for presentation to the SEA Board.	None
1/29/2013	Email-Incoming	Ts'elxweyeqw Tribes	Matt Wealick (TTML - COO)	Regan Schlecker (KMC)	M. Wealick emailed team member with a more detailed follow up to K. Ardell's requested GIS shape files. The request included: <ul style="list-style-type: none"> • Existing and Proposed Pipeline location • Existing and Proposed Right of Way • Existing and Proposed Access M. Wealick will require this data to properly inform the membership as to the present location and proposed locations of the Project.	None
1/29/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Matt Wealick (TTML - COO)	Regan Schlecker (KMC)	Team member emailed M. Wealick regarding sharing digital map files and indicated a data request waiver was required to be filled out and returned then files can be shared. The waiver was attached.	None
2/1/2013	Phone - Attempt	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Wanda Lewis (TERA)	K. Ardell phoned team member and left a voicemail indicating that she was still waiting for field schedule information and that it would be very helpful to have it in the near future.	None
2/1/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Angelina Silver (TERA)	Team member emailed K. Ardell and attached the Project's 2013 tentative field schedule as requested February 1, 2013.	None
2/8/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Regan Schlecker (KMC)	Team member emailed K. Ardell an attached copy of PPT presentation that will be presented to Chiefs on February 13, 2013. Team member spoke to O. Jasper regarding the draft Letter Of Understanding (LOU), aiming to prepare a final draft for Chiefs in advance of February 13, 2013.	None
2/8/2013	Email-Incoming	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Regan Schlecker (KMC)	K. Ardell emailed team member indicating she would call on February 12, 2013.	None
2/13/2013	In-Person	Ts'elxweyeqw Tribes	President Otis Jasper, Corry Archibald (Consultant - Archibald and Associate)	Gary Youngman (KMC), Peter Forrester (KMC), Charles Littledale (KMC), Norman Marcy (KMC)	Team members met with O. Jasper, C. Archibald and community members from Aitchelitz, Shxwhá:y Village, Skowkale, Soowahlie, Squiala, Tzeachten and Skwah. Missing were representatives from Kwaw-Kwah-Apilt and Yakweakwoose.	None
2/13/2013	Email-Incoming	Ts'elxweyeqw Tribes	President Otis Jasper	Regan Schlecker (KMC)	O. Jasper emailed team member regarding capacity funding	Capacity funding
2/14/2013	Email-Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper	Regan Schlecker (KMC)	Team member emailed O. Jasper and reiterated KMC's commitment to work together to finalize the LOU	None
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2/18/2013	Email-	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and	Charles Littledale	Team member emailed O. Jasper and C. Archibald to provide	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
	Outgoing		Associate), President Otis Jasper	(KMC)	TTML with the information for the team member now assigned on the Project. Team member noted the working documents had been passed along and that the new team member would be assisting them with finalizing the LOU.	
2/18/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member emailed C. Archibald indicating meeting availability for February 19, 2013 or February 20, 2013. If C. Archibald wanted to meet and resolve the outstanding issues with the Letter of Understanding, please advise the team member. Team member requested TTML's vendor information.	None
2/18/2013	Email- Incoming	Ts'elxweyeqw Tribes	Paula Neufeldt (TTML - Office Manager)	Norman Marcy (KMC)	P. Neufeldt emailed team members a letter with the required information.	None
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2/19/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Matt Wealick (TTML - COO)	Regan Schlecker (KMC)	Team member emailed M. Wealick as an introduction and on the advice of O. Jasper to discuss KMC operations as they pertain to Grass IR #15. Team member notified M. Wealick regarding the pipeline protection program and depth of cover readings. Team member notified M. Wealick that there was concern of potential insufficient depth of cover from KP 1059.260-1059.627 and further investigation was requested. Team member requested available dates for meeting. Team member provided M. Wealick contact information for Pipeline Protection Technician.	None
2/19/2013	Email- Incoming	Ts'elxweyeqw Tribes	Matt Wealick (TTML - COO), Paula Neufeldt (TST - Office Manager)	Regan Schlecker (KMC)	M. Wealick emailed P. Neufeldt and requested a meeting be arranged to discuss access for Grass IR #15.	None
2/20/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Angelina Silver (TERA)	Team member phoned C. Archibald and notified that the Archaeology permit was going to be submitted February 22, 2013 and that the team manager wanted to make sure the community was aware of the submission. C. Archibald requested an email stating it as well.	None
2/21/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Angelina Silver (TERA)	C. Archibald emailed team member and stated that, as per the January 21, 2013 meeting, team manager committed to sending the permit to SRRMC prior to submitting it to the Archaeology branch, and requested to know if this request had been satisfied.	None
2/21/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Angelina Silver (TERA)	Team member emailed C. Archibald and attached a draft version of the BC Archaeology permit for review.	None
2/21/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member emailed C. Archibald indicating February 26, 2013 and February 27, 2013 would work for a meeting where they could review the Letter of Understanding and hopefully resolve any matters that remain outstanding.	None
2/21/2013	Email- Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	C. Archibald emailed team member indicating he was meeting with the W. Hall (newly elected president of TTML) February 22, 2013 to finalize the agreement..	None
2/21/2013	Email- Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	C. Archibald emailed team member asking for a discussion over the issue of TMEP-BC Archaeology Permit. <ul style="list-style-type: none"> •The need for a reminder at this point in time is a red flag for the nature of ongoing relations unless immediate action is taken to correct the situation. Our aim is to establish an amicable, respectful, collaborative relationship. • We will advise TERA and remind them that they committed to send you the permit prior to submitting it to the Arch branch. • Please advise TERA to submit a Stó:lō Heritage Investigation Permit application for review as a critical part of the assessment 	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					process. As indicated, our process is separate from that of the Province. In the interest of harmonizing processes we strongly recommend that TERA submit the Stó:lō permit application for review and comment in advance of their provincial submission. This proved to save time and effort in streamlining the provincial permit consultation process – engaging in the review your permit application by the qualified staff re: details of methods and such, and ensuring compliance with the Heritage Policy. C. Archibald suggests TERA hold-off submission altogether until such time as the working relationship with the TTML, and possibly other Stó:lō First Nations has been established. • Regarding the BC Archaeology permit, we wanted to let you know that TERA Environmental will be submitting our BC Archaeology permit this Friday February 22nd 2013."	
2/21/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member emailed C. Archibald requested a phone call regarding the chain of emails.	None
2/21/2013	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	C. Archibald emailed team member indicating he was meeting with Stó:lō Research and Resource Management Centre today so it would be helpful to talk prior to that.	None
2/22/2013	Email-Incoming	Ts'elxweyeqw Tribes/Stó:lō Research and Resource Management	Cara Brendzy (SRRMC - Project Archaeologist/ GIS Specialist)	Angelina Silver (TERA)	C. emailed team member and attached the Stó:lō Heritage Investigation Permit Application form for the Kinder Morgan Trans Mountain Pipeline Expansion Project. It was requested that, upon completion, it would be submitted with associated development shapefiles, maps, and most recent version of the Heritage Inspection Permit.	None
2/22/2013	Email-Incoming	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	David Schaepe (SRRMC - Director / Senior Archaeologist)	Angelina Silver (TERA)	D. Schaepe emailed team member and stated that what was required was the Stó:lō Heritage Investigation Permit Application. D. Schaepe requested follow-up for further information on accessing these forms.	None
2/22/2013	Email-Incoming	Ts'elxweyeqw Tribes	Keri Ardell (TTML- Project Coordinator)	Paul Anderson (TERA), Wanda Lewis (TERA)	K. Ardell emailed team members and requested to see a completed report for an example of TERA's field study methodology.	None
2/22/2013	Email-Incoming	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Wanda Lewis (TERA)	K. Ardell emailed team member and referenced January 28, 2013 request for field schedule and study information. K. Ardell requested more information on field studies/programs be forwarded.	None
2/22/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member called C. Archibald to discuss matters to do with Archaeology Permit and the work of TERA Environmental as follow up to January 21, 2013 meeting with TTML. TERA was to have sent and discussed a permit application before proceeding to submit application to the Province. TERA only provided copy of permit with less than a day before intending to submit application to the Province. C. Archibald indicated this issue had the potential to put many of the Stó:lō First Nations off side.	None
2/22/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member emailed C. Archibald indicating there are two versions (Word and PowerPoint) of the Summary of the Environmental and Socio-Economic Assessment for the Pipeline and Facilities, and Marine Transportation Components of the Trans Mountain Expansion Project. These and other documents are part of the documentation for review that is being prepared for your consideration and comment. Team member hoped that this fulfilled another of the commitments from the January 21, 2013 meeting.	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
2/26/2013	In-Person	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator), Matt Wealick (TTML - COO)	Regan Schlecker (KMC), Andrew Mark (KMC)	Team members met with K, Ardell and M. Wealick and discussed potential depth of cover hazard on Grass IR #15.	None
2/27/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member called C. Archibald to discuss finalization of Letter of Understanding and Budget. Outlined issues and discussed possible fixes. C. Archibald explained this would have to go through significant review with TTML even for these minor adjustments.	None
2/27/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member called C. Archibald to clarify aspects of the LOU before forwarding to KMC for execution.	None
2/27/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member emailed K. Ardell and provided recommended revisions in the LOU agreement. Team member had explained TTML's ratification process to KMC, who were concerned about the lack of Band Council Resolution.	None
2/27/2013	Phone - Incoming	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Norman Marcy (KMC)	K. Ardell called team member concerning organization of community meetings for TTML on March 25, 2013 and another tentatively planned for early April 2013. It was noted that these meetings would qualify as the primary introduction to the Project.	None
3/5/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Regan Schlecker (KMC)	Team member stated that it was understood that a LOA was couriered to TTML on March 1, 2013. K. Ardell stated the LOA had been received March 4, 2013 and was being finalized.	None
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3/15/2013	Email- Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Regan Schlecker (KMC)	O. Jasper emailed team member to follow up on LOA.	None
3/18/2013	Letter - Outgoing	Ts'elxweyeqw Tribes	President Willy Hall	Regan Schlecker (KMC)	Team member mailed W. Hall a letter requesting a meeting between KMC and TTML to discuss the Trans Mountain Expansion Project	None
3/18/2013	Letter - Outgoing	Ts'elxweyeqw Tribes	President Willy Hall	Regan Schlecker (KMC)	Team member sent a letter to W. Hall and Council to request a meeting to discuss routing options for the proposed pipeline where it crosses Grass IR#15.	None
3/22/2013	Letter - Outgoing	Ts'elxweyeqw Tribes	President Willy Hall	Gary Youngman (KMC)	Team Member mailed W. Hall a letter notifying of permits being filed to support the 2013 field programs for the Environmental and Socio-Economic Assessment (ESA). These permits would be filed with the National Energy Board (NEB) following a regulatory review and public hearing process (projected for completion in 2015).	None
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4/2/2013	Phone - Incoming	Ts'elxweyeqw Tribes	Mike Goold (PRRO Referrals Officer)	Norman Marcy (KMC)	M. Goold called team member and informed that the PRRO board meeting was held in late March. M. Goold indicated to be the contact in regards to portals.	None
4/2/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member emailed C. Archibald and offered to work in collaboration with TST to facilitate the engagement process. Team member offered to meet informally to discuss proceeding further.	None
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4/16/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member emailed C. Archibald and acknowledged the integrated approach to engagement and requested any supporting documents that would give KMC an idea of the	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					direction TTML wished to take the engagement. Team member also requested details pertaining to the community meeting to be held April 25, 2013. Team member stated availability to meet prior to the community meeting. Team member requested C. Archibald's contact details.	
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4/18/2013	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	C. Archibald emailed team member and notified KMC of the anticipated delivery date for the proposal. C. Archibald also noted that the presence of KMC at the community meeting scheduled April 25, 2013 would no longer be required as certain preliminary community-focused activities were still underway.	None
4/22/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member emailed C. Archibald and arranged to meet prior to the community meeting scheduled April 5, 2013. C. Archibald confirmed meeting details and attached the draft proposal to be discussed.	None
4/29/2013	Email-Incoming	Ts'elxweyeqw Tribes	Carrie Oloriz (Human Environment Group)	Norman Marcy (KMC)	C. Oloriz emailed team member and requested status deliverable.	None
4/29/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Matt Wealick (TTML - COO)	Regan Schlecker (KMC)	<p>Team member phoned M. Wealick:</p> <ul style="list-style-type: none"> • M. Wealick met with KMC operations staff last week; provided an overview of the People of the Rivers referral process that should be followed by proponents; expectation that KMC operations would adhere to process for referrals in Stó:lō Territory • M. Wealick to provide comments on a draft Master Service Agreement for vegetation management; clarified that TTML did want procurement opportunities on existing line to be perceived or counted as TMEP project benefits. M. Wealick awaits reply – contact for KMC. 	None
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Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
5/7/2013	In-Person	Ts'elxweyeqw Tribes	Chief Frank Malloway (Yakweakwioose), Terry Horne (Yakweakwioose), Chief Alice Thompson (Leq'á:mel), Councillor Mike Kelly (Leq'á:mel), Otis Jasper (Soowahlie), Chief Maureen Chapman (Skawahlook), Debra Schneider (Skawahlook), Chief Angie Bailey (Aitchelitz), Chief Willy Hall (Skowkale), Jeffery Point (Skowkale), Chief David Jimmy (Squiala), Chief Glenda Campbell (Tzeachten), Lawrence Roberts (Tzeachten), Melanie Williams (Tzeachten), Lawrence Williams (Tzeachten), Cathy Hall (Tzeachten), Ivan McIntyre (House of Elders), Grand Chief Joe Hall (Chairperson)	Regan Schlecker (KMC), Norman Marcy (KMC), Abby Duncan, Robert Hadden (KMC), Jamie Andrews (KMC)	Team members met with Chief F. Malloway (Yakweakwioose), T. Horne (Yakweakwioose), Chief A. Thompson (Leq'á:mel), Councillor M. Kelly (Leq'á:mel), O. Jasper (Soowahlie), Chief M. Chapman (Skawahlook), D. Schneider (Skawahlook), Chief A. Bailey (Aitchelitz), Chief and President W. Hall (Skowkale), J. Point (Skowkale), Chief D. Jimmy (Squiala), Chief G. Campbell (Tzeachten), L. Roberts (Tzeachten), M. Williams (Tzeachten), L. Williams (Tzeachten), C. Hall (Tzeachten), I. McIntyre (House of Elders), Grand Chief J. Hall (Chairperson). Discussions included: •Project introductions and Regulatory processes. • Role and procedure of the National Energy Board (NEB) • Role and procedure of SN in negotiating with KMC • Right of Way zoning issues • Mutual Benefits Agreement • Sacred site impacts • Remuneration procedures • Compensation policies Materials Distributed: • Standard KMC presentation handout. • Map of the proposed pipeline. • TMPL Newsletter. Action Items: • Team member to procure engineer's mock-ups of the Right of Ways through Tzeachten and Grass Indian Reserves	•Numerous Projects within the territory of the First Nations.
5/8/2013	Phone - Incoming	Ts'elxweyeqw Tribes	Carrie Oloriz (Human Environment Group)	Norman Marcy (KMC)	C. Oloriz called team member and informed that the draft TMEP approach to reviewing potential impacts of project has been reviewed. C. Oloriz proposed provisions for the proposal.	None
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5/10/2013	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	C. Archibald emailed team member and stated that team member had clarified areas within the Integrated Cultural Heritage proposal. C. Archibald stated that with regards to the pending deadlines, TTML would require the proposal be signed off no later than May 17, 2013.	None
5/13/2013	Email-Incoming	Ts'elxweyeqw Tribes	Paula Neufeldt (TTML - Office Manager)	Regan Schlecker (KMC)	P. Neufeldt emailed team member and requested status of invoices.	None
5/15/2013	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	C. Archibald emailed team member and attached: • Stó:lō map • FN Relations & Agreements Chart • Final Integrated Cultural Assessment Proposal C. Archibald also noted that a community contact would call team member to discuss the remaining deliverables schedule; the one-page consultation/engagement definition would be available by the end of the week.	None
5/16/2013	Email-Outgoing	Ts'elxweyeqw Tribes / Stó:lō Research and Resource Management	Jessica Morrison (PRRO Referrals Coordinator)	Regan Schlecker (KMC)	Team member emailed to follow up on a referral the 2011 referral regarding Nathan Creek Natural Hazard Mitigation and renewal of the work permit.	None
5/16/2013	Email-Incoming	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	C. Archibald emailed team member and attached a revised budget and schedule due to the addition of Cheam and Sumas to the Integrated Cultural Heritage Assessment.	None
5/16/2013	Phone - Incoming	Ts'elxweyeqw Tribes	President Otis Jasper	Regan Schlecker (KMC)	O. Jasper phoned team member and discussed a MOU on consultation. O. Jasper and team member discussed meaningful	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					engagement as •information sharing and gathering •determination of impacts •mitigation and avoidance of impacts •accommodation of impacts, and that the goal is to achieve all 4 components. O. Jasper and team member discussed next steps.	
5/17/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Carrie Oloriz (Human Environment Group), Corry Archibald (Consultant - Archibald and Associate)	Norman Marcy (KMC)	Team member emailed C. Archibald and C. Oloriz to ask for help in meeting some of the project timelines by adjusting the scheduling.	None
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5/22/2013	Email- Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	O. Jasper emailed team member with details towards an understanding of what constitutes meaningful engagement. O. Jasper requested team member to provide feedback.	None
5/24/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Regan Schlecker (KMC)	Team member emailed O. Jasper and provided copy of Project Description.	None
5/27/2013	Letter - Outgoing	Ts'elxweyeqw Tribes	Willy Hall (STN - Executive Director)	Gary Youngman (KMC)	Team member mailed W. Hall and notified TTML that the Project Description had been submitted to the NEB. It was explained that this preliminary document was used to signal the intent of TransMountain to submit a comprehensive Facilities Application. The submission of the Project Description follows an NEB decision, released on May 16, 2013, that approved the commercial aspects of the proposed expansion project.	None
5/29/2013	In person	Ts'elxweyeqw Tribes	President Otis Jasper, Carrie Oloriz (Human Environment Group), Keri Ardell, Brianne Severn (Administrative Assistant)	Norman Marcy, Jamie Andrews (KMC)	Team members met with O. Jasper, C. Oloriz, K. Ardell and B. Severn to discuss draft Integrated Cultural Assessment. • Drafting and issues clarification for the proposal draft ICA agreement with TST representatives	None
6/3/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Matt Wealick (TTML - COO)	Regan Schlecker (KMC)	M. Wealick called team member and notified that TTML was waiting for information on vegetation management scope of work and assessments.	None
6/4/2013	Phone - Incoming	Ts'elxweyeqw Tribes	Paula Neufeldt (TTML - Office Manager)	Jamie Andrews (KMC)	P. Neufeldt emailed team member regarding invoicing to KMC.	None
6/9/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member e-mailed O. Jasper with availability to meet.	None
6/10/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member called O. Jasper to discuss the Draft Agreement.	None
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6/14/2013	Email- Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	O. Jasper emailed team member to request invoices for services rendered from January to April, 2013. Team member stated that invoices were awaiting required backup information for invoice processing. O. Jasper suggested to arrange a meeting between TTML and KMC representatives to mediate.	None
6/14/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Carrie Oloriz (Human Environment Group)	Norman Marcy (KMC)	Team member called C. Oloriz and discussed budget	None
6/14/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Norman Marcy (KMC)	Team member called K. Ardell to discuss the draft Integrated Cultural Assessment proposal.	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
6/14/2013	Phone - Attempt	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member called O. Jasper to discuss the Integrated Cultural Assessment submitted by TTML.	None
6/17/2013	Email-Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	O. Jasper emailed Team member to confirm conference call start time, and to request a Pipeline 101 with TTML's project team.	None
6/17/2013	Email-Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	O. Jasper emailed team member to report on the process KMC has had with regards to invoicing TTML and, specifically, the issues that have arisen.	None
6/17/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Corry Archibald (Consultant - Archibald and Associate), Keri Ardell (TTML - Project Coordinator), Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC), Jamie Andrews (KMC)	Team members held a conference call with C. Archibald, K. Ardell and O. Jasper. Discussed: • ICA Budget • Capacity Agreement amendments • Pipelines 101 session proposal	None
6/18/2013	Phone - Attempt	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member called O. Jasper and left a message stating an interest in discussing next steps for engagement, as well as a communication received June 17, 2013 in relation to outstanding invoices.	None
6/18/2013	Phone - Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member would make efforts to touch base with a community contact in order to rectify some miscommunication matters that had arisen over issues. O. Jasper and team member discussed engagement next steps and noted that the exchange of information on the draft ICA was top priority. Team member stated that KMC was ready to sign. O. Jasper noted that a team was working on implementation. O. Jasper will be sending out the schedule for community meetings to give an opportunity for KMC to attend. Team member noted that KMC was preparing to do a Pipeline 101 session soon, but suggested reading the CEPA website for preliminary information.	None
6/18/2013	Phone - Attempt	Ts'elxweyeqw Tribes	President Otis Jasper	Norman Marcy (KMC)	Team member called O. Jasper and follow-up on communication efforts. Team member requested a call-back.	None
6/19/2013	Email-Incoming	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Norman Marcy (KMC)	K. Ardell emailed team member and requested confirmation of availability to attend community presentations to be held July 10, 2013 and July 16, 2013. Team member requested to know if these presentations would also have time to include a Q&A as this would be a great opportunity to meet with TTML FNs that KMC had not yet had a chance to properly engage.	None
6/19/2013	Email-Incoming	Ts'elxweyeqw Tribes	Matt Wealick (TTML - COO)	Regan Schlecker (KMC)	M. Wealick emailed team member to request the depth of cover survey/maps for our territory. Team member provided a map with depth of cover data plotted for the portion of our pipeline through TTML Territory.	None
6/19/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator), Otis Jasper (Member of the Board of Directors)	Jamie Andrews (KMC)	Team member emailed K. Ardell to provide links to websites that are useful in understanding pipeline use, construction, safety and other pertinent details related to pipelines.	None
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6/20/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member emailed O. Jasper and notified TTML that completing the remaining deliverables on the ICA were top priority for the KMC-TTML engagement, as the ICA was the most significant element at this time. Team member noted availability to convene and take whatever actions necessary to conclude the agreement's requirements. Team member also indicated that preparations for implementation were underway, as well as the delivery of additional Pipeline 101 materials, as per TTML request.	None
6/20/2013	Phone -	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Norman Marcy	Team member called K. Ardell and discussed:	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
	Outgoing			(KMC)	<ul style="list-style-type: none"> the Grass Reserve matters <ul style="list-style-type: none"> depth of cover and need to have access the need for information including depth of cover Pipeline 101 and engagement with community Liaison workers conclusion of Integrated Cultural Assessment document (ICA) 	
6/23/2013	Phone - Attempt	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member called O. Jasper and left a message regarding the ICA Agreement conclusion as well as the information exchange required for the anticipated agreement. A call back from O. Jasper was requested.	None
6/25/2013	Email-Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	O. Jasper emailed team member and attached the revised ICA agreement as well as the most recent draft of the budget as replacement for the draft included in the ICA agreement.	None
6/25/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member called O. Jasper and made arrangements to discuss in person the ICA agreement document as well as next steps in community engagement. O. Jasper indicated that some deliverables under the current capacity agreement were forthcoming.	None
6/26/2013	In-Person	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member met with O. Jasper to discuss final edits for the draft Integrated Cultural Assessment agreement. Team member requested TTML provide a map for the Sumas Traditional Territory.	None
7/4/2013	Email-Incoming	Ts'elxweyeqw Tribes	Paula Neufeldt (TTML - Office Manager)	Norman Marcy (KMC)	P. Neufeldt emailed Team member to clarify the request for name change on the ICA agreement.	None
7/4/2013	In-Person	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors) Keri Ardell (TTML - Project Coordinator) Maureen Chapman Daniel Kelly	Jamie Andrews (KMC) Norm Marcy (KMC) Roger Tonge (KMC); Regan Schlecker (KMC)	Team member emailed O. Jasper, K. Ardell, M. Chapman and D. Kelly and provided the standard Project presentation.	None
7/5/2013	In-Person	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator) (TTML); Salish Wesley (SRRMC) Carrie Oloriz (Human Environment Group) (HEG) Rob Stuart (HEG) Lisa Dojack (TTML) Shana Roberts (TTML) Otis Jasper (Member of the Board of Directors)(TTML) Alisha Tushingham (Researcher)	Jamie Andrews (KMC) Norman Marcy (KMC) Roger Tonge Karen Baylis (TERA)	Team members met with K. Ardell, S. Wesley, R. Stuart, L. Dojack, S. Roberts, O. Jasper and A. Tushingham and discussed mapping, archaeology, vegetation mapping/wildlife habitat suitability, project description, Project construction schedule and information on workforce and capital cost, rent or lease payments, depth of cover, communication threads and capacity building. TERA and KMC provided maps.	None
7/7/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell and provided archaeology field survey schedule.	None
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7/10/2013	Email-Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	O. Jasper emailed team member on behalf of TZFN and TTML and stated that, according to the Project's official website, an alternative routing for the proposed new pipeline would see the route going through Chilliwack, BC along the border of Tzeachten Indian Reserve and Grass Indian Reserve. O. Jasper indicated that notices or maps addressed to TZFN or TTML regarding this proposed routing had not been seen or reviewed. O. Jasper concluded that little information and a general map on the Project's website did not constitute any form of meaningful consultation. O. Jasper noted; in the interim, O. Jasper requested KMC confirm that complete details and a detailed map showing the proposed routing as well as granting an extension of 60 days	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					in order to allow TZFN time to meaningfully review and comment on the proposed routing.	
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7/16/2013	Email-Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara Brendzy (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member emailed C. Brendzy and noted they would be the main point of contact for upcoming TERA Environmental Archaeological Assessments. Team member inquired about clarification on the study area Stó:lō would like to be involved in and requested an updated list of TMEP KPs for their study area.	None
7/16/2013	Fax	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member faxed C. the Notification of Commencement of the Archaeological Impact Assessment letter for Stó:lō review.	None
7/16/2013	Fax	Ts'elxweyeqw Tribes	President Otis Jasper	Margaret Mears (KMC)	Team member faxed O. Jasper the Notification of Commencement of the Archaeological Impact Assessment letter for TTML review.	None
7/16/2013	Phone - Attempt	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member phoned K. Ardell and requested confirmation of dates for upcoming community meetings. Team member requested a return phone call.	None
7/16/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member called K. Ardell and requested confirmation of details for upcoming TTML Community Meeting. Requested a call-back to discuss.	None
7/17/2013	Email-Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member emailed C. and confirmed KP range for SRRMC. Team member requested to know if an Assessment start date of August 1, 2013 would be agreeable for SRRMC.	None
7/17/2013	Email-Incoming	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	C. emailed team member and notified her that SRRMC wished to be involved in study areas from 1025 KP to 1092 KP.	None
7/17/2013	Email-Incoming	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	C. emailed team member and provided the KPs of the TMEP SRRMC study area. Team member emailed C. and confirmed that the study area provided matches TERA's information. Team member inquired as whether a tentative Assessment start date of August 1, 2013 works for SRRMC.	None
7/17/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell and requested confirmation of meeting logistics for July 24, 2013 and July 25, 2013.	None
7/17/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member phoned K. Ardell and confirmed July 24, 2013 and July 25, 2013 community meetings. K. Ardell requested mapping product be supplied. K. Ardell requested KMC exit meeting following the presentations.	None
7/18/2013	Email-Incoming	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	K. Ardell emailed team member and confirmed meeting logistics for July 24, 2013 and July 25, 2013. K. Ardell requested team member provide routing maps.	None
7/18/2013	Email-Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member emailed C. and stated that Safety training would be determined based on whether SRRMC was acting as a sub consultant for TERA or working directly under the purview of KMC. Once determined, team member would advise on next stage.	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
7/18/2013	Email-Incoming	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	C. emailed team member and confirmed Assessment start date as August 1, 2013, and requested to know what was required for Safety training tickets for Stó:lō Nation monitors.	None
7/18/2013	Email-Incoming	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	C. emailed team member and confirmed that an assessment start date of August 1, 2013 would work. C. requested information regarding required safety training so that it could be scheduled immediately. Team member emailed C. and noted that the required safety training would depend on whether SRRM crews would be working as a Sub Consultant for TERA or directly under KMC. C. emailed team member and notified that the SRRMC would be working under TERA as there would be a TERA and AMEC rep with the crew at all times. C. noted that it was their understanding that TERA would be in charge of safety. C. noted that upon discussion with A. Osicki, C. would be involved in filling out daily paperwork. C. was waiting from further direction from A. Osicki.	None
7/18/2013	Email-Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	C. discussed project logistics and inquired into another member's involvement in the project.	None
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7/19/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell and confirmed that routing maps would be brought to the July 24, 2013 and July 25, 2013 meetings.	None
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7/22/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member emailed O. Jasper and confirmed receipt of the Preliminary Draft of Interests document. Team member also confirmed availability to meet July 24, 2013 and July 25, 2013 Ts'elxweyeqw Tribes outlined their preliminary interests in the Project including: <ul style="list-style-type: none"> • impacts on their connection to the land; • potential impacts on fishing, hunting and gathering rights and activities and related practices; • maintaining access to, use of, and privacy of spiritual sites; • preserving access to and use of berry patches, plant harvesting locations and traditional hunting grounds; • existing and new rights-of-way on "S'olh Temexw", TTML traditional territory, as they relate to access to spiritual practices, traditional areas, significant landmarks, and disturbance and destruction of traditional sites and cultural areas; • disruption of traditional trails; • risk of spills and accidents; • impacts on wildlife, plants, and aquatic species, especially salmon; • reduction in the quality and quantity of wildlife habitat due to linear disturbances, removal of trees and vegetation, and use of herbicides; • alteration and destruction of fish-bearing rivers and streams; • increased erosion and run-off; 	Access-Private Land, Access - Traditional or Historic Use, Agricultural - Land Use, Environment - Cumulative Effects, Environment - Rare Plants and Communities, Marine - Ecological Risk Assessment, Marine - Fish, Marine - Mammals, Marine - Vegetation, Marine - Water Quality/Quantity, Safety - Earthquakes/Seismic Events, Safety - Emergency Response, Safety - Emergency Spill Response, Socio-Econ. Marine - Social and Cultural Wellbeing - First Nations, Socio-Econ. Terrestrial - Infrastructure and Services, Socio-Econ. Terrestrial - Social and Cultural Wellbeing - First Nations, Terrestrial - Freshwater Fish, Terrestrial - Mammals, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Water bodies, Terrestrial - Wetlands, Terrestrial - Freshwater Spills - Environmental Impact, Terrestrial - Land Spills - Environmental Impact

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					<ul style="list-style-type: none"> • impacts to the value of TTML land; • impacts from land loss from rights-of-way and buffer zones; • vegetation management along pipelines and the use of herbicides; • impacts on air quality and the ozone layer; • the length of time it will take to completely remediate after construction and whether complete remediation is possible; • resources available in the case of a spill; • effects of earthquakes on pipelines; • increased carcinogens in TTML Traditional Territory; • erosion of existing and new pipes and potential for underground contamination; • overseas shipping resulting in transfer of pollution like ballast water or invasive species being emptied into the ocean; • reduction of foods and medicine from the land; and • non-indigenous access to TTML Traditional Territory. 	
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7/23/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member called O. Jasper and left a message indicating team member wished to arrange a meeting for July 24, 2013 and July 25, 2013	None
7/23/2013	Phone - Attempt	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member called O. Jasper and left a message indicating interest to follow-up on a previous communication concerning: <ul style="list-style-type: none"> • sign off of the ICA • meetings with communities • Seven Generations Environmental Services vs. Tzeachten Forestry services • other matters 	None
7/24/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell to confirm meeting logistics for meeting held in Cultus Lake, BC on July 24, 2013. K. Ardell confirmed meeting details.	None
7/24/2013	Email- Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Jessica Morrison (PRRO Referrals Coordinator)	Regan Schlecker (KMC)	Team member emailed J. Morrison and provided advance notice of a referral package to be sent from the BC Oil and Gas Commission to J. Morrison regarding operational activities on the existing Trans Mountain Pipeline. J. Morrison requested the information be submitted through their website and team member indicated they would inform BC Oil and Gas Commission of that request.	None
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Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
7/25/2013	In-Person	Ts'elxweyeqw Tribes	Nicholas Point (Community Member) Alisha Tushingham (TTML Researcher) Coire McKay; (Community Member) Helena Paul; (Community Member) Joanne Jefferson; (Community Member) Terry Horn; (Community Member) Marc Point; (Community Member) Brenda Point; (Community Member) Elaine Malloway; (Community Member) Anni Bailey; (Community Member) Robyn Heslin	Jamie Andrews (KMC) Norman Marcy (KMC) Rob Scott (KMC)	Team member met with N. Point, A. Tushingham, C. McKay, H. Paul, J. Jefferson, T. Horn, M. Point, B. Point, E. Malloway, A. Bailey and R. Heslin at a Community Session held for TST member bands. Team member presented the standard Project presentation.	None
7/30/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Norman Marcy (KMC)	Team member called O. Jasper to discuss execution of the ICA.	None
7/31/2013	Email- Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member requested suitable date to begin work on archaeology assessments.	None
7/31/2013	Email- Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member emailed C. to touch base in order to advance the planning of the Archaeological Assessments. Team member noted that work should begin as soon as safety training had been finalized and requested a date that would work for SRRMC.	None
7/31/2013	Email- Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Trish Wiegele (TERA)	Team member provided stakeholder with the Crown Land Tenure application (Investigative Use Permit) and the Section 8 application (Short Term Use of Water) for the proposed Geotechnical Borehole Program at the Vedder River site.	None
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8/1/2013	Signed Agreement	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Regan Schlecker (KMC)	Signed document received by courier at KMC Burnaby Office, August 1, 2013.	None
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8/08/2013	Letter- Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Regan Schlecker	Team member sent a letter to O. Jasper which notified TTML that capacity funding has been made available from the National Energy Board (NEB), effective July 22, 2013, under the Participant Funding Program to assist landowners. Noted further were the List of Issues released by the NEB on July 29, 2013 which was also available on the NEB website. The letter also stated that the NEB did not intend to consider the environmental and socio-economic effects associated with upstream activities, the development of oil sands, or the downstream use of oil transported by pipeline. Requests for further information on the Participant Funding Program were directed to the NEB and its contact information was provided.	None
8/9/2013	Phone - Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member phone K. Ardell and informed on progress of outstanding information requests from TERA. Team member	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					notified K. Ardell that the Anchor Loop Environmental Monitoring Report was sent August 2, 2013.	
8/9/2013	Email-Incoming	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	C. emailed team member and notified that they had not heard back about safety training. C. requested team member contact them as well as L. Dojack in regard to this matter. Team member notified of whom the contact for training enquiries with KMC was. Team member emailed C. and noted that TTML should in fact be responsible for SRRMC's safety training. Team member copied another team member to clarify the issue.	None
8/19/2013	Phone - Incoming	Ts'elxweyeqw Tribes	Keri Ardell (TTML- Project Coordinator)	Jamie Andrews (KMC)	<p>K. Ardell phoned team member and discussed next steps in moving forward on the ICA. Team member explained to K Ardell that TERA had been in contact and the outstanding information requests would be delivered to K. Ardell as soon as possible.</p> <p>K. Ardell and team member discussed possible meeting dates for the week of August 26, 2013 to discuss steps moving forward and sharing of ICA related information.</p> <p>K. Ardell provided a description of roles and responsibilities of various groups associated with the TTML (SRRMC, PRRO, ETC). K. Ardell also explained that she would provide a document to team member for distribution to the Trans Mountain team regarding information sharing within TTML.</p> <p>K. Ardell and team member discussed the methods of communication between the various entities connected with the ICA. K. Ardell would like information to be sent directly to the persons responsible for specific tasks and to be included in the email cc' thread.</p>	None
8/27/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell and requested a date for a meeting next week.	None
8/28/2013	Email-Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Max Nock (KMC)	O. Jasper emailed team member and requested provincial referrals be added to the agenda. Team member emailed O. Jasper and agreed.	None
9/4/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell and attached a task list from the September 4, 2013 meeting.	None
9/4/2013	Email-Incoming	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	David Schaepe (SRRMC - Director / Senior Archaeologist)	Max Nock (KMC)	Team member emailed D. Schaepe to introduce KMC team member and noted that team member would be in contact to discuss how the process of preconstruction geotech permit referrals from OGC is working for Stó:lō. D. Schaepe confirmed notification of forthcoming contact from team member.	None
9/4/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Cara (SRRMC - Project Archaeologist/ GIS Specialist), Carrie Oloriz (Human Environment Group), Keri Ardell (TTML - Project Coordinator), Otis Jasper (Member of the Board of Directors)	Jamie Andrews (KMC), Wanda Lewis (TERA), Max Nock (KMC)	<p>Team members held a conference call with C., C. Oloriz, K. Ardell and O. Jasper regarding the Archaeology field work in TTML's Traditional Territory. Discussed:</p> <ul style="list-style-type: none"> • TERA's roles and responsibilities with regards to field work • SRRMC's roles and responsibilities with regards to field work • Strategic Engagement Agreement (SEA) and its member bands • Referrals process for concerned First Nations • Structure of the SEA for the Stó:lō territory <ul style="list-style-type: none"> - comprised of 14 Nations, 11 of which are signed on the Integrated Cultural Assessment (ICA) • PRRO and SRRMC have held internal discussions with regards to referrals permitting 	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					Action Items: • C. Oloriz requested that documentation be provided about the current system of notifying First Nations that weed suppression efforts are going to take place. • C. Oloriz requested that outstanding information requests be supplied promptly from TERA so as not to further hold up field study efforts.	
9/5/2013	Email- Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	David Schaepe (SRRMC - Director / Senior Archaeologist)	Max Nock (KMC)	Team member emailed D. Schaepe to arrange an opportunity to discuss referral handling with regards to preconstruction geotech permit referrals for SRRMC. D, Schaepe provided availability.	None
9/9/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Max Nock (KMC)	Team member emailed O. Jasper and discussed logistics for a meeting with BC Oil and Gas Commission (BCOGC) and arrangements with other first nations groups.	None
9/9/2013	Email- Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	David Schaepe (SRRMC - Director / Senior Archaeologist)	Max Nock (KMC)	Team member emailed D. Schaepe to arrange a meeting to discuss preconstruction geotech permit referrals with regards to SRRMC.	None
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9/10/2013	Email- Incoming	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	David Schaepe (SRRMC - Director / Senior Archaeologist)	Max Nock (KMC)	D. Schaepe emailed team member to arrange an opportunity to discuss referral process of preconstruction geotech permit with regards to SRRMC.	None
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9/11/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Max Nock (KMC)	Team member called O. Jasper to discuss next steps with regards to the Salish Sea Initiative and to discuss SMFN's involvement in Emergency Spill Response, habitat restoration and environmental monitoring of the Burrard inlet.	None
9/11/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Max Nock (KMC)	Team member emailed O. Jasper to notify that the meeting to discuss referrals of permits with SRRM, OGC and KMC had not yet been scheduled and would not be scheduled until the week of September 23, 2013. Team member stated that an opportunity to discuss the issue prior to this date with SRRM was offered. Further to this, Team member asked if arrangements had yet been made with TZFN and the members of the Grass IR.	None
9/11/2013	Email- Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	David Schaepe (SRRMC - Director / Senior Archaeologist)	Max Nock (KMC)	Team member emailed D. Schaepe and updated SRRMC on the availability of the OGC representative was, with relation to meeting and discussing the preconstruction geotech referral process.	None
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9/12/2013	Email- Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Max Nock (KMC)	O. Jasper emailed team member to arrange a meeting with TZFN, KMC and OGC. A date within the range of September 17, 2013 – September 20, 2013 was suggested and O. Jasper asked team member to advise on availability during this period.	None
9/13/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Max Nock (KMC)	Team member emailed O. Jasper to arrange a meeting between TZFN, OGC and KMC.	None
9/14/2013	Email- Incoming	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Max Nock (KMC), Jamie Andrews (KMC)	O. Jasper emailed team members regarding the meeting minutes. .	None
9/16/2013	Email- Outgoing	Ts'elxweyeqw Tribes	Otis Jasper (Member of the Board of Directors)	Max Nock (KMC)	Team member emailed O. Jasper and notified TTML that if anything was required from KMC in advance of the meeting scheduled with TTML Chiefs and SGES, scheduled September	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					19, 2013, O. Jasper should contact team member. Team member promised to be in contact following the meeting to get an update. Team member provided a brief summary of meeting agenda.	
9/20/2013	Email-Outgoing	Ts'elxweyeqw Tribes	President Otis Jasper	Max Nock (KMC)	Team member emailed Stakeholder and identified role in: <ul style="list-style-type: none"> securing access to the Grass IR to check the existing pipeline Impact Benefit Agreement (IBA) negotiations .Next Steps discussions to be included on the agenda in an upcoming meeting.	None
9/20/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Carrie Oloriz (Human Environment Group)	Jamie Andrews (KMC)	Team member emailed C. Oloriz and notified C. Oloriz that recent information requests were being discussed between KMC and TERA. Team member promised that KMC was looking into the matter and will ensure it is resolved.	None
9/20/2013	Email-Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara Brendzy (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member emailed C. and attached notification of fieldwork for the TMEP AIA for TTML. Team member noted they would follow up next week to coordinate field crews.	None
9/20/2013	Email-Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management/ People of the River Referrals Office	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member emailed the People of the River Referrals Office and provided a notification letter for Archeological Geotechnical Borehole Drilling fieldwork (Permit No. 2013-26) between: <ul style="list-style-type: none"> - September 30 - October 11, 2013 in Chilliwack - October 16 - 27, 2013 in Abbotsford - November 1 - 12, 2013 in Langley 	None
9/23/2013	Email-Incoming	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Aaron Osicki (TERA), Ian Franck (AMEC)	C. emailed team member and notified that SRRMC requests to participate in the KMC AIA in areas other than what is covered by TTML. C. requested the dates and locations of the KMC AIA outside of TTML interest zone occurring within S'olh Temexw so that SRRMC can determine their participation level by area. Team member emailed C. and noted that the current focus is on the Sumas to Cheam section and once completed the crew would shift to the surrounding area. Team member noted that a tentative schedule of this plan had been sent by another team member and advised that updates regarding changes in the schedule would be provided.	None
9/24/2013	Email-Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member emailed C. and provided a schedule of the TTML and Stó:lō Nation Archaeology Notification. Team member also attached detailed maps of the study area. Team member requested confirmation of the SRRMC request to participate from KPs 1025-1092.	None
9/24/2013	Email-Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member emailed C. and provided an update in regards to a concern for Stó:lō representation in the Archeological Impact Assessment raised by Cheam First Nation.	None
9/24/2013	Email-Outgoing	Ts'elxweyeqw Tribes /Stó:lō Research and Resource Management	Cara (SRRMC - Project Archaeologist/ GIS Specialist)	Clare Peacock (TERA)	Team member emailed C. and informed of the safety training required for field assistants and for C. as a Field Director. Team member provided links to the training courses and requested they be completed by the following Monday. C. emailed team member and requested meeting time and location for safety training. C. noted that they would attempt to have all assistants attend the same session. Team member emailed C. and provided logistics for orientation	None

Event Date	Event Type	Community Group	Community Contacts	Team Members	Details	Concerns
					meetings. Team member requested the names and positions of all crew members for this shift and of those attending the orientation.	
INTENTIONALLY LEFT BLANK						
9/26/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Keri Ardell (TTML - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell and attached requested GIS data.	None
9/27/2013	Email-Outgoing	Ts'elxweyeqw Tribes	Carrie Oloriz (Human Environment Group)	Jamie Andrews (KMC)	Team member emailed C. Oloriz and notified of a scheduled conference call between TTML, KMC and TERA regarding outstanding information requests. Team member requested that C. Oloriz provide an alternate time if unable to attend.	None

PART 2 – PUBLIC CONSULTATION UPDATE NO. 1
AUGUST 1 TO DECEMBER 31, 2013

TABLE OF CONTENTS

	<u>Page</u>
1.0 PUBLIC CONSULTATION	2-1
1.1 Introduction	2-1
1.2 Phase 4 Engagement: Feedback to Stakeholders and Application Filing (August 1 to December 31, 2013)	2-1
1.3 Ongoing Engagement, Phases 5 and 6	2-1
1.4 Communication Activities	2-2
1.4.1 Website Updates and Refresh	2-2
1.4.2 Website Forum	2-6
1.4.3 Phone Line and Email	2-7
1.4.4 E-blasts	2-7
1.4.5 Social Media	2-8
1.4.6 Media Relations	2-12
1.4.7 Advertising/Notification	2-14
1.4.8 Project Update Newsletters	2-17
1.4.9 Emergency Response Program Summary	2-17
1.4.10 Events	2-18
1.4.11 Speaking Opportunities	2-20
1.4.12 Sponsorship Opportunities	2-20
1.5 Phase 4 Stakeholder Engagement Activities	2-21
1.5.1 Reactivation Engagement Program	2-21
1.5.2 Emergency Management Stakeholder Workshops	2-22
1.5.3 Tour of Lac du Bois Grasslands Protected Area, Kamloops, British Columbia	2-25
1.5.4 Economic Benefits Presentations	2-26
1.5.5 Economic Benefits Presentations - Alberta Region	2-27
1.5.6 Economic Benefits Presentations – British Columbia Interior Region	2-30
1.5.7 Economic Benefits Presentations - Lower Mainland/Fraser Valley Region	2-33
1.5.8 Government Relations	2-42
1.6 Summary of Outcomes	2-42
1.6.1 Key Topics of Interest or Concern - ALBERTA (Edmonton to Jasper)	2-43
1.6.2 Key Topics of Interest or Concern – British Columbia Interior (Valemount to Hope)	2-48
1.6.3 Key Topics of Interest or Concern- Lower Mainland/Fraser Valley (Chilliwack to Burnaby)	2-52
1.6.4 Key Topics of Interest or Concern – Mainland Coastal	2-58
1.6.5 Key Topics of Interest or Concern – Island Coastal	2-60
1.6.6 Website Forum QandA	2-62
2.0 REFERENCES	2-70

LIST OF FIGURES

Figure 1.4-1 Trans Mountain Website Page views between August 1 and December 31, 2013	2-2
Figure 1.4-2 Screen Shot of the Refreshed Trans Mountain Website Homepage	2-3
Figure 1.4-3 Screen Shot of Trans Mountain Website Interactive Mapping Tool	2-4
Figure 1.4-4 Screen Shot of Trans Mountain Facilities Application Landing Page	2-5
Figure 1.4-5 Trans Mountain Website Visits	2-6
Figure 1.4-6 Screen Shot of a Project Update E-Blast for the TMEP	2-8
Figure 1.4-7 Geographic Distributions of Trans Mountain Tweets	2-9
Figure 1.4-8 Trans Mountain YouTube Channel Views	2-10
Figure 1.4-9 Screen Shot of Trans Mountain’s Routing Videos	2-11
Figure 1.4-10 Screen Shot of the Economic Benefits Video for the TMEP	2-12

Figure 1.4-11	Screen Shot of the Performing Preventive Cutouts Video for the TMEP	2-12
Figure 1.4-12	Trans Mountain Sample Translated Notification of the Information Session September 2013 regarding the proposed expansion of the Burnaby Storage and Westridge Marine Terminals	2-15
Figure 1.4-13	Sample Trans Mountain Postcard (front and back)	2-15
Figure 1.4-14	Trans Mountain Sample Field Studies Notification – 2013	2-16
Figure 1.4-15	Trans Mountain Sample Newsletter – 4 pages (August 2013)	2-17
Figure 1.4-16	Emergency Response Program Summary December 4, 2013	2-18
Figure 1.5-1	Social Media attributed to the Economic Benefits Presentation	2-41
Figure 1.5-2	Online Activity during the Economic Benefits Presentation	2-42
Figure 1.6-1	Key Topics of Interest or Concern in Alberta	2-43
Figure 1.6-2	Key Issues or Concerns in BC Interior	2-48
Figure 1.6-3	Key Topics of Interest or Concern in Lower Mainland/Fraser Valley	2-52
Figure 1.6-4	Key Topics of Interest or Concern in the Mainland Coastal Region	2-58
Figure 1.6-5	Key Topics of Interest or Concern in the Island Coastal Region	2-60
Figure 1.6-6	Questions Posed on the Online Forum	2-62

LIST OF TABLES

Table 1.4-1	Web Pages	2-6
Table 1.4-2	Trans Mountain Updates	2-7
Table 1.4-3	Trans Mountain E-Blasts	2-7
Table 1.4-4	Trans Mountain Youtube Videos	2-10
Table 1.4-5	Trans Mountain Media Inquiries	2-13
Table 1.4-6	Trans Mountain Media Briefings	2-13
Table 1.4-7	Trans Mountain Letters to the Editor	2-14
Table 1.4-8	Trans Mountain Opinion Editorials	2-14
Table 1.4-9	Summer/Fall 2013 Field Studies Advertising Placement	2-16
Table 1.4-10	KMC Publications	2-18
Table 1.4-11	Trans Mountain Attendance at Community Events	2-19
Table 1.4-12	Trans Mountain Speaking Opportunities	2-20
Table 1.4-13	Trans Mountain Community Sponsorship Opportunities	2-20
Table 1.5-1	Emergency Management Stakeholder Workshop – Edmonton, Alberta	2-22
Table 1.5-2	Participants in the Emergency Management Stakeholder Workshop – Edmonton, Alberta	2-23
Table 1.5-3	Emergency Management Stakeholder Workshop – Hinton, Alberta	2-23
Table 1.5-4	Participants in the Emergency Management Stakeholder Workshop – Hinton, Alberta	2-23
Table 1.5-5	Emergency Management Stakeholder Workshop – Vancouver, British Columbia	2-24
Table 1.5-6	Participants in the Emergency Management Stakeholder Workshop – Vancouver, British Columbia	2-24
Table 1.5-7	Lac Du Bois Grasslands Protected Area Tour – Kamloops, British Columbia	2-25
Table 1.5-8	Attendees/Invitees – Kamloops	2-25
Table 1.5-9	Location and Dates of Economic Benefits Presentations	2-26
Table 1.5-10	Edson and District Chamber of Commerce – Economic Benefits Presentation	2-27
Table 1.5-11	Attendees/Invitees - Edson and District	2-28
Table 1.5-12	RISA – Economic Benefits Presentation	2-28
Table 1.5-13	Attendees/Invitees - RISA	2-28
Table 1.5-14	Hinton and District Chamber of Commerce – Economic Benefits Presentation	2-29
Table 1.5-15	Attendees/Invitees – Hinton and District Chamber of Commerce	2-29
Table 1.5-16	Hope and District Chamber of Commerce – Economic Benefits Presentation	2-30
Table 1.5-17	Attendees/Invitees – Hope and District Chamber of Commerce	2-30
Table 1.5-18	Kamloops Chamber of Commerce – Economic Benefits Presentation	2-30
Table 1.5-19	Attendees/Invitees – Kamloops Chamber of Commerce	2-30
Table 1.5-20	Clearwater and District Chamber of Commerce – Economic Benefits Presentation	2-31
Table 1.5-21	Attendees/Invitees – Clearwater and District Chamber of Commerce	2-31

Table 1.5-22	Blue River Economic Development Group – Economic Benefits Presentation	2-31
Table 1.5-23	Attendees/Invitees – Blue River Economic Development Group	2-32
Table 1.5-24	Valemount and District Chamber of Commerce – Economic Benefits Presentation	2-32
Table 1.5-25	Attendees/Invitees – Valemount and District Chamber of Commerce	2-32
Table 1.5-26	Merritt and District Chamber of Commerce – Economic Benefits Presentation	2-32
Table 1.5-27	Attendees/Invitees – Merritt and District Chamber of Commerce	2-33
Table 1.5-28	Vancouver Board of Trade – Economic Benefits Presentation	2-33
Table 1.5-29	Attendees/Invitees – Vancouver Board of Trade	2-33
Table 1.5-30	Surrey Board of Trade – Economic Benefits Presentation	2-35
Table 1.5-31	Attendees/Invitees – Surrey Board of Trade.....	2-35
Table 1.5-32	Tri-Cities Chamber of Commerce – Economic Benefits Presentation	2-36
Table 1.5-33	Attendees/Invitees – Tri-Cities Chamber of Commerce	2-36
Table 1.5-34	Abbotsford Chamber of Commerce – Economic Benefits Presentation	2-37
Table 1.5-35	Attendees/Invitees - Abbotsford Chamber of Commerce	2-37
Table 1.5-36	Greater Langley Chamber of Commerce – Economic Benefits Presentation	2-38
Table 1.5-37	Attendees/Invitees – Greater Langley Chamber of Commerce	2-38
Table 1.5-38	Burnaby Board of Trade – Economic Benefits Presentation	2-39
Table 1.5-39	Attendees/Invitees – Burnaby Board of Trade.....	2-39
Table 1.5-40	Chilliwack Chamber of Commerce – Economic Benefits Presentation	2-40
Table 1.5-41	Attendees/Invitees – Chilliwack Chamber of Commerce.....	2-40
Table 1.5-42	Trans Mountain Youtube Videos.....	2-41
Table 1.6-1	Interests or Concerns – Alberta	2-44
Table 1.6-2	Interest or Concern – Bc Interior	2-49
Table 1.6-3	Interests or Concerns - Lower Mainland/Fraser Valley.....	2-53
Table 1.6-4	Interests or Concerns – Mainland Coastal Region	2-59
Table 1.6-5	Interests or Concerns – Island Coastal BC.....	2-61
Table 1.6-6	Trans Mountain Website Forum Qanda.....	2-63

LIST OF APPENDICES

APPENDIX A	Emergency Management Workshops Materials
APPENDIX B	Lac Du Bois Grasslands Tour Materials
APPENDIX C	Economic Benefits Presentation Materials
APPENDIX D	Other Communication Materials

1.0 PUBLIC CONSULTATION

1.1 Introduction

This Consultation Update No. 1 and Errata (the Update) provides information on the Trans Mountain Expansion Project (TMEP) Phase 4 Engagement: Feedback to Stakeholders and Application Filing conducted between August 1 and December 31, 2013, for the pipeline and marine corridors. This Update describes how stakeholder comments were gathered and addressed during the reporting period pursuant to Section 52 of the *National Energy Board (NEB) Act*.

Trans Mountain Pipeline ULC (Trans Mountain) remains committed to ongoing public engagement throughout the life of the system.

1.2 Phase 4 Engagement: Feedback to Stakeholders and Application Filing (August 1 to December 31, 2013)

Unless otherwise stated, the feedback reported in this Update includes engagement activities conducted between August 1 and December 31, 2013. Updates to engagement initiatives that continue to occur throughout the regulatory process will be provided periodically to the NEB.

During Phase 4, Trans Mountain held three Emergency Management Stakeholder Workshops; a topic that has been raised in many communities. Additional Emergency Management Stakeholder Workshops will be held in early 2014 and those outcomes will be reported in a subsequent filing. The purpose of these workshops was to provide information on the draft Emergency Response Plan (ERP) and collect stakeholder feedback. Full details of the Emergency Management Stakeholder Workshops are contained in Section 1.3.2.

Trans Mountain also conducted a series of 16 Economic Benefits Presentations along the TMEP route from Edmonton to Burnaby. These presentations emphasized potential opportunities for local benefits through procurement, jobs, and workforce spending. Local businesses have been interested in information on economic opportunities and these presentations addressed that need. Most of these events were delivered in partnership with local Chambers of Commerce, with an overall attendance of more than 1,300 stakeholders. Response from regional Chambers was positive, helping to secure or increase levels of support for the Project. Full details of the Economic Benefits Presentations are contained in Section 1.3.4

Trans Mountain continued discussions on the proposed reactivation of an existing 150 km of 24-inch pipeline from Hinton, Alberta, to Hargreaves, British Columbia. Engagement on this section, along with the 43 km of 24-inch pipeline from Darfield, British Columbia, to Black Pines, British Columbia will continue through Phase 5 and will be documented and provided as updates periodically to the NEB. Full details of the Reactivation Engagement program are contained in Section 1.3.1.

Throughout this reporting period, Trans Mountain continued to provide accurate and timely Project information, as well as receive feedback through face-to-face meetings with local government and interested parties, attendance at various community events, presentations/speaking opportunities and digital engagement efforts. Information on feedback received through engagement activities is provided in the summary of outcomes (Section 1.6).

1.3 Ongoing Engagement, Phases 5 and 6

Engagement and communications activities will continue in Phases 5 and 6, as the TMEP proceeds through the NEB regulatory process and, if successful, the construction phases of the Project. Trans Mountain will continue to share the results of any new studies or work being completed on the Project, to communicate any changes and or updates to Project plans, to share information with stakeholders on the regulatory process, and to engage on construction effects and mitigation measures.

Engagement and communications activities will be undertaken through a number of initiatives, including but not limited to, open houses, workshops, one-on-one meetings, presentations, website, online feedback forms, printed materials, and digital media including social media.

1.4 Communication Activities

The following communications initiatives supported our Phase 4 engagement activities and ensured information was communicated to stakeholder groups thoroughly, in plain language and in a manner that maintained stakeholder relationships and built public acceptance for the Project.

1.4.1 Website Updates and Refresh

Sign-up forms for Vendor/Suppliers and for Jobs were refined and launched on the website in early November 2013 in conjunction with the start of the Economic Benefits Presentation. From the November launch through to December 31, 2013, 231 people signed up for Vendor updates and 146 people signed up for job updates.

During the Economic Benefits Presentations, daily website traffic slightly increased (from an average of 150 visits a day, to approximately 200 visits a day). October visits were 3,801 and November visits were 4,934, resulting in an increase in visits to the website by approximately 30% in November. Figure 1.4-1 depicts the number of pages viewed by all visitors to Trans Mountain website between August 1 and December 31, 2013 and reflects a noticeable increase in website visits during the Economic Benefits Presentations and following the filing of the Facilities Application on December 16, 2013.

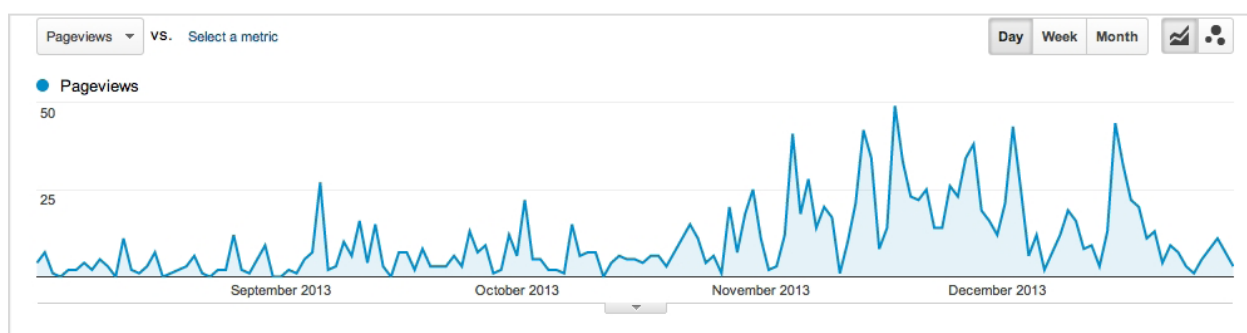


Figure 1.4-1 Trans Mountain Website Page views between August 1 and December 31, 2013

A living communications tool, the Trans Mountain website was refreshed on December 16, 2013 to provide an added focus on the Facilities Application. The site provides online access to all eight volumes of the Application, including the Environmental and Socio-Economic Assessment (ESA), Risk Assessments and an overview of the Aboriginal and stakeholder engagement programs. An interactive map was added and enabled website visitors to zoom into specific geographical areas of interest along both the current and proposed pipeline corridors and to select filters to see specific application information linked to the Facilities Application.

In general the number of site visits has stayed consistent with volume from the last reporting period, with the exception of site visits on December 16, which spiked dramatically (13 times the normal daily traffic) then tapered back to the pre-filing levels after five days. The Facilities Application was the third most visited page in December 2013, despite only having gone live on December 16, 2013.

Other popular content on the website during this reporting period included the Project Overview, the Proposed Pipeline Corridor, and Current Pipeline Operations, all pages under the Proposed Expansion website section. Figures 1.4-2 to 1.4-4 provide screen shots from the website showing the refreshed homepage, the interactive mapping tool and the Facilities Application landing page.

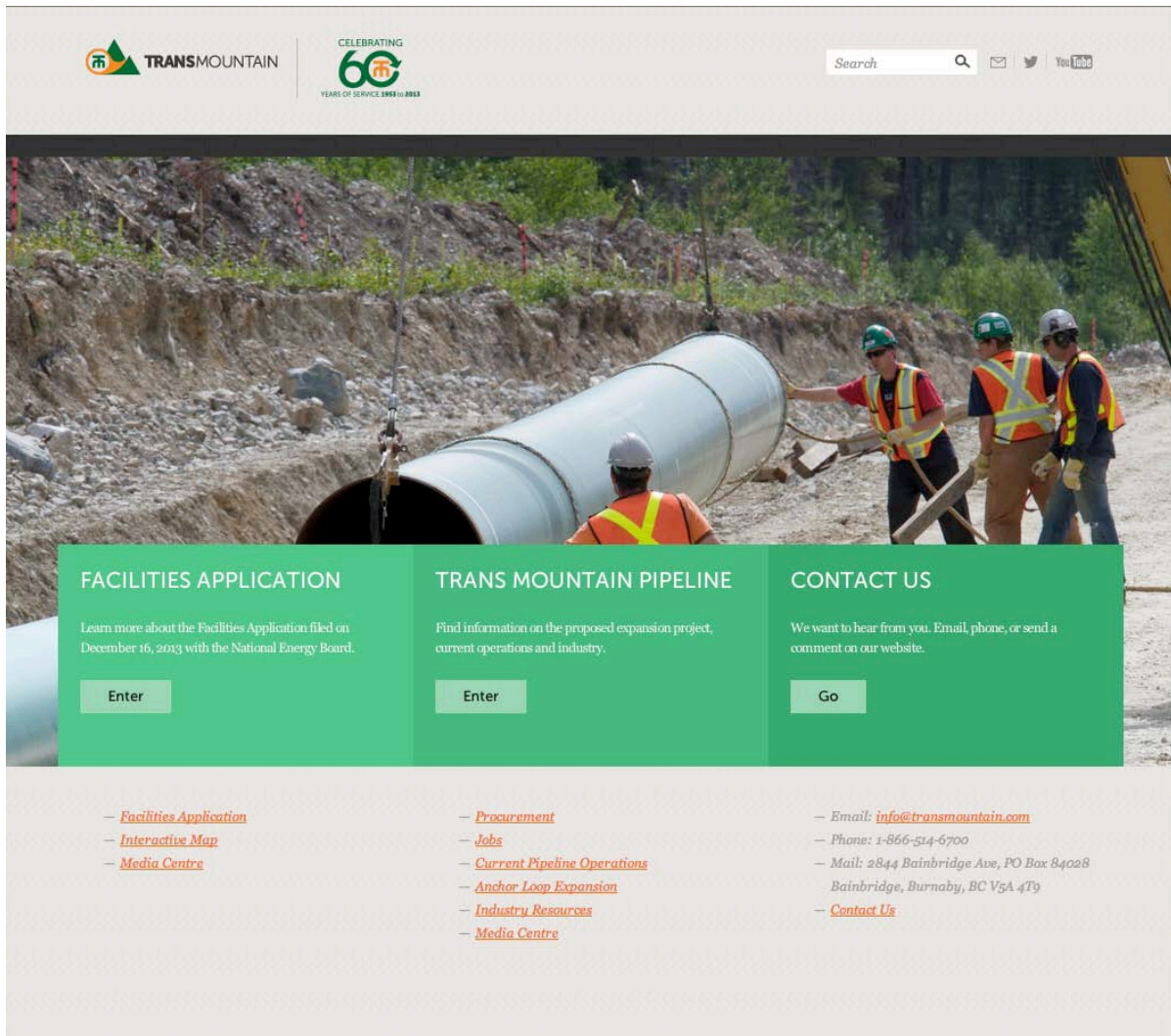


Figure 1.4-2 Screen Shot of the Refreshed Trans Mountain Website Homepage

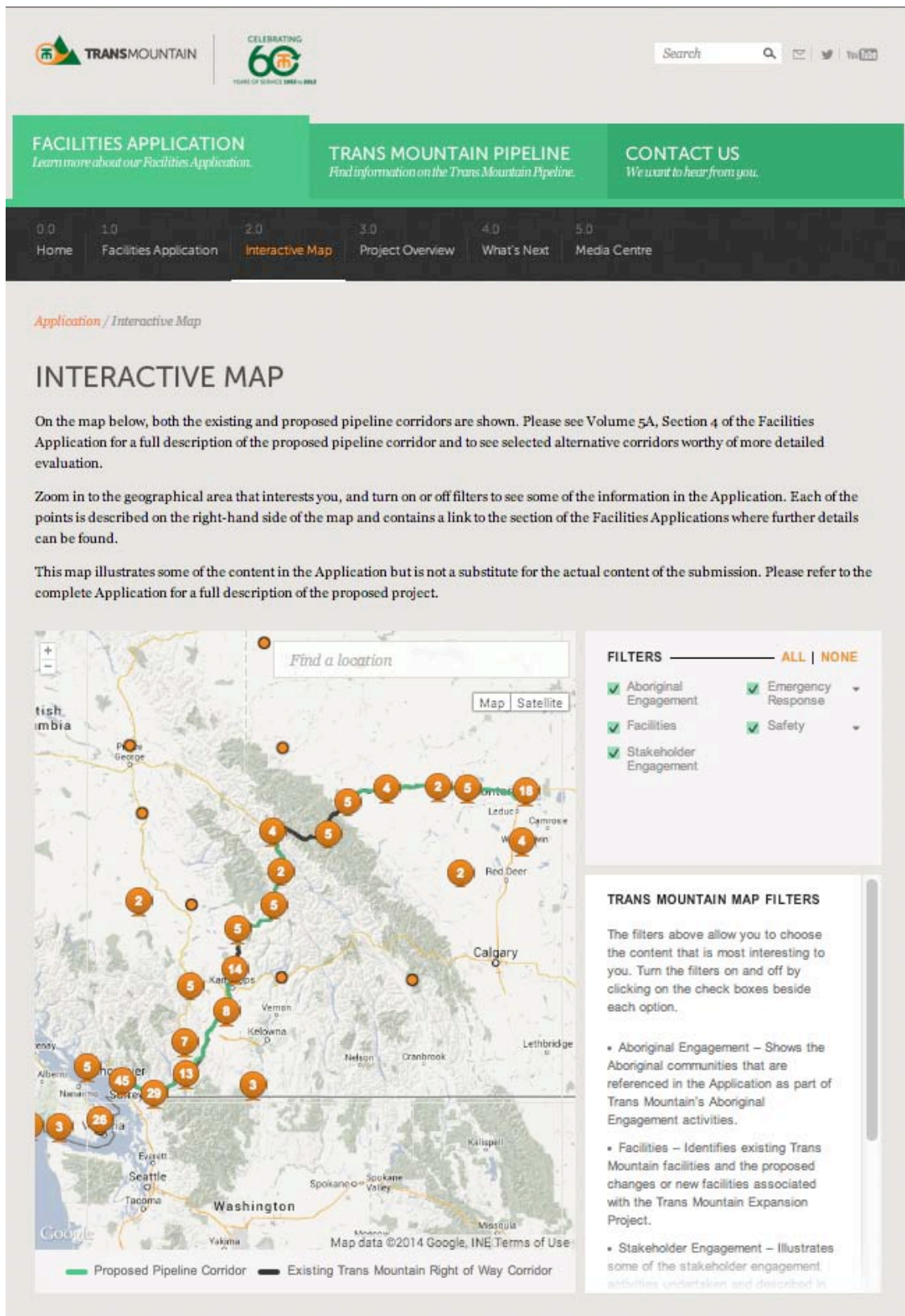


Figure 1.4-3 Screen Shot of Trans Mountain Website Interactive Mapping Tool

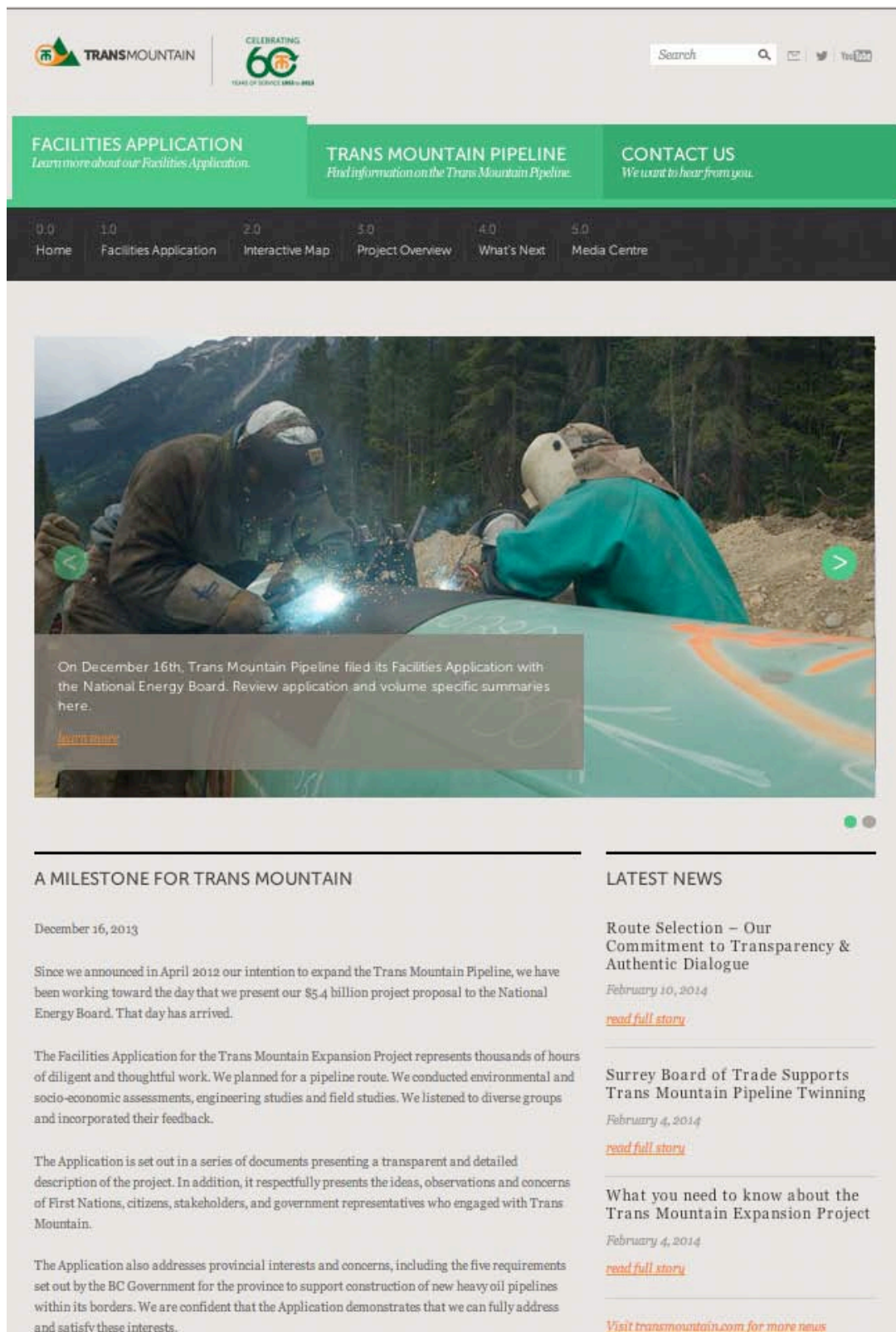


Figure 1.4-4 Screen Shot of Trans Mountain Facilities Application Landing Page

From August 1, 2013 to December 31, 2013, the Project website received 21,704 visits. Of those 65.5% were returning visitors and 34.5% were new. On average, visitors spent four minutes and 16 seconds on the website and looked at 3.29 pages. Table 1.4-1 provides information on popular web pages from the reporting time period, including the pages, page views, and average time spent on each page.

TABLE 1.4-1

WEB PAGES

Page	Reporting Period	Page Views	Average Time on Page
Proposed Expansion (http://www.transmountain.com/proposed-expansion)	August 1 to December 31, 2013	5,168	0:41
Project Overview (http://www.transmountain.com/project-overview)	August 1 to December 31, 2013	3,257	1:45
Route Plans*	August 1 to December 16, 2013	2,579	2:15
Current Pipeline Operations (http://www.transmountain.com/current-pipeline-operations)	August 1 to December 31, 2013	2,500	0:30
Building a Pipeline (http://www.transmountain.com/building-a-pipeline)	August 1 to December 31, 2013	1,840	4:02
Contact us (http://www.transmountain.com/contact-us)	August 1 to December 31, 2013	1,491	1:48
Jobs (http://www.transmountain.com/jobs)	August 1 to December 31, 2013	1,397	1:35
Talk Trans Mountain*	August 1 to December 16, 2013	1,253	2:10
Facilities Application (http://application.transmountain.com/facilities-application)	August 1 to December 31, 2013	1,242	27:44

Note: * These pages were removed on the date of the filing, December 16, 2013, in order to archive old information and present consistent content to the public.

Figure 1.4-5 depicts the number of visits to the Trans Mountain website between August 1 and December 31, 2013 and reflects a noticeable increase in website visits after the filing of the Facilities Application on December 16, 2013.

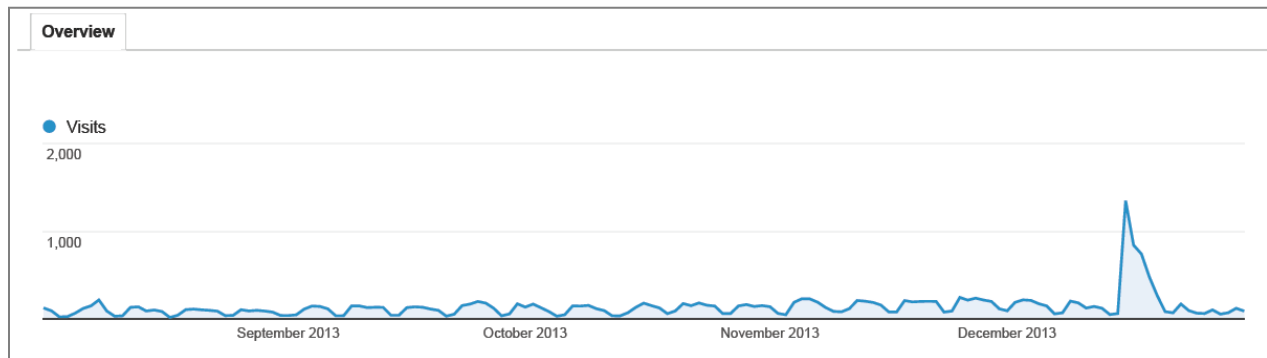


Figure 1.4-5 Trans Mountain Website Visits

1.4.2 Website Forum

Throughout most of the reporting period, Trans Mountain continued to host a forum on the website where visitors could ask questions. Links to the Question and Answer (QandA) and engagement forum were removed on the date of the filing, December 16, 2013, in order to archive old information and present consistent content to the public. Between August 1 and December 16, 2013, 56 questions were answered publicly on the website, 17 were answered privately via email, and two were comments not requiring an answer. Key topics and issues were relayed to the appropriate Project team representative to be considered and incorporated in the Project where applicable.

Trans Mountain Project Updates

Trans Mountain continues to provide timely updates and share news about the Project. When applicable this information was distributed via the Project’s Twitter account and to the media through the media relations program. Table 1.4-2 provides a list of the Trans Mountain Project updates provided between August 1 and December 31, 2013.

TABLE 1.4-2

TRANS MOUNTAIN UPDATES

Title	Date	Page Views August 1 to December 31, 2013
Summer 2013 Newsletter Summarizes First Year of the Proposed TMEP	August, 6, 2013	365
Mapping the Route of the Proposed TMEP	August 16, 2013	115
Senate Committee releases report on moving energy safely	August 22, 2013	208
Public Open House Materials	August 23, 2013	123
Burnaby Terminals Information Session	September 5, 2013	77
Pipeline 101 – What our Summer Students Learned	September 13, 2013	94
Canadian Chamber of Commerce issues new report	September 17, 2013	51
Legacy Fund Improves Rainbow Trout Habitat	September 20, 2013	22
Oil pipeline infrastructure bottlenecks costing Canadian economy billions of dollars	September 23, 2013	73
Burnaby Terminal Information Session	September 26, 2013	61
Edmonton Terminal Information Session	October 3, 2013	85
Premier addresses the Canadian Chamber of Commerce	October 3, 2013	208
Global Business, Local Benefits: Connecting Communities with Opportunities	December 6, 2013	58
Trans Mountain Application Overview	December 16, 2013	373

1.4.3 Phone Line and Email

Both the toll-free phone line (1.866.514.6700) and the email address (info@transmountain.com) continued to be managed during regular business hours. Trans Mountain continues to provide responses to stakeholder inquiries in a timely manner. Between August 1 and December 31, 2013, approximately 31 phone line inquiries and 225 emails were received and responded to.

1.4.4 E-blasts

Trans Mountain continued to provide updates by email called E-blasts to stakeholders who indicated an interest in receiving periodic updates either on the Trans Mountain website, at public events, or at meetings. In accordance with both British Columbia’s and Alberta’s *Personal Information Protection Act*, participants have the freedom to unsubscribe from Trans Mountain’s email E-blasts at any time. Table 1.4-3 provides a list of the E-blast sent by Trans Mountain between August 1 and December 31, 2013.

TABLE 1.4-3

TRANS MOUNTAIN E-BLASTS

Date	E-Blast Topic
August 6, 2013	August Project Newsletter distribution
September 11, 2013	Invitation to Terminal Information Session in Burnaby
September 18, 2013	Invitation to Terminal Information Session in Edmonton
September 23, 2013	Existing Suppliers/Consultants – Invitation to Terminal Information sessions, permission to post company names to the website and information about how to support the Project
November 21, 2013	Potential Suppliers or Vendors, opportunity to register for ongoing updates via new procurement database
December 16, 2013	Facilities Application Filing general stakeholder notification

Figure 1.4-6 provides a screen shot of an E-Blast providing a Project Update for the TMEP.

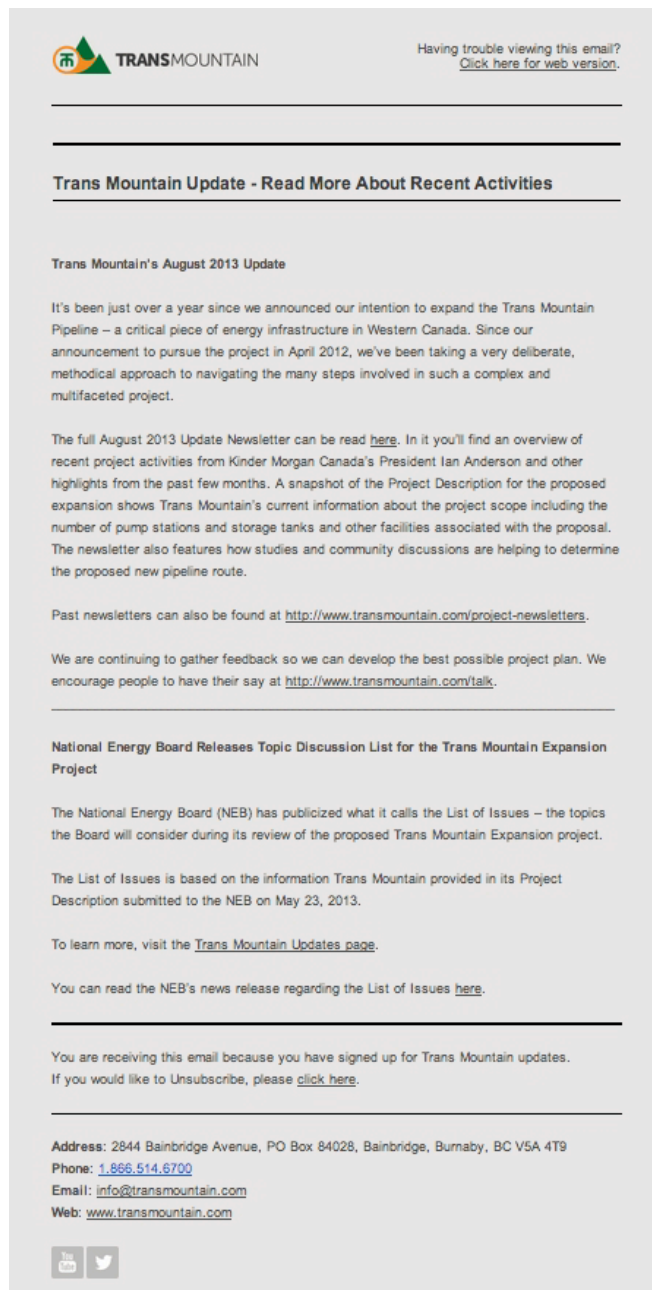


Figure 1.4-6 Screen Shot of a Project Update E-Blast for the TMEP

1.4.5 Social Media

Trans Mountain continued to disseminate information through social media outlets to engage audiences that may prefer to engage through channels other than traditional engagement and communications activities.

Twitter

Trans Mountain's Twitter account (@TransMtn) continues to be used to:

- disseminate accurate and timely information about the Project,
- provide a link to the website where more information is available,
- announce new material as it was posted to the website,

- distribute media coverage about the Project,
- retweet relevant materials (essentially forward other people's tweets),
- provide quick responses to direct questions,
- correct misinformation, and
- promote online engagement tools.

Between August 1 and December 31, 2013, 753 tweets were sent by @TransMtn. As of December 31, 2013, the @TransMtn Twitter account had 925 followers.

Figure 1.4-7 provides information on the current geographic distribution of tweets on the Trans Mountain twitter account.

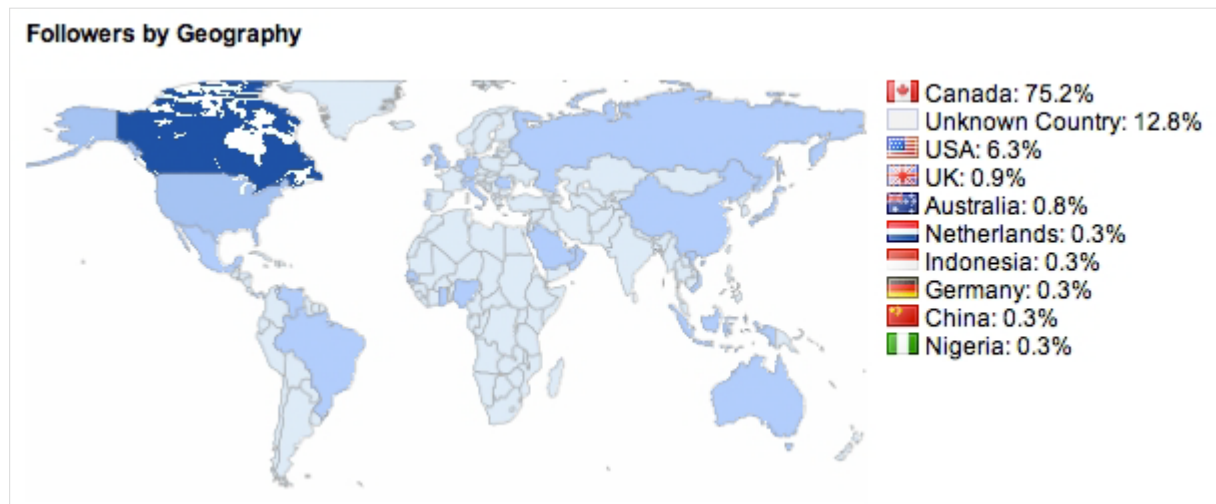


Figure 1.4-7 Geographic Distributions of Trans Mountain Tweets

YouTube

Between August 1 and December 31, 2013, Trans Mountain added 13 new videos to its Project specific YouTube channel located at <http://www.youtube.com/user/TransMtn>, generating a total of 1,738 views and 3,342 estimated minutes watched.

The following events resulted in a noticeable increase in YouTube channel views and are reflected in Figure 1.4-8 below:

- Economic Benefits Presentations, November 5 to 28, 2013; and
- Filing of the Facilities Application, December 16, 2013.

Figure 1.4-8 provides information on the number of views between August 1 and December 31, 2013. Figures 1.4-10 and 1.4-11 provide screen shots of the Economics Benefits Video and the Performing Preventive Cutouts video posted on YouTube. Table 1.4-4 provides information on the length of videos, the number of views, and estimated number of minutes watched and the average duration of the YouTube views.

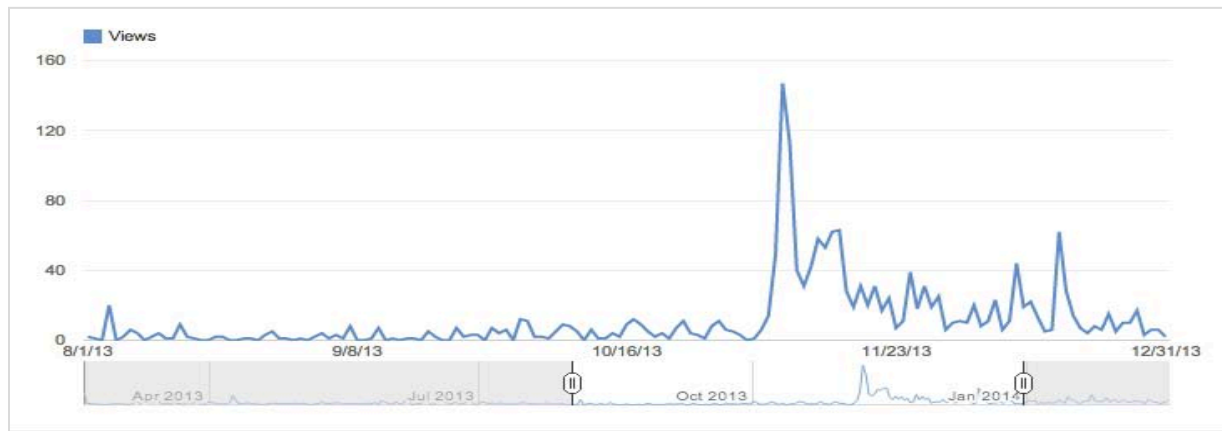


Figure 1.4-8 Trans Mountain YouTube Channel Views

TABLE 1.4-4

TRANS MOUNTAIN YOUTUBE VIDEOS

Video	Length of Video	Views	Estimated Minutes Watched	Average View Duration
Proposed Study Corridor: Wabamun	1:17	19	7	0:35
Proposed Study Corridor: Pembina River Crossing, Alberta	1:02	15	4	0:27
Proposed Study Corridor: Kamloops, British Columbia	2:37	17	2	0:27
Proposed Study Corridor: Hope, British Columbia	2:57	32	21	1:14
Proposed Study Corridor: Hinton, Alberta	1:46	19	12	1:27
Proposed Study Corridor: Edmonton, British Columbia	3:51	14	9	0:57
Proposed Study Corridor: Chilliwack, British Columbia	1:08	25	10	0:51
Proposed Study Corridor: Cheam Wetlands and Bridal Veil Falls area	0:53	2	1	0:37
Proposed Study Corridor: Burnaby to Westridge	1:06	11	4	1:00
Proposed Study Corridor: Abbotsford, British Columbia	1:15	8	2	0:35
Proposed Study Corridor: Langley to Burnaby	3:57	19	9	0:48
Economics Benefits for The TMEP	3:02	1,358	2,234	2:03
Pipeline Safety: Performing Preventive Cutouts	2:22	154	214	1:36

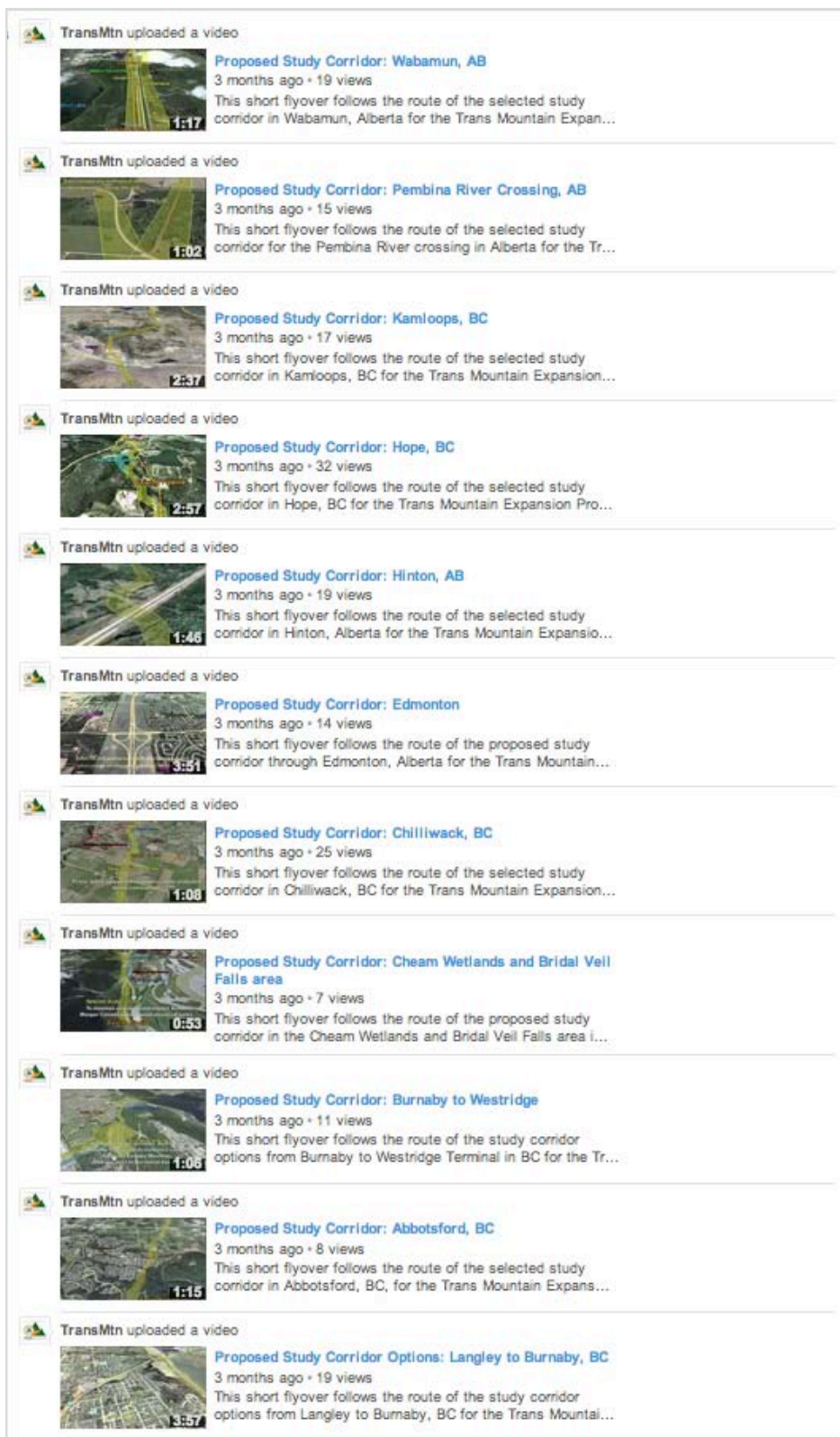


Figure 1.4-9 Screen Shot of Trans Mountain's Routing Videos

Source: www.transmountain.com, February 20, 2014



Figure 1.4-10 Screen Shot of the Economic Benefits Video for the TMEP



Figure 1.4-11 Screen Shot of the Performing Preventive Cutouts Video for the TMEP

1.4.6 Media Relations

Trans Mountain continued to reach out proactively to local news organizations in communities along the proposed pipeline route and marine corridor, respond to incoming media inquiries, and offer information and interviews with Project spokespeople to raise awareness about the various opportunities for people to engage with the Project and to provide accurate Project information. Media contacts included newspapers, magazines, radio stations, and TV stations. Trans Mountain continued to utilize Project media phone numbers (604) 908-9734 and (855) 908-9734, and a media email address (media@transmountain.com).

Between August 1 and December 31, 2013, Trans Mountain also conducted a number of activities, which included:

- submitting letters to the editor of various publications;
- providing updated image and b-roll packages on regular basis;

- posting web stories and videos to provide accurate Project information; and
- using Twitter to engage in discussion with journalists.

Trans Mountain responded to 179 media inquiries and provided 83 interviews between August 1 and December 31, 2013. Table 1.4-5 provides information on the TMEP media inquiries between August 1 and December 31, 2013.

TABLE 1.4-5

TRANS MOUNTAIN MEDIA INQUIRIES

Month	Number of Media Inquiries	Number of Media Interviews	Key Topics
August 2013	12	5	Routing
September 2013	28	7	Routing, terminals expansion, safety
October 2013	47	9	60th Anniversary of TMPL, Greenpeace Protest, terminal security, pipeline safety
November 2013	43	35	Economic and community benefits, pipeline safety, application filing date
December 2013	49	27	Facilities Application filing, routing and maps, how a route is determined, marine risks assessment studies, NEB process

Media Tours

The Facilities Application provided a summary of tours conducted from April 2012 through to September 31, 2013. No additional Media Tours occurred from October 1 to December 31, 2013.

Media Briefings

Trans Mountain held formal media briefings to provide an opportunity for reporters in large media markets to have access to subject-area experts in a QandA format. While many media members attended the sessions, others ran stories prior to or as a follow up to the sessions, helping to inform communities about opportunities to participate in the Project. Table 1.4-6 provides information on the formal media briefings.

TABLE 1.4-6

TRANS MOUNTAIN MEDIA BRIEFINGS

Date	Location	Topic	Number of Media (outlets)
September 25, 2013	Burnaby	Burnaby Terminals Expansion briefing	8 from 5 outlets
December 16, 2013	Calgary	Facilities Application filing	22 from 19 outlets

Letters to the Editor

Trans Mountain submitted the following Letters to the Editor to provide accurate Project information in response to previously printed materials. Table 1.4-7 provides information on Trans Mountain Letters to the Editor.

TABLE 1.4-7

TRANS MOUNTAIN LETTERS TO THE EDITOR

Date	Publication	Topic	Author
August 15, 2013	Kamloops Daily News	Pipeline Integrity Program	Hugh Harden
August 27, 2013	Langley Advance	Trans Mountain welcomes any opportunity to respond to questions and provide information	Greg Toth
September 2, 2013	Globe and Mail	Activists continue crusade against pipeline	Hugh Harden
September 3, 2013	Chilliwack Times	Pipeline activists tour spills site	Hugh Harden

Opinion Editorials

Trans Mountain also submitted the following opinion editorials written by Mr. Ian Anderson to provide accurate information through the media.

TABLE 1.4-8

TRANS MOUNTAIN OPINION EDITORIALS

Date	Publication	Title	Author
November 14, 2013	Langley Times	Pipelines create opportunity	Ian Anderson
November 28, 2013	Chilliwack Times	Pipelines create opportunity	Ian Anderson

1.4.7 Advertising/Notification

Trans Mountain conducted advertising campaigns in support of engagement activities to notify stakeholders about online feedback opportunities and encouraged attendance at public events. The campaign included print advertising and direct mail postcard drop.

Trans Mountain continues to translate Project informational documents such as news releases, newspaper advertisements, and the Information Guide for the public and media in communities along the proposed pipeline and marine corridor. Figure 1.4-12 provides a sample of an invitation to an information session, translated into Chinese.



KINDER MORGAN CANADA
Trans Mountain Expansion Project: Public Info Session Ad
Publication: Ming Pao
Size: 11.75" wide x 10.106" deep / COIL
August 28, 2013 / Proof 1,2,3,4,5
Agency: Sight Hound Design & Advertising
Tel: 904.885.7721 - @sighthound.ca

Figure 1.4-12 Trans Mountain Sample Translated Notification of the Information Session September 2013 regarding the proposed expansion of the Burnaby Storage and Westridge Marine Terminals

Direct Mail Advertising

Trans Mountain performed a direct mail postcard (Figure 1.4-13) drop to homes around the Burnaby and Westridge Terminals. Trans Mountain selected the direct mail drop area after determining it was the most efficient method to increase the reach of notification in these areas and to ensure the directly affected stakeholders in these areas were informed. On September 11, more than 6,700 postcards were dropped in the mail and would have been received on September 13 or 14, 2013 depending on the speed of the postal service. The remaining postcards were reserved for handouts at various upcoming events.



Figure 1.4-13 Sample Trans Mountain Postcard (front and back)

Field Studies

Trans Mountain's four-page Field Studies brochure, originally produced in June 2012 to outline the various field studies associated with the Project, was viewed on the Project website 85 times between August 1 and December 31, 2013.

During the reporting period, an updated field studies notification advertisement was placed in local newspapers along the pipeline route between Edmonton, Alberta, and Burnaby, British Columbia. The notifications ran once per month while Trans Mountain was conducting field studies in the community. Table 1.4-9 shows the publications, dates, and advertising details for these insertions. Figure 1.4-14 provides an example of the field studies notice.

TABLE 1.4-9

SUMMER/FALL 2013 FIELD STUDIES ADVERTISING PLACEMENT

Publication	Circulation	Insertion Date
Edson Leader	1,615	Monday, August 5
Hinton Parklander	4,333	Monday, August 5
Sherwood Park/Strathcona County News	26,411	Tuesday, August 6
Spruce Grove Examiner	11,010	Friday, August 2
Stony Plain Reporter	11,307	Friday, August 2
Edmonton Examiner	168,776	Wednesday, August 7
Valley Sentinel (Valemount, Tete Jaune, Dunster)	1,396	Thursday, August 1
Hope Standard	1,950	Wednesday, August 7

Figure 1.4-14 Trans Mountain Sample Field Studies Notification – 2013

1.4.8 Project Update Newsletters

In August 2013, Trans Mountain published a newsletter to provide an update on the Project and a summary of recent activities. The newsletter had a print run of 7,500 and was distributed to stakeholders and was available at meetings, public events and on the Project's website. A link to the website was provided in the relevant E-blasts. Between August 1 and December 31, 2013 the newsletter on the website was viewed 58 times. Figure 1.4-15 provides a sample of the Trans Mountain newsletter publication.



Figure 1.4-15 Trans Mountain Sample Newsletter – 4 pages (August 2013)

1.4.9 Emergency Response Program Summary

General information about the proposed Project has regularly appeared in Kinder Morgan Canada Inc. (KMC) publications. In December 2013, KMC produced an Emergency Response Program (ERP) Summary booklet that described its current ERP. KMC continued to engage with communities along the pipeline corridor to review existing plans and consider

Table 1.4-10 provides information on the KMC publications. Figure 1.4-16 provides an example of the Emergency Response Program Summary.

TABLE 1.4-10

KMC PUBLICATIONS

Date	Publication	Content
December 2013	Emergency Response Program Summary	Updated ERP Summary

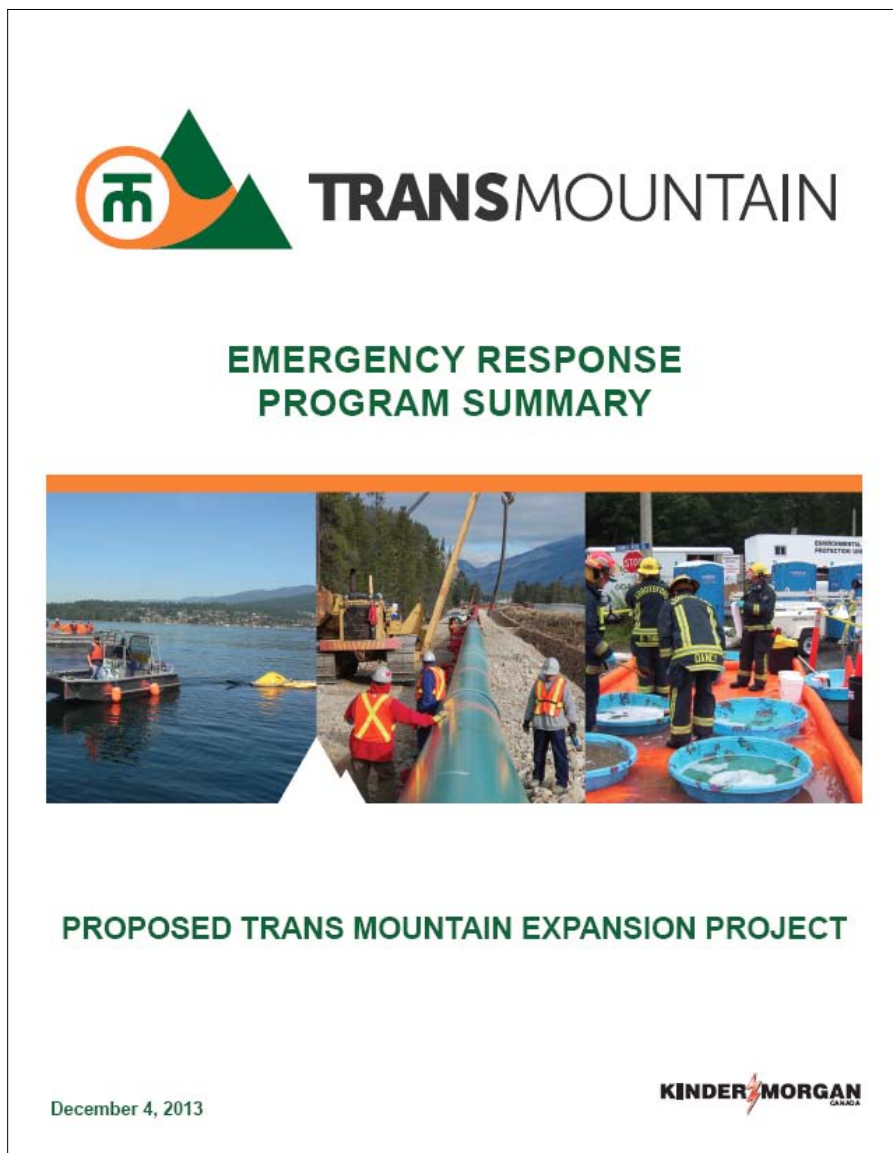


Figure 1.4-16 Emergency Response Program Summary December 4, 2013

1.4.10 Events

Participation in and or attendance at events provided a forum for direct contact with stakeholders, as well as for people to ask questions about the Project. Trans Mountain representatives took the opportunity to attend various events between August 31 and December 31, 2013. Table 1.4-11 provides information on Trans Mountain attendance at events.

TABLE 1.4-11

TRANS MOUNTAIN ATTENDANCE AT COMMUNITY EVENTS

Date	Location	Event
August 10, 2013	Burnaby, British Columbia	Kensington Community Fair
September 5, 2013	Calgary, Alberta	Google Canada presentation to CEPA
September 13, 2013	Kamloops, British Columbia	Resource Training Organization / Thompson Rives University RTO/TRU Drive the Trades: Scholarship Golf Tournament
September 13, 2013	Vancouver, British Columbia	Premier's Tournament
September 13, 2013	Surrey, British Columbia	Surrey Mayor's Charity Ball
September 30, 2013	North Vancouver, British Columbia	Port Metro Vancouver (PMV), <i>Harvest Event</i>
September 16 to 20, 2013	Vancouver, British Columbia	UBCM Convention
September 18, 2013	Vancouver, British Columbia	Chartered Institute of Logistics and Transport (CILTNA): Managing The PMV Logistics Interface: Looking To The Future
September 18, 2013	Vancouver, British Columbia	Vancouver Board of Trade: New Governor of Bank of Canada
September 19, 2013	Surrey, British Columbia	Surrey Board of Trade: Doing Business on the Fraser Dialogue
September 19, 2013	Calgary, Alberta	2013 Crude Markets and Railway Takeaway Summit
September 19, 2013	Port Moody, British Columbia	Pacific Coast Terminals Expansion Open House
September 22, 2013	Coquitlam, British Columbia	Raincoast Conservation Foundation : <i>"What's At Stake - Movies for an Oil-Free Coast"</i>
September 25, 2013	Seattle, British Columbia	British Columbia/Pacific States Oil Spill Task Force Annual Meeting
September 27, 2013	New Westminster, British Columbia	Fraser River Discover Centre Grand Opening
September 28 to 30, 2013	Kelowna, British Columbia	Canadian Chamber of Commerce AGM
October 2, 2013	Vancouver, British Columbia	Nature Trust "Wild about Nature" Fundraiser Gala
October 3, 2013	Kamloops, British Columbia	Canadian Association of Petroleum Producers (CAPP): Energy Mix Giant Floor Map Event
October 3, 2013	Surrey, British Columbia	Surrey Board of Trade Manufacturing Industry Reception
October 3 to 4, 2013	Vancouver, British Columbia	Chrysalix Summit on External Innovation
October 6 to 8, 2013	Vancouver, British Columbia	2013 Utility Perspectives
October 8, 2013	Port Moody, British Columbia	Port Moody Council Meeting
October 8, 2013	Calgary, Alberta	ESandG Accountability Forum
October 10, 2013	Langley, British Columbia	Fraser Valley Mayors Panel and Municipal Trade Show
October 16, 2013	Coquitlam, British Columbia	Tri-Cities Chamber of Commerce - By-election All Candidates Meeting
October 16, 2013	Vancouver, British Columbia	VBOT: Mayor Gregor Robertson on the Economic Future of Vancouver
October 16, 2013	Vancouver, British Columbia	British Columbians for International Prosperity
October 16, 2013	Calgary, Alberta	2013 Calgary Energy Roundtable
October 21, 2013	Edmonton, Alberta	NEB Public Meetings - Edmonton
October 22, 2013	Edson, Alberta	NEB Public Meetings - Edson
October 23, 2013	Valemount, British Columbia	NEB Public Meetings - Valemount
October 24, 2013	Clearwater, British Columbia	NEB Public Meetings - Clearwater
October 24, 2013	Victoria, British Columbia	An evening with British Columbia's Deputy Ministers
October 31, 2013	Vancouver, British Columbia	Conference: Moving the Future: A new conversation about Transportation and the Economy
November 4, 2013	Burnaby, British Columbia	Premier's Homecoming Dinner
November 5, 2013	Vancouver, British Columbia	Vancouver Board of Trade - Trans Mountain Expansion Project: Community Economic Benefits
November 5, 2013	Langley, British Columbia	Fraser Valley Chamber of Commerce Fall Business Showcase
November 7, 2013	Fort Langley, British Columbia	Pipe-up: "Fort Langley Town Hall"
November 12 to 13, 2013	Vancouver, British Columbia	BCBC Summit: "The world needs more BC: Growing International Trade."
November 13, 2013	Calgary, Alberta	CEPA Reception for AAMDC delegates
November 14, 2013	Burnaby, British Columbia	Burnaby Board of Trade Business Excellence Awards
November 14, 2013	North Vancouver, British Columbia	Pipelines and Oil Tankers: A public lecture by Robyn Allan
November 15, 2013	Vancouver, British Columbia	UDI U40 Lunch - <i>"Understanding Neighbourhood Engagement"</i>
November 20, 2013	Abbotsford, British Columbia	Abbotsford Business Awards
November 20, 2013	Vancouver, British Columbia	Metro Vancouver - Longterm Infrastructure Planning
November 21, 2013	Surrey, British Columbia	Surrey Board of Trade lunch with Transportation Minister Todd Stone
November 21, 2013	Coquitlam, British Columbia	Fortis Open House re Woodfibre LNG facility in Howe Sound.

TABLE 1.4-11 Cont'd

Date	Location	Event
November 26, 2013	Vancouver, British Columbia	Vancouver Board of Trade - Robin Silvester, President and CEO of Port Metro Vancouver – Annual Address
November 26, 2013	Vancouver, British Columbia	University of Calgary: Asian Market Diversification Conference
December 5, 2013	Burnaby, British Columbia	SFU - President's Reception
December 6, 2013	Vancouver, British Columbia	Maritime Community Meeting
December 10, 2013	Vancouver, British Columbia	LIFT Philanthropy Partners

1.4.11 Speaking Opportunities

Trans Mountain representatives participated in various events including, panel discussions, and presentations to a wide variety of stakeholders. These events offered Trans Mountain an opportunity to outline Project details to various audiences and answer questions. Table 1.4-12 provides information on Trans Mountain speaking opportunities.

TABLE 1.4-12

TRANS MOUNTAIN SPEAKING OPPORTUNITIES

Date	Location	Speaking Opportunity	TMEP Representative
September 12, 2013	Surrey, British Columbia	Surrey Board of Trade Environment and Business Awards	Ian Anderson
September 12, 2013	North Vancouver, British Columbia	District of North Vancouver Community Discussion	Mike Davies (Panelist)
September 18, 2013	Vancouver, British Columbia	Chartered Institute of Logistics and Transport (CILTNA) – PMV Logistics Interface: Looking to the Future	Ian Anderson (Panelist)
September 18, 2013	Burnaby, British Columbia	Vancouver Regional Construction Association (VRCA) Breakfast Meeting	Greg Toth
September 19, 2013	Calgary, Alberta	Crude Markets and Rail Takeaway Summit Canada 2013	Norm Rinne
October 23, 2013	Burnaby, British Columbia	Western Canada Group of Chartered Engineers – Evening Presentation	Adam Lind
November 6, 2013	Vancouver, British Columbia	Pacific Energy Innovation Association "Energy Breakfast" Meeting	Norm Rinne
November 12, 2013	Vancouver, British Columbia	British Columbia Business Summit 2013 (Business Council of British Columbia)	Ian Anderson (panelist)
November 14, 2013	Burnaby, British Columbia	Burnaby Board of Trade Business Excellence Awards	Lizette Parsons Bell
November 19, 2013	Burnaby, British Columbia	ACEC-British Columbia (Association of Consulting Engineering Companies of British Columbia)	Greg Toth
November 25, 2013	Edmonton, Alberta	Economic Benefits Presentations – Resource Industry Suppliers Association (RISA)	Greg Toth
November 27, 2013	Hinton, Alberta	Presentation to Hinton Rotary	Garrath Douglas

1.4.12 Sponsorship Opportunities

Trans Mountain has taken the opportunity to contribute to various organizations including community events and fundraising programs. Table 1.4-13 provides a few examples of Trans Mountain sponsorships between August 1 and December 31, 2013.

TABLE 1.4-13

TRANS MOUNTAIN COMMUNITY SPONSORSHIP OPPORTUNITIES

Organization	Purpose
Abbotsford Chamber of Commerce - Chamber Connections Event	Sponsorship to celebrate Chamber's 100th anniversary and to support Big Brothers, Big Sisters
Abbotsford Hospice Society – Moments of Hope Gala	Honour Circle Sponsorship
BBOT - Burnaby Business Excellence Awards	Sponsor of Business Person of the Year award

TABLE 1.4-13 Cont'd

Organization	Purpose
BCBC - Business Council of British Columbia Business Summit	Supporting Sponsorship
Canadian Chamber of Commerce AGM	A Sponsor at the AGM
Evening with Trevor Linden - Hope and Dist. Chamber of Commerce	Bronze sponsorship
Fraser River Discovery Centre	Support the "My River My Home" Teacher's Resource Package
Invasive Species Council of British Columbia (ISBC) 2014 Annual Public Forum	Silver Sponsorship
Montecito Elementary School – Emergency Response Disaster Project	Support of Emergency Response Disaster Project.
Nature Trust of British Columbia Fundraising Gala	Support fund-raising gala.
North Vancouver Chamber of Commerce Breakfast meeting "BC Agenda for Prosperity"	Support Breakfast event
Pacific Energy Innovation Association (PEIA) Forum 2014	Annual Forum "Balancing Economic Prosperity and Environmental Stewardship"
Reach Gallery Museum - "After Dark at the Reach"	Sponsorship of annual fundraising event
Thompson Rivers University Trades and Technology VIP Invitational Event	Sponsorship to help school scholarships
7th Annual Mayors' Charity Ball	Proceeds support the Surrey Firefighter's Charitable Society
Vancouver Board of Trade Energy Forum	Support Energy Forum

1.5 Phase 4 Stakeholder Engagement Activities

The following documents the stakeholder engagement activities that occurred between August 1 and December 31, 2013. Phase 4 Engagement activities and discussions included, but were not limited to:

- reactivation on segments of existing 24" pipeline
- emergency Management Stakeholder Workshops;
- Lac du Bois Grasslands tour in Kamloops;
- a series of Economic Benefits presentations in collaboration with local Chambers of Commerce along the TMEP route from Edmonton to Burnaby;
- ongoing meetings with environmental groups and ENGOS; and
- face-to-face stakeholder meetings.

These activities enabled the Project to continue to identify and ensure stakeholder concerns were captured about local issues related to the proposed pipeline expansion including emergency response planning and economic benefits through construction of the pipeline.

A total of 324 in-person meetings were held with stakeholders and interest groups regarding the Project. Of these meetings, 69 were held with Municipal Governments, 15 with representatives of the Federal Government, 22 with Provincial Government representatives, and 218 with others including individuals, chambers of commerce, local interest groups, and environmental organizations.

1.5.1 Reactivation Engagement Program

Engagement on the reactivation of two 24-inch segments of existing pipeline, as part of the Trans Mountain Expansion Project, continued in Phase 4. The pipeline segments include:

- Hinton, Alberta, to Hargreaves, British Columbia – 150 km segment, in continuous operation from 1953 to 2008; and
- Darfield, British Columbia, to Black Pines, British Columbia – 43 km segment, in continuous operation from 1953 to 2004.

To date with stakeholders they identified the following issues:

- new access requirements for dig sites;
- residual spill contamination at Jasper Pump Site;
- misinformation that the proposal is for a third line through the Parks;
- increased volumes of product transported through the Parks;
- safety and emergency response;
- stakeholder fatigue attached with multiple projects;
- associated power line work;
- water sourcing for hydrostatic testing; and
- chemical storage at Jasper Pump station.

Engagement on the reactivation sections will continue through Phase 5 and updates be provided periodically to the NEB.

1.5.2 Emergency Management Stakeholder Workshops

Emergency planning and response have been key areas of concern in both pipeline and marine communities. To address this concern, Trans Mountain initiated a series of Emergency Management Stakeholder Workshops in Phase 4. During the reporting period, three Emergency Management Stakeholder Workshops were held in the following locations (additional workshops will be held in Phase 5):

- September 24, 2013, in Edmonton, Alberta;
- September 25, 2013, in Hinton, Alberta; and
- December 6, 2013, in Vancouver, British Columbia.

Workshop invitees included local emergency managers and first responders, health and safety officials and local government representatives. Trans Mountain representatives provided attendees an overview of existing operations and the proposed TMEP. Trans Mountain also provided an introduction to the ERP planning process. Attendees reviewed Trans Mountain’s ERPs relevant to their area and provided feedback on those plans.

The materials presented including the PowerPoint presentation, the ERP Volumes, an ERP Summary Booklet, and area maps were also available online, the day following each session for a period of 3 weeks. The PowerPoint presentation for the workshop in Vancouver contained additional slides with information regarding the marine aspects of the Project.

Feedback received at these sessions was shared with the participants within two weeks of the workshop and will be incorporated into a summary report on recommendations once all emergency response workshops have been completed. Details of the Emergency Management Stakeholder Workshops are summarized in Tables 1.5-1 to 1.5-6 below.

TABLE 1.5-1

EMERGENCY MANAGEMENT STAKEHOLDER WORKSHOP – EDMONTON, ALBERTA

Region	Location	Date	Number of Attendees
Alberta	Coast Edmonton Plaza Hotel	September 24, 2013 9:00 AM to 12:00 PM	17

TABLE 1.5-2

**PARTICIPANTS IN THE EMERGENCY MANAGEMENT
 STAKEHOLDER WORKSHOP – EDMONTON, ALBERTA**

Organization	
Alberta Emergency Management Agency	City of Edmonton
Alberta Health Services	Edmonton Fire Rescue Services
Alberta justice and Solicitor General	Shock Trauma Air Rescue Service (STARS)
Alberta Rail Safety	Alberta Transportation
Alberta Environment Support and Emergency Response Team (ASERT)	Royal Canadian Mounted Police (RCMP) Strathcona County
Alberta Health Services Emergency Medical Services (EMS)	Strathcona County Fire Department

Primary concerns raised through the Edmonton workshop included the following:

- third-party strikes;
- the cumulative impact of terminals and heavy industry in Strathcona County;
- increased emergency training and resource needs of all the municipalities that the pipeline crosses;
- oil transport via rail;
- a geographic response plan for wilful vandalism, terrorism and eco-terrorism;
- confidence in company’s response personnel, expertise and commitment; and
- Human Health Risk Assessment (HHRA) for diluent vapours.

Feedback received from participants at the Edmonton Emergency Management Stakeholder Workshop, not previously addressed in the Facilities Application, is summarized in greater detail in Table 1.6-1.

TABLE 1.5-3

EMERGENCY MANAGEMENT STAKEHOLDER WORKSHOP – HINTON, ALBERTA

Region	Location	Date	Number of Attendees
Alberta	Lakeview Inn and Suites	September 25, 2013 9:00 AM to 12:00 PM	10

TABLE 1.5-4

**PARTICIPANTS IN THE EMERGENCY MANAGEMENT STAKEHOLDER WORKSHOP – HINTON,
 ALBERTA**

Organization	
Parkland County Fire Services	Alberta Health Services
Alberta Environment and Sustainable Resource Development (AESRD)	Edson RCMP
Parks Canada	Hinton RCMP
Town of Hinton	Hinton Fire Department

Primary concerns raised through the Hinton workshop included the following:

- involvement in pre-planning, design, planning and construction;

- communication strategies for pre-construction, construction and operation to be prepared for potential issues such as civil unrest and mass evacuation;
- the potential for cumulative effects;
- need for ongoing training to deal with employee turnover; and
- the scope of reactivation, and what it means for Jasper National Park.

Feedback received from participants at the Hinton Emergency Management Stakeholder Workshop, not previously addressed in the Facilities Application, is summarized in greater detail in Table 1.6-1.

TABLE 1.5-5

EMERGENCY MANAGEMENT STAKEHOLDER WORKSHOP – VANCOUVER, BRITISH COLUMBIA

Region	Location	Date	Number of Attendees
Island Coastal	Vancouver Emergency Operations Centre	December 6, 2013 8:30 AM to 12:30 PM	45

TABLE 1.5-6

**PARTICIPANTS IN THE EMERGENCY MANAGEMENT
 STAKEHOLDER WORKSHOP – VANCOUVER, British Columbia**

Organization	
British Columbia Institute of Technology (BCIT), Security, Safety and Emergency	Langley, City and Township Emergency Program Coordinator
Burnaby Emergency Program Committee (EPC)	Shore Emergency Management Office (North Shore EMO)
Burnaby RCMP	PMV
Coquitlam EPC	Port Moody
Coquitlam Fire Department	RCMP
Coquitlam, Manager Utility Programs	RCMP, Lower Mainland District (LMD)
Delta Police Dept.	RCMP, Operational Readiness and Response (ORR)
Emergency Management British Columbia (EMBC)	Richmond Emergency Programs,
Fraser Health Authority	Surrey, Fire Dept.
Integrated Partnership for Emergency Management (IPREM)	Vancouver City representatives
Justice Institute of British Columbia (JIBC)	Vancouver Health
Langley Township, Public Works	Vancouver Police

Primary concerns raised through the Vancouver workshop included the following:

- fire protection;
- location specific spill response time;
- coordination and capacity of response;
- emergency training of first responders and resource needs of all local jurisdictions;
- cost of emergency evacuation;
- land response; and
- remediation and associated costs.

Feedback received from participants at the Vancouver Emergency Management Stakeholder Workshop, not previously addressed in the Facilities Application, is summarized in greater detail in Table 1.6-4.

1.5.3 Tour of Lac du Bois Grasslands Protected Area, Kamloops, British Columbia

On September 24, 2013, Trans Mountain representatives provided a tour of the Lac du Bois Grasslands area to key stakeholders. Attendees met at the Holiday Inn in Kamloops, British Columbia for a briefing and were then driven to the proposed right-of-way for the Project for a walking tour of the grasslands area. Following the identification of concerns and discussion with subject matter experts, attendees were provided route maps.

TABLE 1.5-7

LAC DU BOIS GRASSLANDS PROTECTED AREA TOUR – KAMLOOPS, BRITISH COLUMBIA

Region	Location	Date	Number of Attendees
Interior BC	Met at Holiday Inn, Kamloops; walking tour in Lac du Bois Grasslands Protected Park	September 24, 2013 8:15 AM to noon	13

TABLE 1.5-8

ATTENDEES/INVITEES – KAMLOOPS

Organization	
Kamloops Thompson Trails Alliance	Crew Leader Natural Resources, City of Kamloops
Ranger, British Columbia Parks	TRU Grad Student
Kamloops Naturalist Club	Tranquille Livestock Association
Grasslands Conservation Council	Verne Sundstrom Forestry Consulting
Kamloops Naturalist Club	St'k'emlupsemc of the Secwepemc Nation
Thompson Rivers University (TRU)	Environmental Services Coordinator, City of Kamloops

Several stakeholders cautiously expressed support for the pipeline passing through the Lac du Bois Grasslands, provided an adequate net benefit to the park could be demonstrated by Trans Mountain. Some stakeholders were uncomfortable with the proposed right-of-way passing through the Lac du Bois Grasslands and preferred the alternate route through the community of Westsyde.

The following net benefit ideas were raised:

- recontour and revegetate;
- alignment with the Telus fibre-optic right-of-way;
- control motorized vehicle access particularly at north end of park;
- additional staffing to support management of British Columbia Parks land base; and
- range management (grazing controls) to enhance carbon sequestration of grasslands.

Feedback received from participants at the Lac du Bois Grasslands Protected Area tour, not previously addressed in the Facilities Application, is summarized in greater detail in Table 1.5-9 to Table 1.5-10.

Engagement activities related to British Columbia Parks Stage 2 Application will be completed in Phase 5 for Finn Creek Provincial Park, North Thompson Provincial Park, Lac du Bois Protected Area, Coquihalla Summit Recreation Area and Bridal Veil Falls Provincial Park. Local engagement will follow the *Provincial Protected Area Boundary Adjustment Policy, Process and Guidelines* (British Columbia Ministry of Environment 2010), including:

- alternatives considered to avoid the park;
- overall economic benefits to the Province;
- social and environmental impacts; and
- mitigation and restoration.

1.5.4 **Economic Benefits Presentations**

Economic Benefits Presentations were held in communities along the TMEP route from Edmonton to Burnaby, with an emphasis on opportunities for local benefits through procurement, jobs, and workforce spending. Most events were delivered in partnership with local Chambers of Commerce. Highlights of the Economic Benefits Presentations include:

- 16 Events from Edmonton through to Burnaby;
- 1,320 attendees - 194 in Alberta, 247 in BC Interior, 879 in Lower Mainland/Fraser Valley;
- 205 companies added to procurement registry;
- 127 people added to jobs registry;
- 20+ local media articles, 5 to 10 radio interviews; and
- 936 online views of economic benefits video.

Response from the leadership and membership of local Chambers was generally positive, with the events helping to secure or increase their level of support for the Project. Local businesses have been interested in information on economic opportunities for some time, and this series of presentations helped to address that need.

Overall the tone was generally positive. New supporters were identified and existing supporters gained new information and messaging to extend within their own networks. There was a significant volume of positive traditional and social media coverage in all communities. A theme of local opportunities emerged quickly in our conversations with local businesses and economic development groups, and on traditional and social media.

TABLE 1.5-9

LOCATION AND DATES OF ECONOMIC BENEFITS PRESENTATIONS

Region	Chamber	Date	Speaker	Attendance
Alberta	Edson and District Chamber of Commerce	November 20, 2013	Garrath Douglas	14
Alberta	RISA (Edmonton)	November 25, 2013	Greg Toth	150
Alberta	Hinton and District Chamber of Commerce	November 25, 2013	Garrath Douglas and Margery Knorr	30
BC Interior	Hope and District Chamber of Commerce	October 21, 2013	Greg Toth	28
BC Interior	Kamloops Chamber of Commerce	November 8, 2013	Ian Anderson	64
BC Interior	Clearwater and District Chamber of Commerce	November 18, 2013	Kate Stebbings and Margery Knorr	40
BC Interior	Blue River Economic Development Group	November 21, 2013	Kate Stebbings and Margery Knorr	16
BC Interior	Valemount and District Chamber of Commerce	November 21, 2013	Kate Stebbings and Margery Knorr	64
BC Interior	Merritt and District Chamber of Commerce	November 22, 2013	Kate Stebbings and Margery Knorr	35
Lower Mainland/Fraser Valley	Vancouver Board of Trade	November 5, 2013	Ian Anderson	375

TABLE 1.5-9 Cont'd

Region	Chamber	Date	Speaker	Attendance
Lower Mainland/Fraser Valley	Surrey Board of Trade	November 6, 2013	Norm Rinne	63
Lower Mainland/Fraser Valley	Tri-Cities Chamber of Commerce	November 14, 2013	Ian Anderson	115
Lower Mainland/Fraser Valley	Abbotsford Chamber of Commerce	November 15, 2013	Ian Anderson	49
Lower Mainland/Fraser Valley	Greater Langley Chamber of Commerce	November 19, 2013	Greg Toth	125
Lower Mainland/Fraser Valley	Burnaby Board of Trade	November 27, 2013	Ian Anderson	100
Lower Mainland/Fraser Valley	Chilliwack Chamber of Commerce	November 28, 2013	Greg Toth	52
OVERALL ATTENDANCE				1,320

In general, the following materials were provided at the Economic Benefits Presentations, while the PowerPoint presentation “Trans Mountain: Local Economic Opportunities” was tailored to address local aspects of the Project:

- “\$50 Million A Day” brochure - from the Canadian Chamber of Commerce;
- “Connect with Local Opportunities” postcard;
- “TMEP Employment Opportunities” fact sheet; and
- Video: Economic Benefits for TMEP.

Media Coverage

There was a media at each event, most notably at the Vancouver Board of Trade where Ian Anderson was interviewed by Canadian Broadcasting Corporation, CKNW, Metro News, Bloomberg, Global, Metro News, 24 Hours, Vancouver Sun, Globe and Mail, Report on Business, Sun News Network, Omni and the Province. Each event was attended by at least two reporters, with an average of four reporters. Media in attendance ranged from small community outlets to large publications like the Wall Street Journal.

An Op-Ed from Ian Anderson was submitted to 10 route community newspapers and 2 non-route newspapers, the Vancouver Sun and the Globe and Mail and was ultimately printed in the Langley Times and Chilliwack Times.

Web and Social Media

The Economic Benefits Presentation helped to drive online activity. Visits to the website increased by 30% in November 2013, and page views increased by 23% Trans Mountain also gained a significant number of new Twitter followers. The tone of social media was significantly more positive than in previous months. The economic benefits video developed for the presentations and posted on YouTube, is one of our most-viewed videos.

1.5.5 Economic Benefits Presentations - Alberta Region

1.5.5.1 Edson and District Chamber of Commerce

The Economic Benefits Presentation with the Edson and District Chamber of Commerce was positive, informal and discussion-oriented. The main concern raised was the availability of local workers given the cumulative demands of multiple projects.

TABLE 1.5-10

EDSON and DISTRICT CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Edson Chamber Office	November 20, 2013	14

TABLE 1.5-11

ATTENDEES/INVITEES - EDSON and DISTRICT

Organization	
CFR Chemicals	Living Waters School Division
Computers Place/Edson Chamber	Nova Theatre
Edson and District Chamber of Commerce	Talisman Energy
Edson Leader	Wild Lotus Weddings and Events
Grand Prairie College	XM 105 Radio
Les Barker Catwork Ltd.	Yellowhead County

Note: - One attendee did not provide an organizational affiliation and as a result was not listed in the table above.

1.5.5.2 Resource Industry Suppliers Association, Edmonton

The Economic Benefits Presentation drew the largest attendance at a Resource Industry Suppliers Association (RISA) event held in 2013. Generally attendees were potential suppliers and were in support of the Project. Questions focused on local procurement, technical elements of the Project, and how RISA members could support the Project.

TABLE 1.5-12

RISA – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Chateau Nova Yellowhead	November 25, 2013	150

TABLE 1.5-13

ATTENDEES/INVITEES - RISA

Company	
Acklands- Grainger	Mammoet Canada Western Ltd.
Advanced Enviro Engineering Ltd.	Matrix Services
AFD Petroleum	Metal Supermarkets
Alberta Innovates Technology	Midwest Constructors
Almita Pilling Inc.	Myshak Crane and Rigging
ALS Environmental	Nilex Inc.
Alta-Fab Structures	Nova Hotels
Altair Contracting	NSCG Crane and Heavy Haul Services
Aluma Systems	Optrics
Arrow Engineering Inc.	Opus Stewart Weir
Associated Engineering	Paradox Access Solutions
Atco Structures	Paulson Cormier and Associates
Atlantic Industries Ltd.	Precision Bolting Ltd.
Braden Burry Expediting	Prinoth Ltd.
Business Development Bank of Canada	Pyramid Corporation-Nisku
Car-ber	RADCAD
C-Fer Technologies	Ritchie Bros Auctioneers
Challenger Geomatics Ltd.	Rockwell Automation
Clearstream Energy Holding	Rolled Alloys
Contemporary Office Interiors	Sandborn Roofs
Crimtech Services Ltd.	Schneider Electric
Crimtech Services Ltd.	Seko Construction Ltd.
David Aplin Group	Skyway Canada Ltd.
Denille Industries Ltd.	Spirit Staffing
E.S Fox Ltd.	SRS Industrial

TABLE 1.5-13 Cont'd

Company	
Edmonton Chamber of Commerce	SterlingCrane
EECOL electric Ltd.	Stream Flo Industries
Emergency Response Management Consultants	Summit Trucks
Enviro Trace Ltd.	SunBelt Supply
Finning Canada	Superior Propane
Focus NDT	Supreme Group
Granham Industrial Services	Sureway Construction Group of Companies
Hertz Energy Services	TerraPro Group
Hood Group	Tervita
Ian Murray and Company	The Supply Post
Infinity Belting Ltd.	Thurber Engineering Ltd.
Intergra Technologies Limited	UT Quaility
J.V Driver	Vertex Resource Group Ltd.
Jet Label	Voice Construction
Layfield Environmental Systems	Westech Industrial
Local 488-Plumbers and Pipefitters	Wika Instruments
Local 955 Int'l. Union of Operating Engineers	Worley Parsons
Lockwood Valves Canada	RISA
Magna IV Engineering	

1.5.5.1 Hinton and District Chamber of Commerce

The Economic Benefits Presentation was well received by members of the Hinton and District Chamber of Commerce. Questions focused on British Columbia's Five Conditions, permanent jobs, how to work with the Chamber to manage expectations and create opportunities, and the burden on local services.

TABLE 1.5-14

HINTON and DISTRICT CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Hinton Golf Club	November 25, 2013	30

TABLE 1.5-15

ATTENDEES/INVITEES – HINTON and DISTRICT CHAMBER OF COMMERCE

Organization	
Alberta Works	NWS Construction (N.W.S)
Barrow Safety	ReMax2000
Town of Hinton	Royal LePage
Coalspur Mines Ltd.	Shaw Communication
Coldwell Banker	The Old Grind
Cougar Creek Cabins	West Ridge Sand and Gravel
Hinton and District Chamber of Commerce	Wild Orchard
Hinton Voice	Eagle 105
Kopar	Hinton Parklander
Lakeview Inns and Suites	

1.5.6 Economic Benefits Presentations – British Columbia Interior Region

1.5.6.1 Hope and District Chamber of Commerce

The Economic Benefits Presentation to the Hope and District Chamber of Commerce coincided with Small Business Week. The tone was generally quite positive with some questions on pipe thickness, valves, and pipe integrity.

TABLE 1.5-16

HOPE AND DISTRICT CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Hope Recreation Centre	October 21, 2013	28

TABLE 1.5-17

ATTENDEES/INVITEES – HOPE AND DISTRICT CHAMBER OF COMMERCE

Organization	
Area A Director for the FVRD (Boston Bar/North Bend/Canyon Alpine)	Parliamentary Secretary to the Minister of Justice and Attorney General for Corrections, member of the Cabinet Committee on Secure Tomorrow, and the Legislative Review Committee.
Colonial 900 Inn	Pipe Up
Hope Standard	Hope and District Chamber of Commerce
Manager of Hope Quality Inn	

Note: - 15 attendees did not provide an organizational affiliation and as a result were not listed in the table above

1.5.6.1 Kamloops Chamber of Commerce

The Economic Benefits Presentation to the Kamloops Chamber of Commerce was positive with KMC's President, Ian Anderson, providing remarks on behalf of the Project. Attendees were welcoming and interested in the full range of economic opportunities on the Project. Questions covered worst-case scenario for a marine spill, timelines for peak employment, trades training opportunities, and the regulatory process.

TABLE 1.5-18

KAMLOOPS CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Holiday Inn and Suites	November 8, 2013	64

TABLE 1.5-19

ATTENDEES/INVITEES – KAMLOOPS CHAMBER OF COMMERCE

Organization	
British Columbia Liberal Government	Simpco First Nation
Member of the Legislative Assembly Constituency Assistant	Hotel540
Absorbent Products	Kamloops Communications
AREC Management Corp.	Milton's Movers
Ashton and Associates	Myrons Door and Gate Systems
Board/Advance Hospitality Solutions	Northern Trailer
Board/Edward Jones	North Shore Business Improvement Association (NSBIA)
Board/Forward Law	Ramada Inn
Board/Fresh Inc.	Royal Bank of Canada (RBC)
Board/Kamloops Airport	Sableridge Capital Partners

TABLE 1.5-19 Cont'd

Organization	
Buzz Your Brand Marketing	Sprott Shaw Community College
Canadian Imperial Bank of Commerce (CIBC)	Summit Capital Business Brokers
City of Kamloops - Councillor	Thurber Engineering Ltd.
Colliers International	City of Kamloops - Councillor
Community U, TRU	Two Vegetable's Emporium
Constantia Resources Ltd.	Urban Systems
CTQ Consulting	Venture Kamloops
Delta Sun Peaks	Western Industrial Solutions
DoubleTree Hotel	

Note: - Two attendees did not provide an organizational affiliation and as a result were not listed in the table above.

1.5.6.1 Clearwater and District Chamber of Commerce

The Economic Benefits Presentation to the Clearwater and District Chamber of Commerce was well attended despite heavy snowfall and difficult roads. The team presented to Mayor and Council earlier in the day and a number of Councillors were in attendance again at the Chamber event. Questions included the structure of property taxes, opportunities for community benefits, permanent employment opportunities, and workforce accommodation options.

TABLE 1.5-20

CLEARWATER and DISTRICT CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Clearwater Community Resource Centre	November 18	40

TABLE 1.5-21

ATTENDEES/INVITEES – CLEARWATER AND DISTRICT CHAMBER OF COMMERCE

Organization	
Clearwater Chamber of Commerce Members	

Note: - Nine attendees did not provide an organizational affiliation and as a result were not listed in the table above.

1.5.6.2 Blue River Economic Development Group

The Economic Benefits Presentation to the informal economic development group in Blue River was positive. Attendee questions focused on local contracting policies, details of workforce spending, types of temporary and permanent jobs, accommodations, trades training, and how to support approval of the Project.

TABLE 1.5-22

BLUE RIVER ECONOMIC DEVELOPMENT GROUP – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Royal Canadian Legion	November 21, 2013	16

TABLE 1.5-23

ATTENDEES/INVITEES – BLUE RIVER ECONOMIC DEVELOPMENT GROUP

Organization	
Blue River Community Association	River Safari
Cane Creek Wilderness Retreat	Thompson Headwater Services Committee
Husky Gas	Thompson Nicola Regional District (TNRD)
JVC (Snow Clearing Company)	Log Inn Pub
Mike Wiegele Helicopter Skiing	

Note: - Seven attendees did not provide an organizational affiliation and as a result were not listed in the table above

1.5.6.1 Valemount and District Chamber of Commerce

The Economic Benefits Presentation to the Valemount and District Chamber of Commerce was successful, with many questions focused on opportunities. Questions focused on how local people can connect to jobs, contracting structure, macro-economic impacts, community legacies, accommodations, and the Project timeline.

TABLE 1.5-24

VALEMOUNT and DISTRICT CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Best Western Plus Valemount Inn and Suites	November 21, 2013	64

TABLE 1.5-25

ATTENDEES/INVITEES – VALEMOUNT AND DISTRICT CHAMBER OF COMMERCE

Organization	
Canoe River Campground	Valley Sentinel/Chamber
Canadian Imperial Bank of Commerce (CIBC)	Valemount and Area Recreation Development Association (VARDA)
Lewis Construction	Village Councillor
Valemount Chamber/Councillor	Yellowhead Traffic Control
Valemount Swiss Bakery	

Note: - 28 attendees did not provide an organizational affiliation and as a result were not listed in the table above.

1.5.6.2 Merritt and District Chamber of Commerce

The Economic Benefits Presentation to the Merritt and District Chamber of Commerce was positive, with a number of local leaders present. Attendee questions focused on getting students into trades training, contracting structure, community investments, routing, timeline of the regulatory process, and how to support approval of the Project.

TABLE 1.5-26

MERRITT and DISTRICT CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Culture Club	November 22, 2013	35

TABLE 1.5-27

ATTENDEES/INVITEES – MERRITT AND DISTRICT CHAMBER OF COMMERCE

Organization	
Arnica Contracting	Merritt Desert Inn
Ask Wellness	Merritt Herald
Carrie Ware and Co.	Merritt Printing
Chamber Of Commerce	Millco Safety
City of Merritt	Nexus Resources
Community Futures	Nicola Valley Vacations
Core Communications/Chamber	Nicola Valley Institute of Technology (NVIT)
Country Bug Books	Property Guys
D and D Emporium	Q101
First Nations	Ramada Inn
Home Hardware	Shaw TV
LNB Construction Inc.	The Grand
Lower Nicola Band Manager	Work BC
Murray GM	Wydan Ventures
Mental Health	

Note: - Two attendees did not provide an organizational affiliation and as a result were not listed in the table above.

1.5.7 Economic Benefits Presentations - Lower Mainland/Fraser Valley Region

1.5.7.1 Vancouver Board of Trade

The session with the Vancouver Board of Trade was the kickoff of our Economic Benefits Presentations. KMC's President, Ian Anderson, provided remarks on behalf of the Project.

TABLE 1.5-28

VANCOUVER BOARD OF TRADE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Fairmont Hotel Vancouver	November 5, 2013	375

TABLE 1.5-29

ATTENDEES/INVITEES – VANCOUVER BOARD OF TRADE

Organization	
2010 Legacies NOW	Kirk and Co. Consulting Ltd.
Abacus Mining and Exploration	KPMG LLP
Acciona Infrastructure Canada Inc.	Landsea Tours Ltd.
ACEC	Lawson Lundell LLP
Action Talent Inc.	LIFT Philanthropy Partners
Airsprint	Madsen Consulting
Angus One Professional Recruitment Ltd.	Magna IV Engineering
Ashcroft Terminal	McCarthy Tetrault LLP
Ausenco Sandwell	Methanex Corporation
Barbeau, Evans and Goldstein Barristers and Solicitors - Trademark Agents	Ministry of Jobs, Tourism and Skills Training
British Columbia Common Ground Alliance	Moffatt and Nichol
British Columbia Environmental Industry Associates	Mustel Group Market Research
BC Hydro	Narrows inlet Hydro Holding Corp
British Columbia Hotel Association	NATIONAL Public Relations
British Columbia Shipping News	Observer Media Group Vancouver Observer

TABLE 1.5-29 Cont'd

Organization	
BCIT - Corporate and Industry Training Services, School of Business	Pacific Pilotage Authority (PPA) Canada
BDO Canada LLP	Pacific Salmon Foundation
BGC Engineering	Partnerships British Columbia
Bank of Montreal (BMO)	Peter Kiewit Infrastructure Co.
British Maritime Technology Group Ltd BMT WBM	Point Nexus Consulting Inc.
Boughton Law Corporation	PMV
Bramcon Project Consultants Ltd.	Praxis Point Consulting Group
British Columbia For International Prosperity Association	Premier Pacific Coach Lines
British Columbia Hotel Association	Prince Rupert Port Authority
British Consulate-General Vancouver	Prospect Point Ventures
Burgess Cawley Sullivan and Associates	Quebec Government Office in Vancouver
Business Career Centre, Sauder School of Business, UBC	REMAX Crest Realty Westside
CAPP	Rio Tinto
Canadian Natural Resource Alliance	Rogers Group Financial
Canadian Western Bank	Sage Consulting Ltd.
CAPP	Schenker of Canada Limited
Carah Worldwide consulting Inc.	Seaspan International Ltd
Cement Association of Canada	Securiguard Services Limited
Cenovus Energy Inc.	Sequoia Restaurants
Canadian Energy Pipeline Association (CEPA)	Simon Fraser University (SFU)
Cerescorp Company	SMIT Marine Canada
CGI Information Systems and Management Consultant Inc.	Spectra Energy
Chamber of Shipping of British Columbia	Stantec
Chevron Canada Limited	Starfish Channel Builders
Chris Freimond Public Relations Inc.	Suncor Energy
Corporate Consulting	Surrey Board of Trade
CrossPoint Strategies	Tech Mahindra Canada
Dentons Canada LLP	Teck Resources Limited
Duke Public Relations	Teekay Shipping
e=mc ² Events	TELUS Corporation
Earncliffe Strategy Group British Columbia	Tervita
Edelman	The British Columbia Coast Pilots Ltd.
FleishmanHillard	The Conference Board of Canada
FortisBC Inc.	The Donnelly Group
Fraser River Pile and Dredge GP Inc	The Vancouver Board of Trade
Freeform Communications Inc.	TMS Gateway
French Economic Development Group/SDECB	Total Staffing Solutions
French Economic Development Group/SDECB	Trans Mountain Pipeline
General Cable Corp	Transport Canada - Programs
Genome British Columbia	Triovest
Global Container Terminals	Truckers Loggers Assoc.
Global Public Affairs	True North Public Affairs
Globe and Mail	TSX Venture Exchange Inc.
Gulf and Fraser Credit Union	University of British Columbia
Hatch Mott MacDonald	Vancouver Airport Authority
Hay Group	Vancouver Aquarium
Hemmera Inc.	Vancouver Pile Driving
Hewlett-Packard Canada Ltd.	VanWest Group Consulting
Image Group Inc.	WBC Wharf Operators Association
Insurance Bureau of Canada	Western Stevedoring
Intellex Legal Project Management Inc.	Yellowhead Mining Inc
Jubilee Rose Enterprises Ltd.	YWCA Metro Vancouver
Justice Institute of British Columbia	
Kerr Wood Leidal Associates Ltd.	

Note: - 30 attendees did not provide an organizational affiliation and as a result were not listed in the table above.

1.5.7.2 *Surrey Board of Trade*

The Economic Benefits Presentation to the Surrey Board of Trade featured more detailed information on local impacts and opportunities. It followed a presentation on environmental impacts and mitigation by Ian Anderson, to the Surrey Board of Trade which provided them the opportunity to do their due diligence before issuing a supportive policy statement. Questions at the Economic Benefits Presentation focused on marine response, safety, land acquisition, right-of-way and routing, employment opportunities, Aboriginal relations, and engaging with Mayor and Council.

TABLE 1.5-30

SURREY BOARD OF TRADE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Eaglequest Golf Course	November 6, 2013	63

TABLE 1.5-31

ATTENDEES/INVITEES – SURREY BOARD OF TRADE

Organization	
ABC Recycling	Kwantlen Polytechnic University
Advance Wire Products	Ledcor/Fraser Transportation Group
Arktos Developments Ltd.	Levelton Consultants
B and B Contracting Group DBA BandB Heavy Civil Construction	Metro Testing Laboratories -Surrey
BDO Canada	MNP –Surrey
Briarhall Consulting Inc.	Murray Latta Progressive Machine Inc.
Canadian National Railway Company (CN)	Northwest Waste Solutions Inc.
CH2M HILL	Now Community Newspapers Ltd.
City of Surrey	Office of MLA Port Moody - Coquitlam
City of Surrey - Engineering	Opus Dayton Knight Consultants Ltd.
Cummins Western Canada	Pacific Surrey - right-of-way mowing and brushing
DMCL Chartered Accountants LLP	PW Trenches Construction Inc.
Downtown Surrey Business Improvement Association	Rotary Club
EECOL Electric	Senaca Canada Inc.
Finning Caterpillar	SFU
MP, Fleetwood Port Kells	Sonitrol Western Canada
Focus Corporation	Sun Consulting Engineers Ltd
Fraser River Pile and Dredge (GP) Inc.	Surrey – Tynehead
Fraser Surrey Docks, LP	Surrey Board of Trade
G3 Consulting	Total Safety Services Inc.
Gage-Babcock and Associates Ltd.	Triton Environmental Consultants Ltd
Hamilton Duncan Armstrong and Stewart	Wellons Canada Corp
Iron Mountain Welding	Williams and White Group of Companies
JRE Promotional Products	

1.5.7.1 *Tri-Cities Chamber of Commerce*

The Economic Benefits Presentation to the Tri-Cities Chamber of Commerce was positive with only a few questions. The tone in the room was supportive, both during the presentation and in one-on-one conversations. During questions, Ian Anderson addressed Trans Mountain’s support for a strengthened marine spill response regime.

TABLE 1.5-32

TRI-CITIES CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Executive Plaza Hotel and Conference Centre	November 14, 2013	115

TABLE 1.5-33

ATTENDEES/INVITEES – TRI-CITIES CHAMBER OF COMMERCE

Organization	
Alliance Printing	PlaceWeave Community News Network
Ann Soucie - Sutton Group 1st West Realty	PoCo Inn and Suites Hotel
Austin Heights BIA	PollyK Consulting
Avia Employment Services	Port Moody - Coquitlam
Bart Aldrich Notary Co.	Profit Mastery
Beedie Development Group	Rapid Time Networks
Belkorp Environmental Services Inc.	Raybern Erectors
Best Western Plus	RBC Business Banking
Boulevard Casino	Roger Gurr and Associates
Canstar Restorations	Rotary Club of Coquitlam
City of Coquitlam	Rotary Club of Coquitlam Sunrise/JIBC
CoBees Enterprise Ltd.	Royal LePage Coronation West - Barrie Seaton
Crest Impressions Inc.	Sandpiper Signs and Decals
Crossroads Hospice Society	SAP Canada
Darla Furlani Photography	Scoliabank Shaunessy
Douglas College Faculty of Commerce and Business	Seaforth Environmental
EPR Coquitlam	Coquitlam-Maillardville
Express Employment Professionals	SHARE Family and Community Services Society
Focused Networking	Snapd Coquitlam
FortisBC	Sonia's Hair Studio
Great Canadian Gaming Corporation	Stonebridge Operations
Gregory and Associates	Sultran
Imperial Oil	TE Nikiforuk CGA
Independent Power Producers Association of British Columbia	The Tri-City News
Investors Group Financial Services Inc.	Thompson Studios
J. Percy and Company Ltd.	Three Sixty Financial Group
Kemp Harvey Kok De Roca-Chan Inc. CGAs	TMSI Telephony Managed Solutions Inc.
Lawyers West LLP	Translink, Tri-Cities Chamber
Mardon Insurance Brokers (Coquitlam) Ltd.	Tri-Cities Chamber
Medray Imaging	Tri-M Aviation Inc.
Minuteman Press Tri-Cities	Troico Home Solutions Inc.
My Education Room (K-12 Education)	TW Hawes Inc. CGA
New View Society	Typlan Consulting Ltd.
NOW Newspaper	UBS Industries
Pacific Coast Terminals Co. Ltd.	Veracis Wellness
Pasta Polo	Village of Belcarra
Peter Kiewit Infrastructure Co.	Westminster Savings - Shaughnessy
Phoenix Truck and Crane	Westminster Savings - Sunwood
Richard R.S. Rainey Law Corp	

Note: - Two attendees did not provide an organizational affiliation and as a result were not listed in the table above.

1.5.7.2 Abbotsford Chamber of Commerce

The Economic Benefits Presentation to the Abbotsford Chamber of Commerce was positive. Trans Mountain's approach to engagement and communications was complimented by numerous attendees both in person and during questions. Topics included how the business community could help TMEP prepare for a brief influx of economic activity, how pipeline technology has evolved, how to offset our environmental footprint, routing, and the structure of municipal taxes and landowner compensation.

TABLE 1.5-34

ABBOTSFORD CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Sandman Hotel and Suites	November 15, 2013	49

TABLE 1.5-35

ATTENDEES/INVITEES - ABBOTSFORD CHAMBER OF COMMERCE

Organization	
Abbotsford - Mission	
Abbotsford - South	Freshwater Fisheries
Abbotsford - West	KPMG
Abbotsford Airport	Lelton Consultants
Abbotsford Chamber of Commerce	Madrone Environmental Services Ltd
Abbotsford Downtown Business Improvement Assoc	Matsqui Prairie DDI Committee
Abbotsford Hospice	McDonald and Ross
Abbotsford Rotary Club (lunch)	Minister of International Trade
Agricultural Land Commission ALC	MSA Computer Ltd.
Aldergrove Credit Union	MSA Museum Society
Abbotsford Soil Conservation Association (ASCA)	Nursery Grower and University of the Fraser Valley Chair of Agriculture)
Axis Land Surveying Ltd.	Peterbilt Pacific Ltd.
British Columbia Ag Council	Prospera Credit Union
British Columbia Landscape Nursery Assoc	FVRD
Beautiworld Development Corp. and Blauson Homes Inc.	Giesbrecht Goodrich and Co
Best Western Plus	Indo Canadian Business Assoc
Blauson Homes Inc.	Kal Tire
BMO - Agriculture Services	Punjabi Patrika
Bobcat	RBC Dominion Securities
Bobcat Country Equipment LP	Royal Bank of Canada
City of Abbotsford	Sandman Hotel and Suites Abbotsford
Clayburn Refractors	Scotiabank
Economic Development	St. John Ambulance
Entertainment and Sports Centre	Target Products Ltd
Farm Credit Union	TD Bank British Columbia Agriculture Services
Former MLA	The Abbotsford News
Fraser Valley Child Development Centre Foundation	The Reach Gallery Museum
Fraser Valley Fire Protection (Hydrant Services)	University of The Fraser Valley

Note: - Eight attendees did not provide an organizational affiliation and as a result were not listed in the table above.

1.5.7.3 Greater Langley Chamber of Commerce

The Economic Benefits Presentation to the Greater Langley Chamber of Commerce was generally positive, however a small contingent raised questions about the impact of the proposed pipeline on real estate values.

TABLE 1.5-36

GREATER LANGLEY CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Cascades Casino Resort Ballroom	November 19, 2013	125

TABLE 1.5-37

ATTENDEES/INVITEES – GREATER LANGLEY CHAMBER OF COMMERCE

Organization	
203 Business Centre	Langley Pos-Abilities Society
A.W. Gray and Associates Inc	Langley Sunrise Rotary
Alikova and Associates Inc.	Langley Times
Applewood Kia	Leading Edge Branded Apparel and Promotional Products
Association of Professional Engineers and Geoscientists British Columbia (APEGBC)	Leed Advisors Inc.
Ban Chok Dee Thai Cuisine	Magellan Law Group LLP
British Columbia Trucking Association	Manulife Securities Inc.
BDO Canada LLP	Maple Leaf Disposal Ltd
Big Brothers Big Sisters of Langley	Midnight Express Printing
Bonetti Meats (2010) Ltd.	Mr Locksmith
BRITCO	Otter Co-op
Campbell Burton and McMullan	Playtime Gaming
Cascades Casino Resort	Pottinger Gaherty Environmental Consultants
Christian Labour Association of Canada (CLAC)	Precision Auto Service Ltd.
Cloverdale Disposal	Prospera Credit Union
Corix Utilities Inc.	Redwood Plastics Corp
Corix Water Systems Inc.	Rheanew Business Solutions Inc.
Earls Kitchen and Bar Langley	Robert Half
Fort Langley - Aldergrove	Rodney Blackwell Engineering Ltd.
Gary Gallant, with Expedia CruiseShipCenters	Sandhill Development Ltd
Giesbrecht Goodrich and Co.	Sandman Hotel Group
Gordon Zacher	Sandman Signature Hotel and Suites Langley
Greater Langley Chamber of Commerce	Sequeira Partners Inc.
Genesis Restorations Ltd.	Shoppers Drug Mart #2113
Greenhouse PhotoGraphix Inc.	Social Media Minder
Horizon Landscape Contractors Inc.	Source Office Furnishings
Horse Council of British Columbia	Sparkling Clean
Insurance Corporation of British Columbia (ICBC)	Statewood Properties Ltd.
Irwin Air Ltd	Sudden Impact Clothing Co.
J.D. Farms Specialty Turkey Store	Sun Life Financial
John Manuel Financial Services CPCA	Sunshine Autobody Ltd.
Johnston Meier Insurance Brokers Inc.	Tethered Computer Service Inc.
Keepsake Portraits	Thomson Technology
Kore Ventures Inc.	Tidy Tanks Ltd
KPMG MSLP	Tomlinson Alliance Group Financial (TAG)
My North Langley	Township of Langley
New West Gypsum Recycling	United Rentals
NitroLube Canada Inc.	Valley Evergreen Pharmacy Ltd.
Nottus Marketing	Valley First Aid Ltd.
On Line Collision Ltd.	Valley Womens Network
Kwantlen Polytechnic University	Well Seasoned - a gourmet food store
Langley 2014 British Columbia Seniors Games Society	Yearwood and Company Lawyers
Langley Community Support Groups Society	MP Mark Warawa's Constituency Office

TABLE 1.5-37 Cont'd

Organization	
Langley Hospice Society	

Note: - Nine attendees did not provide an organizational affiliation and as a result are not listed in the table above.

1.5.7.4 Burnaby Board of Trade

The Economic Benefits Presentation to the Burnaby Board of Trade had a positive tone and there were many supporters in the room.

TABLE 1.5-38

BURNABY BOARD OF TRADE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Delta Burnaby Hotel and Conference Centre	November 27, 2103	100

TABLE 1.5-39

ATTENDEES/INVITEES – BURNABY BOARD OF TRADE

Organization	
Association of Consulting Engineering Companies (ACEC)	IMAS Printing
AECOM	IMS Marine Surveyors Ltd
AGAT Laboratories	Iron Mountain Document Management
Air Liquide Canada Inc.	KMK Law Corporation
Allaire Development	Kwantlen Polytechnic University
Andrew Scott	Marine Technical Services
Association of Professional Engineers and Geoscientists (APEG)	Matthew Mobilio
Associated Engineering (B.C.) Ltd	McRae's Septic Tank Services
Autopro Automation Ltd	MetroVancouver
American Society of Mechanical Engineers (BCASME)	MLA, Burnaby North
British Columbia Liberals	Morrison Hershfield
British Columbia OneCall	Mott Electric
BCIT	Netlink Computer Inc.
BCIT Accounting	Noram
Black Gold	North Vancouver Chamber of Commerce
Brent Moyer	Pacific Parklands Foundation
BRITCO	Pacific Rim Consultants (Engineering)
Burnaby Firefighters Association Local 323	Pacific Salmon Foundation
Burnaby Hospital Foundation	Pacific Western Brewing
Burnaby North Road Business Improvement Association	PMV
Calvin Chou	RCI Container World
Canadian Freightways	Ricoh Canada Inc.
CAPP	SB Communications and Public Affairs Ltd
Certified General Accountants	Seaspan
CH2MHill	Securiguard
Charlie's Chocolate Factory	Sejong Counseling and Communication Services
Chevron	SFU Beedie School of Business
City of Burnaby	Shell
Clearly Accounting	SFU
Command Enterprises	St. John Ambulance, Burnaby
Coverall (Corporate Cleaning Company)	Stantec Consulting Ltd.
Delta Burnaby Hotel and Conference Centre	Stoney Creek Community Garden
DK Wong and Associates Inc.	Superior Propane

TABLE 1.5-39 Cont'd

Organization	
Eagle Mountain Bar and Grill at Burnaby Mountain Golf Course	SW Audio Visual Event Services
Eagle Creek StreamKeepers	Telus
Edmonds Business and Community Association	The Heights
Burnaby Residents Opposed to KMC Expansion (BROKE)	The Regeneration Group/Vancouver Lawn Tennis Club
ENVIROW Consulting Inc.	The Wall Street Journal
Esso	Total Procurement Solutions
FortisBC Energy Inc	Tourism Burnaby
Fraser River Discovery Centre	Trans Link
GlooStudios Inc.	TUV NORD Group
GREENLANE BIOGAS	UniverCity on Burnaby Mountain
Harmonic Functions Inc.	Vancouver Hino Truck Sales - A Division of Jim Pattison Dealerships GP
Health Canada	Western Canada Marine Response Corporation (WCMRC)
Hilton Vancouver Metrotown Hotel	Williams and White Machine Inc.
IBM Canada Ltd.	YFM Your Finances Matter
Independent Contractors and Businesses Association (ICBA)	Ziggys

Note: - Two attendees did not provide an organizational affiliation and as a result are not listed in the table above.

1.5.7.5 Chilliwack Chamber of Commerce

The Economic Benefits Presentation to the Chilliwack Chamber of Commerce presentation was positive. There were few questions, but topics included pipeline routing near schools, oil price spreads, and transportation costs.

TABLE 1.5-40

CHILLIWACK CHAMBER OF COMMERCE – ECONOMIC BENEFITS PRESENTATION

Location	Date	Number of Attendees
Coast Chilliwack Hotel	November 28, 2013	52

TABLE 1.5-41

ATTENDEES/INVITEES – CHILLIWACK CHAMBER OF COMMERCE

Organization	
89.5 The Drive	Henderson's Funeral Homes and Crematorium
A and G Fencing	HSBC Bank
Aldergrove Credit Union	HUB International Barton Insurance Brokers
Auburn Residences	Knight Centre Holdings
Best Western Rainbow Country Inn	MLA, Chilliwack - Fraser Canyon
Chilliwack – Hope	Odlum Brown Limited
Chilliwack Downtown Business Improvement Association	Prospera Credit Union
Chilliwack Economic Partners Corporation	Run of River Power
Chilliwack Fish and Game Protective Association	Sardis Park VQA British Columbia Wine Store
Chilliwack Husky Travel Centre	Save The Planet Composting
Chilliwack Probus Club	ScotiaBank
City of Chilliwack	Scott Resource Services Inc.
Coast Hotel	Spectra
Comfort Inn	Sto:lo Aboriginal Skills and Employment Training
Cynthia Sugar Communications	Travel Lodge
District of Mission	Tri-R Development Group Inc.

TABLE 1.5-41 Cont'd

Organization	
Envision Financial	Ts'elxwéyeqw Tribe
FVRD	Wagner Appliances Ltd.
Greystone Promotional Products	

Social Media

A video, “Economic Benefits for the TMEP”, was developed to support Economic Benefits Presentations. Table 1.5-42 provides information on the video, the number of views, and estimated number of minutes watched for the period, November 5 to December 10, 2013. Figure 1.5-1 shows Social Media attributed to the Economic Benefits Presentation.

TABLE 1.5-42

TRANS MOUNTAIN YOUTUBE VIDEOS

Video	Length of Video	Views	Estimated Minutes Watched	Average View Duration
Economic Benefits for TMEP	3:03	936	1926	1:57

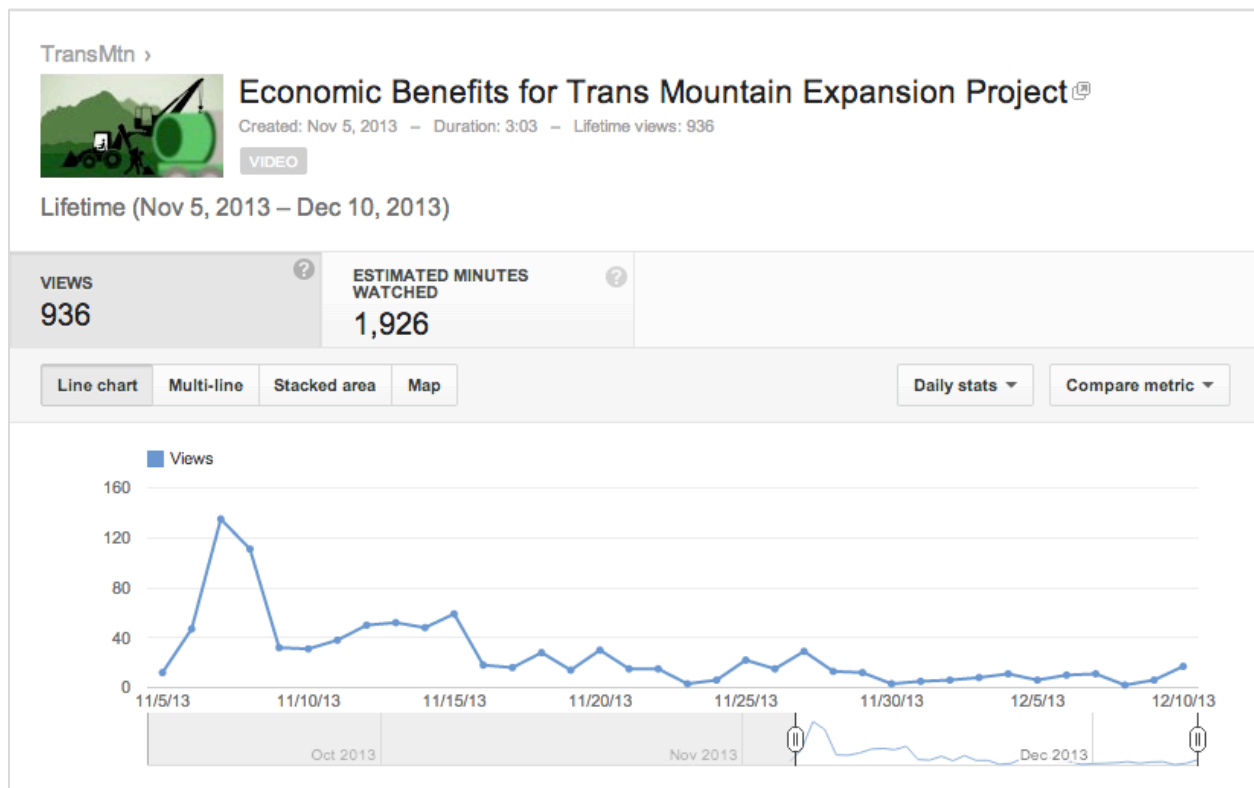


Figure 1.5-1 Social Media attributed to the Economic Benefits Presentation

Online Activity

Figure 1.5-2 shows online activity from November 1 to December 10, 2013. This is attributed to the Economic Benefits Presentations.

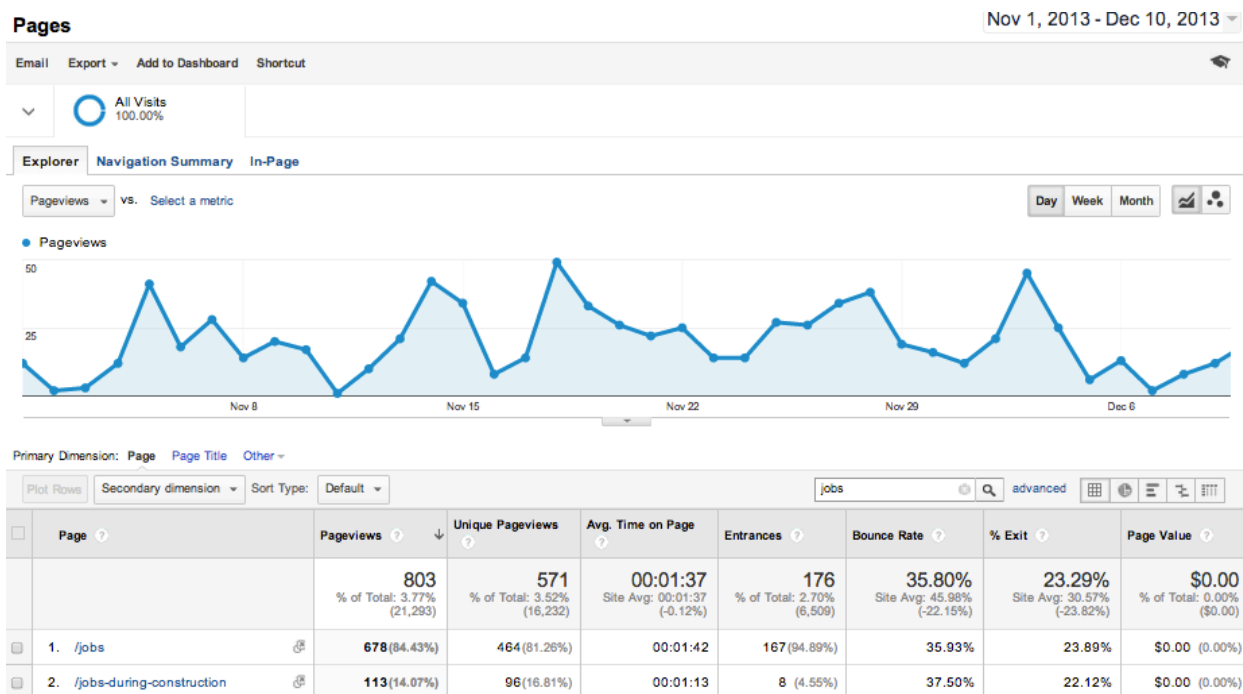


Figure 1.5-2 Online Activity during the Economic Benefits Presentation

1.5.8 Government Relations

Engagement to facilitate effective participation in the assessment process continued in Phase 4 with local governments, the provincial governments of Alberta and British Columbia and the Federal government. Trans Mountain held more than 250 government meetings to provide an update on the Project and respond to questions from attendees on a wide range of topics including:

- Routing;
- Aboriginal and stakeholder engagement;
- Marine ESA;
- TERMPOL/marine risk studies; and
- Economic benefit.

Trans Mountain also met with the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) Review Committee on November 21, 2013 to provide a briefing on the work done leading up to the TERMPOL filing; including engagement and communications activities.

1.6 Summary of Outcomes

During the period of August 1 to December 31, 2013, Trans Mountain hosted 16 Economic Benefits presentations in conjunction with Chambers of Commerce; three Emergency Management Stakeholder Workshops, with more planned in 2014; continued conversations with stakeholders on the reactivation sections and conducted a tour of the Lac du Bois Grasslands area. Trans Mountain also held meetings with environmental groups regarding potential project impacts to freshwater and marine ecosystems.

Feedback on the Project has been received through the following:

- comments and questions posted on the Project website's online engagement portal;

- inquiries to the Project phone line and email address;
- Economic Benefits Presentation;
- Emergency Management Stakeholder Workshops;
- social media; and
- stakeholder meetings.

Feedback received from the sources listed above, and not previously addressed in the Facilities Application, is summarized by Region in Table 1.6-1 to Table 1.6-6. Feedback specific to the Website Forum is summarized in Table 1.6.7.

1.6.1 Key Topics of Interest or Concern - ALBERTA (Edmonton to Jasper)

Figure 1.6-1 displays the topics of interest or concern in Alberta since the filing of the Application. This includes all comments from all engagement activities during the period August 1 to December 31, 2013 including, the Economic Benefits Presentation, the Emergency Response Planning Workshops, social media, stakeholder meetings, inquiries to the Project phone line and email address and online engagement.

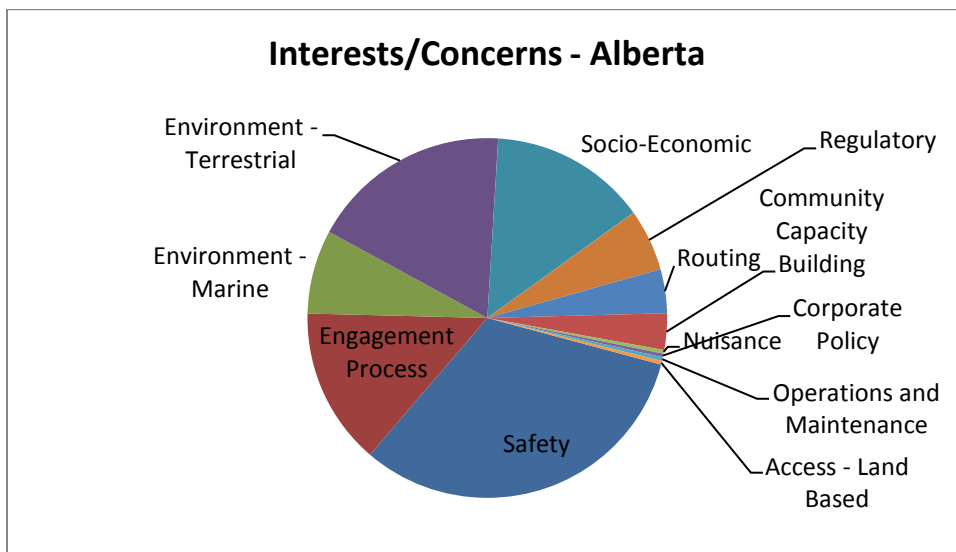


Figure 1.6-1 Key Topics of Interest or Concern in Alberta

Table 1.6-1 provides information on the key topics of interest for Alberta and Trans Mountain's response to the interest or concern.

TABLE 1.6-1

INTERESTS OR CONCERNS – Alberta

Key Topic	Interest or Concern	Summary Response	Location in Application
Corporate Policy			
	Oil Sands impact not being a part of the Trans Mountain Pipeline Review. How will this impact Hinton if people know that oil sands products are flowing through their town via an expanded pipeline?	<p>For upstream or downstream impacts outside of Trans Mountain's jurisdiction or control, Trans Mountain is acting as a catalyst to influence the industry to help address issues upstream and downstream from the pipeline. Examples include: climate change; oil sands development; shipping practices; emergency spill response; and protecting the ecological integrity of British Columbia and Alberta.</p> <p>Trans Mountain has had discussions with the stakeholders about the proposed pipeline route and what it would mean for the community in Hinton. The reactivated pipeline segments from Hinton to Hargreaves and Darfield to Black Pines generally parallel the existing TMPL right-of-way.</p> <p>Trans Mountain continues to gather feedback and input about the study corridor identified in Alberta and looks forward to continuing the conversation throughout the life of the Project. Upstream issues are not part of the list of topics that the NEB has put out.</p>	<p>Volume 4A - Project Design and Execution - Engineering</p> <p>Volume 5B: ESA – Socio-Economic Section 2.0</p>
Operations and Maintenance			
	What does Trans Mountain mean by "shutdown"? How does pressure impact the ability to shut down the line - is there still potential for a spill?	<p>All pump stations and terminals in the expanded TMPL system will include emergency shutdown (ESD) systems that will operate automatically in some abnormal operating conditions and can also be activated remotely from the Pipeline Control Centre (PCC) or locally by field operations.</p> <p>Trans Mountain would continue to run the downstream pumps, moving the product away from the site.</p>	Volume 4C - Project Design and Execution - Operations and Maintenance Section 7.0
	Are all the tanks in Edson decommissioned? Will you put new tanks in, or use the space for anything else?	There is one tank in service as a relief tank in Edson. All the remaining tanks are either out of service or have been decommissioned. Trans Mountain currently has no plans for additional tanks in Edson or the use of the space the tanks now occupy. The new pump station will be sited elsewhere on the property.	
Construction			
	Will the existing Westridge dock need to be replaced?	At this time, it is anticipated that the existing dock would be removed from service. Construction of a new dock complex with a total of three Aframax-capable berths, as well as a utility dock (for tugs, boom deployment vessels, and emergency response vessels and equipment) is planned for completion by the end of 2017.	Volume 6D – Westridge Marine Terminal Environmental Protection Plan Volume 4A - Project Design and Execution - Engineering
	Is Trans Mountain planning on automating all the valves?	On the new line, all valves will be automated. The new line through Jasper that went in during the Anchor Loop project is also automated. For the existing line, valves will be automated on a priority basis including valves near river crossings and sensitive areas. For Jasper National Park, engineering is coordinating with Parks Canada personnel.	Volume 4A - Project Design and Execution - Engineering
Regulatory			
	How does Trans Mountain deal with jurisdictional issues in response planning?	The Province of British Columbia employs ICS for provincial emergency programs, and the Province of Alberta is currently developing similar standards as is the Canadian Coast Guard. The ICS is a management system designed to enable effective, efficient incident management through integration of facilities, equipment, personnel, procedures and communications within a common organizational structure. The NEB uses ICS for emergency response management through participation in Unified Command, as well as integration of staff within the response structure.	Volume 7 – Risk Assessments and Management of Pipeline and Facility Spills Section 4.3.1

TABLE 1.6-1 Cont'd

Key Topic	Interest or Concern	Summary Response	Location in Application
Regulatory			
	<p>Will the Project be assessed under CEAA? What are the implications if it is not, generally speaking, not just related to emergency response? Consequences are not just environmental. What about commercial impacts such as lost tourism and income for tour guides and outfitters?</p>	<p>The Project requires an environmental assessment under the NEB Act. In addition, as the proposed pipeline exceeds 40 km in length and will be regulated by the Board, the Project is a "designated project" under the Regulations Designating Physical Activities (October 2013) and is thus subject to the Canadian Environmental Assessment Act, 2012 (CEA Act, 2012).</p>	n/a
Safety			
	<p>How prepared is Trans Mountain to minimize impacts and does Trans Mountain have the necessary resources (response personnel, expertise and commitment)? Does Trans Mountain have a plan B, C, D in the event of compounding disasters? Having the Trans Mountain person on the phone will dictate how much confidence we have, but any chances in advance of an incident to meet the people and understand your preparedness would be helpful.</p>	<p>It is our intention to minimize impacts to residences and communities as much as possible and our Project will meet all requirements of the NEB, Canadian Standards Association, along with all applicable regulatory authorities.</p> <p>Trans Mountain uses the Incident Command System (ICS) to manage incidents. ICS outlines clear roles and responsibilities with respect to emergency response and includes Unified Command for coordination with Federal, Provincial, Municipal and Aboriginal agencies. Trans Mountain works closely with local emergency responders and regularly practice table top and deployment exercises.</p> <p>Teams prepare for worst-case scenarios on a regular basis using the Trans Mountain Emergency Response Plan (ERP) and the ICS.</p>	<p>Volume 7 – Risk Assessments and Management of Pipeline and Facility Spills</p>
	<p>Involvement in pre-planning, design, planning and construction. We will need that in order to be prepared during construction. Strategy for communication and preparedness pre-construction, during construction and during operation. We need to be prepared for potential issues such as civil unrest and mass evacuation.</p>	<p>Trans Mountain's emergency preparedness and response measures are designed to ensure timely and appropriate responses to emergencies in compliance with applicable federal, provincial, and municipal legislation, and recognized industry standards of practice.</p> <p>To comply with the systematic Safety Management Program approach as required by Section 47 of the NEB OPR, an ERP will be developed and implemented for TMEP construction. The TMEP ERP for construction will be separate from, and complementary to, the Trans Mountain operations ERP and will lay out the guidelines for the development of the prime contractors' detailed site-specific ERPs. The TMEP ERP for construction will address legislative requirements and be based on recognized industry standards of practice.</p> <p>The site-specific ERPs will address potential construction emergency situations requiring response by TMEP construction resources (as supplied by the prime contractors), Trans Mountain operations resources, or external resources, in keeping with the philosophy of using the most immediately available resources. It is expected that the site-specific ERPs will address personal injury or health incidents, environmental damage, fires, floods, earthquakes, rock slides, avalanches, sabotage, trespass, and other emergency situations that may arise in the context of construction. The site-specific ERPs will consider the contractors' risk assessments (Section 5.1.2 of Volume 4B) completed as part of the Hazard Prevention Program required by Part XIX, Section 19.1 of the Canada Labour Code. The site-specific ERPs will identify emergency response roles and responsibilities and the detailed procedures, including notifications, to be followed in the event of various types of emergencies.</p>	<p>Volume 4B - Project Design and Execution – Construction Section 5.4</p>

TABLE 1.6-1 Cont'd

Key Topic	Interest or Concern	Summary Response	Location in Application
Safety (cont'd)			
	<p>Willful vandalism, terrorism and eco-terrorism, social license and limiting cumulative effects are both important in preventing eco-terrorism. Does Trans Mountain have geographic-specific response plans that would be useful?</p>	<p>The current ERP for TMPL provides a generic response to a spill for any location along the pipeline, whereas the ERPs for Terminals/Tank Farms and for Westridge Marine Terminal are location-specific. All plans have a common structure and format and address key elements. These include:</p> <ul style="list-style-type: none"> • responder health and safety; • internal and external notifications; • spill/site assessments; • spill containment and recovery; • protection of sensitive areas; and • multiple hazards. <p>Each of the plans also includes detailed information on the ICS, includes the Environmental Health and Safety Policy, regulatory background, and documents the approach to training and exercises. The plans provide comprehensive information and are a ready resource to a safe, consistent, and timely response to an emergency or spill. All ERPs also address general requirements for non-spill incidents such as security, explosions, and fires, and include a detailed air monitoring plan that is applied in the event of a spill.</p>	<p>Volume 7 – Risk Assessments and Management of Pipeline and Facility Spills</p>
	<p>Does Trans Mountain understand the emergency training and resource needs of all the municipalities that the pipeline crosses? There is huge variation in the types of resources available and the types of training that local fire departments have – particularly between paid and volunteer departments.</p>	<p>In addition to the formal review of roles and contact information, Trans Mountain invites outside responding agencies to participate in training, deployment and table-top exercises to determine the working relationships of the organizations. During these events, further refinements to ERPs occur due to changes in real world conditions and processes. Trans Mountain also participates in external agency trainings and table-top exercises to further develop the working relationships with local authorities and integration of the emergency operations centres.</p>	<p>Volume 7 – Risk Assessments and Management of Pipeline and Facility Spills</p>
	<p>In Kalamazoo, benzene levels kept workers from fixing the line. Are Trans Mountain's people trained for that?</p>	<p>One of the objectives of a preliminary qualitative human health risk assessment (QHHRA) was to provide information to Trans Mountain, the Project team and spill response authorities on the nature, extent and likelihood of occurrence of potential human health effects that could result from oil spills under the simulated spill scenarios in order to help inform emergency response preparedness and planning and other programs aimed at the protection of public health and safety.</p> <p>Trans Mountain is conducting plume modeling to determine what personal protection equipment (PPE) is necessary, and when it would be safe to approach an incident site.</p>	<p>Volume 7 – Risk Assessments and Management of Pipeline and Facility Spills</p>
	<p>Pre-incident and during-incident communications – does Trans Mountain have an all-encompassing ERP that includes the terminals and the pipeline, and all the right people. ICS is important for planning at the time of the incident, but it is also important that everyone who might be involved have the information in advance.</p>	<p>Trans Mountain's Incident Command System (ICS) is designed to enable effective, efficient incident management through integration of facilities, equipment, personnel, procedures and communications within a common organizational structure. ICS provides a standard format, with the purpose of enabling incident managers to identify the key concerns associated with the incident—often under urgent conditions—without sacrificing attention to any component of the response. It represents organizational "best practices" and, as an element of the Command and Management Component of NIIMS, has become the standard for emergency management.</p> <p>The ICS was also designed to be flexible in application to size of incident, to enable rapid integration of agencies and personnel into a common management structure, and is intended to minimize duplication of effort.</p>	<p>Volume 7 – Risk Assessments and Management of Pipeline and Facility Spills</p>

TABLE 1.6-1 Cont'd

Key Topic	Interest or Concern	Summary Response	Location in Application
Safety (cont'd)			
	Trans Mountain has money to spend on remediation and protection, but what about responders? Is there training available for local responders? We are interested in partnerships with Trans Mountain for ongoing training and for detection equipment testing and upkeep.	TMEP's Community Awareness and Emergency Response (CAER) program has focused on large centres, particularly in locations where there are tanks. Upon installation of the second line, TMEP will consider providing its CAER program to senior departmental people in every community, who can then train the rest of their departments, and new members. If the number of trainers is insufficient in a particular department, TMEP will consider training everyone. It is important that all local responders are aware that they should not respond if they believe it is unsafe to do so.	Volume 5B – ESA Socio-Economic Assessment Section 5.5.6.1 and 7.2.5.3
Pipeline Integrity	Oil transport via rail	In developing the Project, Trans Mountain did not consider fundamentally different alternatives such as rail transportation rather than pipelines, or pipeline concepts to different destinations. The RH-001-2012 proceeding demonstrated the need and benefits of expanding the existing TMPL. Pipelines are proven to be the safest and most efficient method to move large quantities of petroleum products over great distances on land. Trans Mountain takes pipeline safety very seriously and use a multi-layered approach to pipeline safety that encompasses integrity management, damage prevention and emergency response programs. For these reasons, no effort was made to consider the economic feasibility or environmental effects of these or other conceptual alternatives.	Volume 2 – Project Overview, Economics and General Information Section 4.1 Volume 4C - Project Design and Execution - Operations and Maintenance Section 8.0
	Is pipeline integrity planning for the expansion project separate from what is already in place, or will it encompass both lines?	Pipeline integrity will cover both lines. The systems and concepts will be the same as in the existing plan, but the frequency and types of maintenance will be different. Practices are largely the same, as pipeline technology has not changed a great deal. One of the key integrity tests is hydrostatic testing of sections of the line.	Volume 4C – Project Design and Execution - Operations and Maintenance
	Will it be easier to project the pipeline conditions and look for anomalies in the actual conditions when products are split so that lighter products are in the existing line and heavier ones are in the new line? Will you always know which product batch is where in the line?	The TMPL Line 1 and Line 2 pipelines will have distinct batches of crude oils or refined products moving through them at any given time. As is the case on the existing TMPL system, comprehensive integrated procedures will ensure that batches are reliably injected and Trans Mountain Pipeline (ULC) delivered in accordance with pumping instructions issued to the CCOs by the Shipper Services Department. Trans Mountain has three decades of experience in batched pipeline operations and will be able to continue to conduct the batching operations on the expanded TMPL system safely and efficiently.	Volume 4C – Design and Execution - Operations and Maintenance Section 7.1.8

1.6.2 Key Topics of Interest or Concern – British Columbia Interior (Valemount to Hope)

Figure 1.6-2 displays the key topics of interest or concern in BC Interior. This includes all comments from all engagement activities including public information sessions, community workshops, stakeholder meetings, presentations and online engagement.

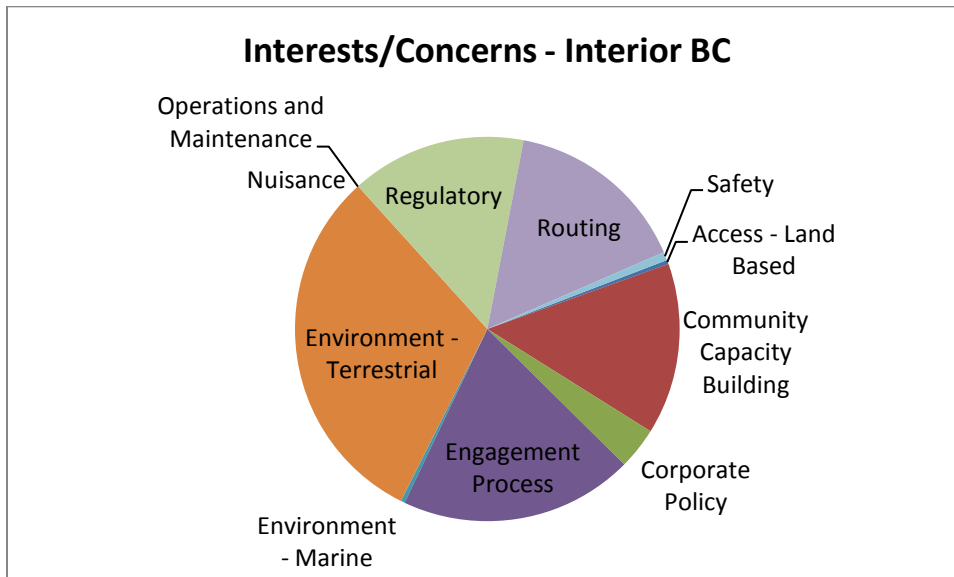


Figure 1.6-2 Key Issues or Concerns in BC Interior

Table 1.6-2 provides information on the key topics of interest for BC Interior and Trans Mountain's response to the interest or concern.

TABLE 1.6-2

INTEREST OR CONCERN – BC INTERIOR

Key Topic	Interest or Concern	Summary Response	Location in Facilities Application
Environment - Terrestrial			
	Who would spray the weeds that have been spreading along landowner property and ROW in Merritt?	Vegetation management is an integral part of Trans Mountain's comprehensive approach to pipeline safety. It allows Trans Mountain to protect the pipeline, ensure public safety, and provide access for maintenance, inspections, and emergency response. Vegetation management is a planned process which Trans Mountain conducts regularly and has done before in other areas along the pipeline route. Trans Mountain will advise the landowner of Trans Mountain's weed management policy and the Project's EPP. Mitigation measures outlined in the Pipeline EPP of Volume 6B, and Table 7.2.4-2, are proven and effective industry standard measures to reduce the introduction and spread of weeds. These measures will be implemented during both construction and maintenance activities.	Volume 3C - Landowner Relations Table 1.4.1 Volume 5B: ESA - Socio-Economic Section 7.0
	Are there valves on the existing line on each side of the Coquihalla river crossing near Hope, British Columbia?	There are a number of block valves between Kingsvale and Hope at major creek and highway crossings on TMPL. The TMPL crosses the Coquihalla a number of times in this section. At the Coquihalla River crossing closest to Hope there is an upstream block valve that can be controlled manually. For more information on leak detection and the use of valves, go to http://www.transmountain.com/consequence-reduction-measures . Final valve site locations will be established during the detailed engineering and design phase.	Volume 4A - Project Design and Execution - Engineering
	What is the thickness of the pipe for the existing line at the Coquihalla river crossing near Hope, British Columbia?	The pipe wall thickness of the existing Coquihalla River crossing in Hope, BC is 0.5 inches.	
Routing			
	Any impact on the airport (Valemount)?	Land use activities are addressed under HORU in Sections 5.4 and 7.2.4. The Project will cross areas zoned or otherwise noted for a range of land uses or protection. Most plans in British Columbia do not explicitly discuss the coordination of pipeline activity in the context of other uses. It is anticipated that Trans Mountain will continue to engage with municipal representatives to ensure the principles and vision of long-term land development in the areas through which the Project passes are respected.	Volume 5B – ESA Socio-Economic Assessment Section 5.0: Socio-Economic Setting for the Pipeline Volume 5D – Socio-Economic Technical Report

TABLE 1.6-2 Cont'd

Key Topic	Interest or Concern	Summary Response	Location in Facilities Application
Socio Economic			
	Geothermal power - I understand the Project will require upgrading to power, and we have potential for geothermal in the Canoe Reach that Borealis Geopower has been working on. Might Trans Mountain consider investing in that project to help supply power for the pipeline as well as supporting Valemount?	The Project team continues to dialogue with the stakeholder regarding suggestions raised by the Mayor of Valemount.	Volume 5B – ESA Section 7.0: Socio-Economic Effects Assessment
	Housing - You mentioned potentially leaving construction trailers for low income housing, but I think we have a deeper need. A rental property manager here thinks that if 20 families move into Valemount, we'll have a housing shortage. It seems weird with so many empty houses, but many are for sale or are second homes, and the owners do not generally want to rent them, because of the hassle involved. Also we have a number of employers (like CN and Yellowhead Helicopters) who have people work here for short terms, and there is not any housing that really suits their needs. Might Trans Mountain consider investing in something like a boarding house or hostel, and/or apartments of some sort that would be suitable for affordable market housing for new people moving here?		Volume 5B – ESA Section 7.0: Socio-Economic Effects Assessment
	How are taxes assessed and paid? For example: Do individuals pay tax on their property and does the District also receive taxes on that property from KM?	Taxes are assessed in accordance to the district/municipal models and are paid similarly to any business. Trans Mountain pays municipal taxes on installed facilities based on the values of the facilities and the mil rate set for these facilities within each municipality. These payments are independent of taxes paid by individual private property owners. Property owners are not responsible for paying any taxes on Trans Mountain facilities.	
	Request to consider letting the community develop a bid to collectively offer accommodation and meals rather than have a camp. Want more understanding of the size of the camp in Vavenby.	While construction camps will be used in some areas, in other areas Trans Mountain anticipates that direct construction-related workers will use existing accommodations in construction hubs (e.g., hotels, campgrounds, rental housing) or commute from other communities. Trans Mountain will develop a Worker Accommodation Strategy that considers a range of housing options, including temporary camps, pre-booking hotels/motels, and working with regional organizations to identify/extend recreational vehicle spaces.	Volume 5B – ESA Section 7.0: Socio-Economic Effects Assessment
	How will the communities participate in the discussion around accommodation?	Ongoing engagement and dialogues will continue with communities and stakeholders. In addition to the Economic Presentations undertaken in the fall, Community Readiness Presentations and discussions will occur later in 2014/early 2015..	Volume 3A – Public Consultation Table 1.7.2
	What does the work force spending actually looks like, and (how when will we know) the types of "shoes" needed?"	This is a general model to indicate the typical types of spending. We will have a much more specific view of the services needed as the Project is developed.	

TABLE 1.6-2 Cont'd

Key Topic	Interest or Concern	Summary Response	Location in Facilities Application
Socio Economic (cont'd)			
	<p>Can TMEP speak to how they will deal with social challenges?</p>	<p>Trans Mountain recognizes that the construction of the Project will require a large workforce and may exert an influence on health in nearby communities. The effects of an influx in temporary workers would primarily manifest in those communities acting as a construction hub for construction workers and in particular, those communities that have relatively small resident populations compared to the size of the temporary Project workforce. As the Project Team continues its detailed design of the Project, community readiness discussions will be part of the ongoing engagement.</p> <p>The Socio-Economic Mitigation Plan in Volume 5B identifies key mitigation strategies including:</p> <ul style="list-style-type: none"> • Develop and implement an issues-tracking process to monitor and respond to Project-related socio-economic issues • Establish a process by which community members can raise complaints or concerns related to Project activities or workers • Develop a code of conduct for workers • Communicate with local health authorities, emergency medical services and social service authorities on the timing of the Project, duration of stay in local communities, and expected number of people, and on-site health care plans. 	<p>Volume 5B - ESA - Socio-Economic</p>

1.6.3 Key Topics of Interest or Concern- Lower Mainland/Fraser Valley (Chilliwack to Burnaby)

Figure 1.6-3 displays the key topics of interest or concern in Lower Mainland/Fraser Valley. This includes all comments from all engagement activities including public information sessions, community workshops, stakeholder meetings, presentations and online engagement.

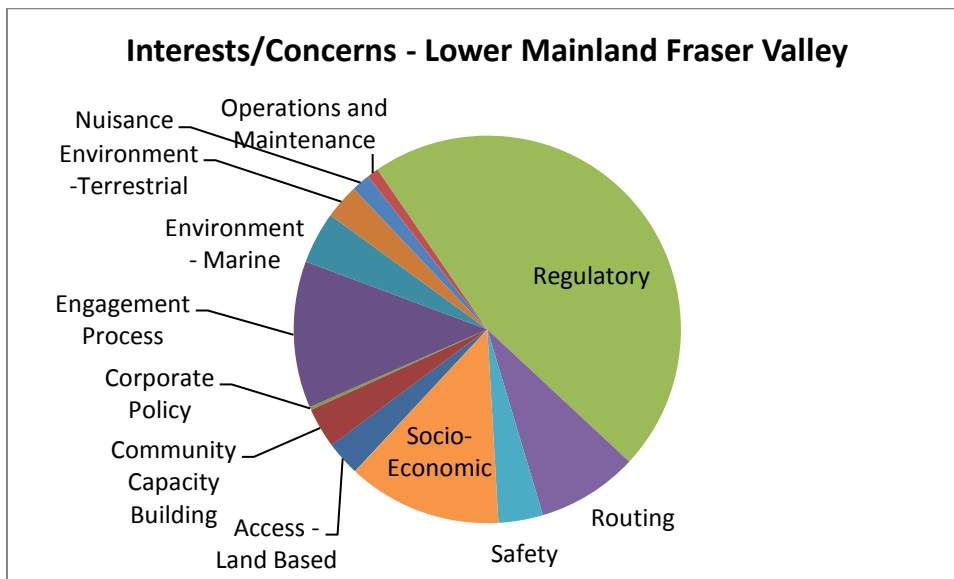


Figure 1.6-3 Key Topics of Interest or Concern in Lower Mainland/Fraser Valley

Table 1.6-3 provides information on the key topics of interest for Lower Mainland/Fraser Valley and Trans Mountain's response to the interest or concern.

TABLE 1.6-3

INTERESTS OR CONCERNS - LOWER MAINLAND/FRASER VALLEY

Key Topic	Interest or Concern	Summary Response	Location in Application
Environment – Terrestrial			
	<p>How will Trans Mountain monitor air quality impacts during construction and expanded operation? Which pollutants will be monitored, by what equipment, and at what locations? How will Trans Mountain rectify any ambient air quality objective exceedances during construction or operation?</p>	<p>Petroleum odours can be a nuisance for our neighbours, and sometimes they can also signal a problem with our operations. Because safe operations and protection of the environment are always top of mind in our line of work, Trans Mountain investigates and follows up on all odour reports.</p> <p>Activities that occur during the construction and operations phases have the potential to affect air quality and GHG; therefore, Project interactions with air quality and GHG during these phases were assessed. The Project will result in the following air emissions:</p> <ul style="list-style-type: none"> • criteria air contaminants (CACs), a group of commonly found contaminants typically formed from combustion for which there are ambient air quality criteria, including particulate matter (PM), Carbon Monoxide (CO), nitrogen dioxide (NO2), and sulphur dioxide (SO2); • volatile organic compounds (VOCs), a group of organic compounds with sufficiently high vapour pressures under ambient conditions to evaporate from the liquid form of the compound and enter the surrounding air, and participate in atmospheric photochemical reactions; • hydrogen sulphide (H2S) and mercaptans; and, • GHGs, including carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O) as well as overall climate change. <p>Trans Mountain has taken a number of steps to improve air quality monitoring and its process for communicating with local residents including an enhanced Odour Complaints and Investigation Process - Taking steps to minimize odours and investigate their cause is a top priority. Steps include the following:</p> <p>Enhanced Odour Complaints and Investigation Process – Taking steps to minimize odours and investigate their cause is a top priority. Odors can be reported to 1-888-876-6711 around the clock. All odour reports will be investigated and addressed. As a result of the January incident, additional measures will include notification of the local fire department dispatch.</p> <p>Air Quality Monitoring and Reporting – An air monitoring station will be installed at the Sumas Terminal by the end of this year and an independent, rapid response service provider will conduct air monitoring sampling and analysis if needed in the event of an incident.</p>	<p>Volume 5C - Air Quality and Greenhouse Gas Technical Report for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project</p> <p>Volume 5A - Biophysical Section 7.2.4</p>
	<p>In response to the FVRD and during the March 2013 workshop, Trans Mountain has stated that there is "good research" which shows that short-term increases in suspended sediment have little impact on benthic invertebrate communities. However, it is understood that this research is based on small mountain streams, not the slow-moving, low gradient streams or sloughs common in the Fraser Valley. What measures will be taken to avoid sedimentation and turbidity impacts on the region's watercourses and wetlands?</p>	<p>Pollution in sediments influences the development of benthic invertebrates, the base of the food chain and can lead to modification of the whole ecological structure (Beasley and Kneale 2002). Benthic invertebrates are a useful indicator of water quality for effluent discharge, but may not be the most practical indicator to use for short-term disturbances such as those from pipeline watercourse crossings. However, that does not suggest potential effects to benthic invertebrates from increased suspended solids at pipeline watercourse crossings should be overlooked. Benthic invertebrates are an important food source for many aquatic organisms, including fish and, consequently, are considered under the fish and fish habitat element. Further details are located in Volume 5A, Section 7.2.7.</p>	<p>Volume 5A, Socio-Economic Assessment – Biophysical Section 7.2.7.</p>

TABLE 1.6-3 Cont'd

Key Topic	Interest or Concern	Summary Response	Location in Application
	<p>Cheam Lake Wetlands Regional Park stands to be directly affected by the proposed pipeline. This park is home to many protected or endangered and rare species of flora and fauna. There is concern that the construction phase will disturb sensitive habitat, interfering with migratory birds and other protected species such as the Great Blue Heron, who currently have a rookery in Cheam Lake Wetlands Regional Park. What measures will be taken to mitigate disruptions caused by construction and to ensure the protection of sensitive species during construction?</p>	<p>Determining the pipeline route involves a range of studies, including environmental and engineering studies, in conjunction with discussions with landowners, neighbours, Aboriginal Peoples, stakeholders and the community which are underway. Trans Mountain will work with Environment Canada and comply with the <i>Migratory Birds Convention Act</i> and <i>Migratory Birds Sanctuary Regulations</i>, as well as any provincial and territorial wildlife agencies related to the Project components and impacts. Clearing and pre-construction activities will be conducted outside the minimum migratory bird restricted activity period (RAP) of May 1 to July 31, where practical. In the event that the schedule changes and clearing activities are planned during the migratory bird RAP, a migratory bird nest sweep will be conducted. In the event that an active nest is found, a protective buffer will be established around the nest. The size of the buffer will be influenced by the status of the bird. Typically a 30 m buffer is applied to a songbird nest and a 100 m buffer is applied around waterfowl or raptor nests. Recommended mitigation measures are identified in Volume 6B – Pipeline Environmental Protection Plan.</p>	<p>Volume 5A, – Biophysical Table 7.2.10-3 Volume 6B – Pipeline Environmental Protection Plan</p>
Routing			
	<p>Environmental concerns with Salmon River valley route.</p> <p>Hoping not to see Salmon River in FA, they would rather not intervene</p>	<p>The Salmon River is one of a number of important fish-bearing tributaries and watercourses in the Hope to Burnaby segment of the pipeline route. Details on crossing methods and restricted activity periods are addressed in biophysical technical reports in Volume 5C of the Facilities Application.</p>	<p>Volume 5C - Biophysical Technical Reports</p>
Safety			
	<p>As a Hazmat responder, I am concerned about the lack of enough information about product in the pipe at any given time as we move multi products.</p> <p>Why did Trans Mountain speak at a Rotary event before notifying owners about potential reroute?</p> <p>Land agents are tentative and seem reluctant to answer questions – that's why residents have asked to meet with company reps.</p>	<p>MSDS sheets are available for each controlled substance to assess the safety hazards of the situation, control danger to human life and identify the composition of the petroleum products transported.</p> <p>The program uses a direct contact approach as it enables Trans Mountain's land agents to personally provide information to landowners and occupants about the Project and proposed studies. It also provides landowners and Crown occupants an opportunity to ask questions and identify concerns about the Project or the TMPL. These questions and concerns are passed on to the Project team. Trans Mountain's intention is to provide response to each landowner or occupant's concern or issue. The process has begun and will continue through all phases of landowner and occupant engagement.</p> <p>Operating and building pipeline infrastructure affects many along the route and Trans Mountain recognizes the potential impact to its neighbours and communities in proximity to operating areas. Trans Mountain works with landowners along its pipeline network. A key objective is to treat each landowner fairly and equitably. For those who may be directly affected by the Project, Trans Mountain will identify and address landowners' concerns and questions about the Project. These landowners will then work with the Land Team to reach jointly equitable solutions for the Project.</p>	<p>Volume 6B and 6C – Pipeline Environmental Protection Plan</p> <p>Volume 3C – Landowners Relations</p>
Socio Economic			
	<p>Access to both Cheam Lake Wetlands Regional Park and Sumas Mountain Inter-Regional Park could be impacted by construction activity. Will residents and other visitors still be able to access the affected parks during construction?</p>	<p>Physical disturbance to community use areas is assessed in Volume 5B, Section 7.2.4, HORU. The Project will endeavour to work its construction schedule around such community events to the greatest extent possible. Trans Mountain will be implementing a range of measures to reduce disturbance to community assets and events. Key mitigation measures include: avoiding important community features and assets during right-of-way finalization; narrowing the right-of-way in select areas; scheduling construction to avoid important community events, where possible; communication of construction schedules and plans with community officials; and other ongoing consultation and engagement with local and Aboriginal governments. Even with mitigation measures, there are still likely to be some residual effects in terms of disruption to community use areas, even as it relates to the general presence of construction activities, vehicles and sensory disturbance. Potential effects on transportation infrastructure are assessed in Volume 5B, Section 7.2.5, Infrastructure and Services.</p>	<p>Volume 5B – Socio-Economic Section 7.2.3, HORU.</p>
	<p>What steps will be put in place to ensure business continuity where pipeline construction is adjacent to businesses?</p>	<p>It is Trans Mountain's intention to find a route for the proposed pipeline, which minimizes impact to communities. Where privately-held land is needed for the proposed new route, land agents from Trans Mountain will discuss proposed locations of the pipeline and compensation with landowners. Access and Traffic Management Plans will be used to minimize disruption to traffic.</p>	<p>Volume 5B – Socio-Economic Assessment</p>

TABLE 1.6-3 Cont'd

Key Topic	Interest or Concern	Summary Response	Location in Application
	<p>What steps will be put in place to ensure that maintenance or upgrading activities related to municipal infrastructure will not be encumbered in the future?</p>	<p>The construction of the Project could affect infrastructure and services through direct physical disturbance to physical infrastructure that exists in the right-of-way or through increased use of certain infrastructure and services related to direct or indirect Project needs. During the construction phase, there may be direct physical disturbance to roads or other community infrastructure that are crossed by the Project or located in areas required for construction lay-down. A range of mitigation and enhancement measures have been recommended in Section 11 of The Technical Report in Volume 5D to reduce potential adverse socio-economic effects and to enhance potential socio-economic opportunities and benefits related to the Project.</p> <p>The potential residual effects on social and cultural well-being, HORU, infrastructure and services, navigation and navigation safety, and employment and economy indicators are identified, discussed and evaluated for significance in Section 7.0 of Volume 5B, which should be read in conjunction with this technical report.</p> <p>Volume 5B – Socio-Economic. Section 7.2.5 - Infrastructure and Services, discusses the potential effects of the Project on physical infrastructure and capacity of community infrastructure and services, including:</p> <ul style="list-style-type: none"> • transportation infrastructure (e.g., roads, rail, air and, where applicable, ports); • linear infrastructure (e.g., subsurface lines) and power supply; • waste and water infrastructure; • housing; • educational services; • emergency, protective and social services (health infrastructure and services are discussed in Section 7.2.8 Community Health); and • recreational amenities. <p>Discussion is focused on infrastructure that may be physically disturbed by the Project, as well as the overall capacity of community infrastructure and services to meet Project-related changes in demand.</p>	<p>Volume 5D, ESA - SocioEconomic Technical Reports, Section 11.0</p> <p>Volume 5B, ESA – Socio-Economic Technical Reports, Section 7.0</p>

TABLE 1.6-3 Cont'd

Key Topic	Interest or Concern	Summary Response	Location in Application
	<p>Will protocols be established with local government in relation to construction activity adjacent to municipal or private infrastructure, including diking structures?</p>	<p>The Socio-Economic Management Plan (SEMP) in Volume 6A summarizes the proposed mitigation and enhancement measures that have been designed to manage potential social, economic and health-related issues and economic opportunities associated with the Project. The SEMP focuses on mitigation and enhancement measures that are not covered by the EPPs or other management plans developed for the Project and should be read in parallel with the various Project EPPs (Pipeline EPP, Facilities EPP and Westridge Marine Terminal EPP, Volumes 6B to 6D) and other management plans for a complete understanding of how Project-related issues will be managed.</p> <p>Potential effects associated with the construction and operations of the Project on infrastructure and services indicators are listed in Table 11.5-1. These interactions are based on the results of the literature review, desktop analysis, field surveys, interviews and TEK, consultation/engagement with Aboriginal communities, landowners, government authorities (e.g., regulatory agencies, municipalities), stakeholders (e.g., NGOs, recreation associations), the general public (Section 3.0) and the professional experience of the assessment team. A summary of mitigation and enhancement measures provided in Table 11.5-1 was principally developed in accordance with Trans Mountain standards as well as industry practices.</p> <p>Volume 5B – Socio-Economic. Section 7.2.5 - Infrastructure and Services, discusses the potential effects of the Project on physical infrastructure and capacity of community infrastructure and services, including:</p> <ul style="list-style-type: none"> • transportation infrastructure (e.g., roads, rail, air and, where applicable, ports); • linear infrastructure (e.g., subsurface lines) and power supply; • waste and water infrastructure; • housing; • educational services; • emergency, protective and social services (health infrastructure and services are discussed in Section 7.2.8 Community Health); and • recreational amenities. <p>Discussion is focused on infrastructure that may be physically disturbed by the Project, as well as the overall capacity of community infrastructure and services to meet Project-related changes in demand.</p>	<p>Volume 5D, ESA - Socio-Economic Technical Reports Section 11.0 Table 11.5-1</p> <p>Volume 5B – Socio-Economic</p>
	<p>Maintaining a high level of biosecurity is of critical concern in the region, given the significant economic impacts that would result from any disease outbreak. How will Trans Mountain work with the British Columbia Ministry of Agriculture and the Canadian Food Inspection Agency CFIA to ensure that appropriate protocols are developed and followed during and after construction (or maintenance)</p>	<p>Overall, any risk to or loss of livestock or agricultural plants due to the infestation of pests and disease would be considered an accidental breach of biosecurity protocols and mitigation measures and, therefore, is considered to have low probability of occurrence. Mitigation measures have been developed to minimize the risk of pest and disease introduction, including: washing and disinfecting vehicles and equipment arriving from other jurisdictions or that have been used on other operations; banning importation of plants, soils or organic matter to nurseries; restricting staff and vehicle entry to areas with nurseries or livestock facilities, and the use of footbaths</p>	<p>Volume 5D - Agricultural Assessment Technical Report.</p> <p>Volume 6B – Pipeline Environmental Protection Plan (Table 7.2.4-2; and,</p> <p>Volume 6B - Agricultural Management Plan</p>
	<p>How will Trans Mountain work with the Ministry of Agriculture and local farmers to monitor long-term impacts on productivity related to the operation of the pipeline?</p>	<p>A standalone Agriculture Assessment Technical Report was commissioned, given that agriculture is a key land use along the proposed pipeline corridor. Agricultural land use is a distinct indicator within the broader socio-economic element of HORU (see Socio-Economic Technical Report of Volume 5D and Volume 5B ESA). This report consists of a high level view on the types of agriculture encountered along the proposed pipeline corridor and the associated areas (expressed in ha) for a variety of agricultural land uses affected by the Project. Potential effects and associated mitigation measures are also identified.</p>	<p>found in Volume 6B – Pipeline Environmental Protection Plan - The Agriculture Assessment Technical Report</p>

TABLE 1.6-3 Cont'd

Key Topic	Interest or Concern	Summary Response	Location in Application
	<p>How are construction emissions being accounted for? What steps will Trans Mountain take to ensure minimal air quality impacts from construction-associated vehicles and equipment? Will Trans Mountain commit to abiding by the Metro Vancouver non-road diesel engine emission regulation when conducting work in the FVRD?</p>	<p>Trans Mountain's policy is to comply with all health, safety, security and environmental laws, rules and regulations, not just because it is legally required but also because we believe it is the responsible way to conduct our business.</p> <p>The majority of air emissions produced during construction activities will be from fugitive dust. Fugitive dust will result from land clearing, grading, excavation, concrete work and vehicle traffic on paved and unpaved roads. The amount of dust generated will be a function of construction activities, soil type, moisture content, wind speed, frequency of precipitation, vehicle traffic, vehicle types and roadway characteristics. Emissions will be greater during dry periods and in areas of fine-textured soils subject to surface activity. A carbon management plan will be developed to mitigate (reduce) emissions as much as possible. The construction emissions and impacts are discussed in Volume 5A, Sections 5.4 and 7.2.4 of the Facilities Application.</p>	<p>Volume 5A, Biophysical - Sections 5.4 and 7.2.4</p>
Project			
	<p>What is the economic and safety comparison between shipping oil by train and pipeline?</p>	<p>In developing the Project, Trans Mountain did not consider fundamentally different alternatives such as rail transportation rather than pipelines, or pipeline concepts to different destinations. The Reasons for Decision (RH-001-2012) proceeding demonstrated the need and benefits of expanding the existing TMPL. For these reasons, no effort was made to consider the economic feasibility or environmental effects of these or other conceptual alternatives.</p>	<p>Volume 2 – Project Overview and General Information</p>

1.6.4 Key Topics of Interest or Concern – Mainland Coastal

Figure 1.6-4 displays the key topics of interest or concern in Mainland Coastal communities. This includes all comments from all engagement activities including public information sessions, community workshops and online engagement.

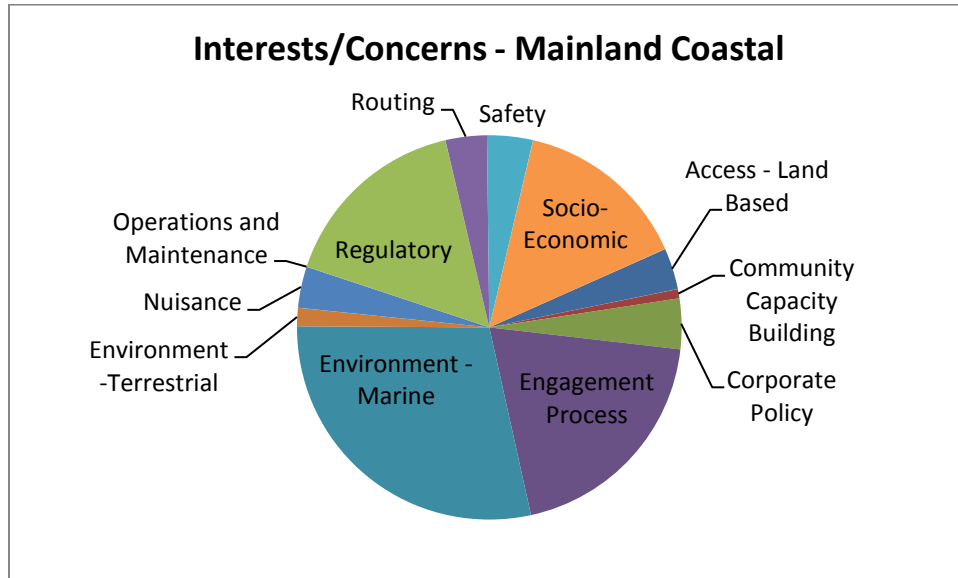


Figure 1.6-4 Key Topics of Interest or Concern in the Mainland Coastal Region

Table 1.6-4 provides information on the key topics of interest for the Mainland Coastal region as well as Trans Mountain's response to the interest or concern.

TABLE 1.6-4

INTERESTS OR CONCERNS – MAINLAND COASTAL REGION

Key Topic	Interest or Concern	Summary Response	Location in Application
Safety			
	Are currents reviewed as part of the Under Keel Clearance work? Has TMEP considered the capacity of Marine Communications and Traffic Services MCTS to handle increased traffic?	<p>The Movement Restriction Area (MRA) rules define the allowable beam (<i>i.e.</i>, width) and draft (<i>i.e.</i>, depth) of tankers in relation with the channel. Tankers have to maintain an under keel clearance of 10% over a channel width of 2.85 times the vessel's beam and are restricted to daylight transit. Since the center of the channel is relatively deep in comparison to the vessel's draft it is typically the width of the channel that determines the allowable draft and therefore the extent to which a tanker can be loaded.</p> <p>Since channel width varies with tidal height so then does the extent to which tankers can be loaded. Occasionally, under the largest high tides, Aframax tankers can load up to about 90,000 tonnes (approximately 80% DWT capacity) of cargo and based on the average density of heavy crude oil loaded at Westridge Marine Terminal this is equivalent to about 98,000 m3 (615,000 bbls). However, over the tidal cycle the average cargo loaded would be about 550,000 bbls (equivalent to about 70% DWT capacity). The effect of the draft restrictions on cargo capacity were taken into consideration by Trans Mountain when estimating the extent of tanker traffic that might result from the Project. This estimate was used in the quantitative risk assessment (Volume 8C - TERMPOL 3-15,) of an oil spill occurring from one of these tankers.</p> <p>Upon arrival in Canadian waters, tankers must follow strict communications and guidance protocols. The ship remains in communication with Marine Communications and Traffic Services (MCTS) and the ship's position is monitored throughout the transit. It is handed off between traffic zones as it moves from one to the other. A combination of radar, automatic information system and direct radio communication is used to co-ordinate safe conduct of the vessel with other masters and pilots. Smaller marine vessels including many fishing vessels are not required to register with the CCG Marine Communications and Traffic Services, and many are not equipped with AIS transponders, radar reflectors or other equipment that improves their visibility to large deep sea vessels, especially in poor weather (CCG 2013b). Transport Canada and the CCG continue to encourage small vessels to use technology to improve visibility.</p>	<p>Volume 8C- TERMPOL Reports Section 12</p> <p>Volume 8A – Marine Transportation Section 2.1.2</p>
	Who would enforce the "moving safety bubble"? Need to be clear as to what the bubble is – an MCTS zone versus a military enforced zone. Need for the tanker master to enforce the zone when a pilot is not on board.	<p>The codifying of the rule would itself have a significant impact. A quantitative risk assessment conducted by Det Norske Veritas (DNV) recommended to Trans Mountain two key measures to improve navigational safety for Project-related tankers, thus reducing the probability of an accidental oil spill from a laden tanker. These two measures included additional tug escort and a Moving Safety Zone around laden tankers. As noted in the bullets above, DNV concluded that, with the implementation of these two key measures, the risk of a credible worst case oil spill from a Project-related tanker would not be substantially more than it is today, without the Project.</p> <p>Through its updated Tanker Acceptance Criteria, Trans Mountain will require additional tug escort for Project-related tankers for the entire transit between Westridge Marine Terminal and the Pacific Ocean. As well, Trans Mountain is seeking endorsement for the Moving Safety Zone from the Joint Coordinating Group of the CVTS.</p>	Volume 8A – Marine Transportation Section 5.4.2
	What is the difference between the 7 and 12 study areas? Needs to be said that 34 calls means 64 movements in the harbour.	In order to accurately assess the frequency in which Project tankers may be exposed to other incidents it was necessary to model all traffic movement along the route these tankers travel. For ease of extrapolation, the region was divided in twelve segments. Segments 1 and 2 comprise the in-port section of the route; segments 3-7 comprise the normal transit section of the region, and segments 8-12 comprise the waters and shore that are adjacent to the normal tanker.	Volume 8C- TERMPOL Reports Section 2
	Anchorage models are based on good weather. Challenges could come in foggy or bad weather. Need to consider this variability	Fisheries and Oceans Canada supports international marine transportation by providing necessary information on tides, currents and weather data. The Canadian Hydrographic Service provides nautical charts and navigational products that help ensure the safe navigation of Canada's waterways. The Canadian Hydrographic Service collaborates and shares these charts with other national organizations and hydrographic service organizations, as they are the road maps that guide mariners safely from port to port.	Volume 8A – Marine Transportation Section 1.4.2.2

1.6.5 Key Topics of Interest or Concern – Island Coastal

Figure 1.6-5 displays the key topics of interest or concern in Island Coastal communities. This includes all comments from all engagement activities including public information sessions, community workshops and online engagement.

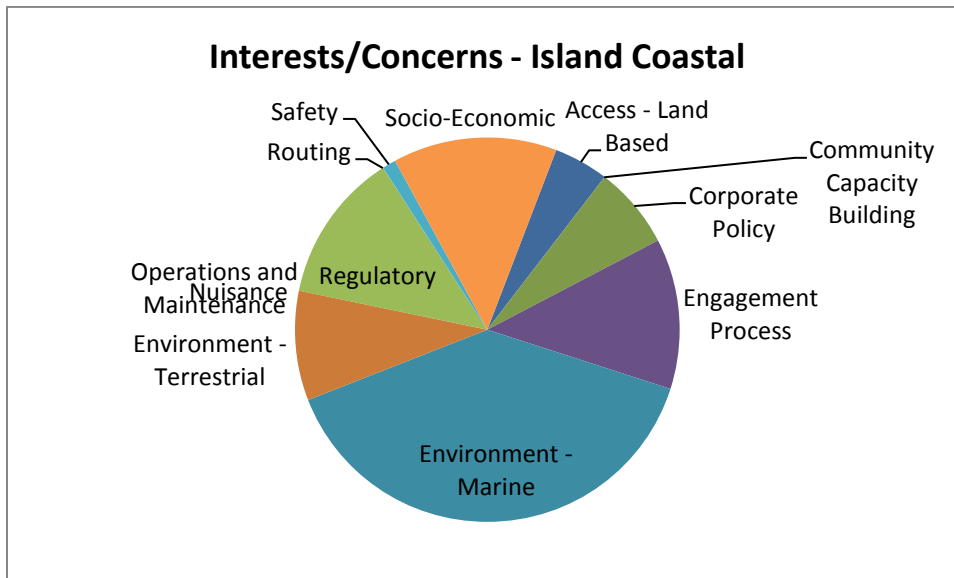


Figure 1.6-5 Key Topics of Interest or Concern in the Island Coastal Region

Table 1.6-5 provides information on the key topics of interest for Island Coastal regions as well as Trans Mountain's response to the interest or concern.

TABLE 1.6-5

INTERESTS OR CONCERNS – ISLAND COASTAL BC

Key Topic	Interest or Concern	Summary Response	Location in Application
Environment - Terrestrial			
	Spill Planning and Coordination	The regulatory framework, roles and responsibilities for emergency response and preparedness for an oil spill in a marine environment in Canada were described in detail in Volume 8A, Section 1.4. The <i>Canada Shipping Act, 2001</i> is administered by Transport Canada and provides the overall regulatory framework for spill prevention, emergency preparedness and response in the marine environment.	Volume 8A, Marine - Marine Transportation Section 5.5.1
	Spill Modelling	In order to understand the fate and behaviour of spilled oil, representative scenarios were selected, and then analyzed using EBA's numerical spill modelling system. Representative scenarios were modeled without spill response measures applied to mitigate the effect of an accidental oil spill in order to provide conservative results.	Volume 8A – Marine Transportation Section 5.4.4.5
Safety			
	Geotechnical Faults	<p>Although no active faults (where rupture has occurred in the last 11,000 years) have been identified in British Columbia, studies will be conducted as part of the detailed engineering and design phase in an attempt to further confirm the presence or absence of active faults crossing or running close to the route.</p> <p>At major watercourse crossings, and other areas where lateral spreading as a result of liquefaction has the potential to occur, the pipeline will be designed to resist the potential ground movement (both transient and permanent) associated with the design level event.</p>	<p>Volume 4A – Project Design and Execution – Engineering Section 2.9.3</p> <p>Volume 8A, Marine - Marine Transportation Section 4.3.14.1</p>

1.6.6 Website Forum QandA

Until the date of filing the Application, Trans Mountain hosted a forum on the website enabling visitors to ask questions. Trans Mountain continued to respond to questions about the Project through its online website forum between August 1, and December 16, 2013. When the public asked questions on the website, topics and issues were relayed to the appropriate Project team representative to be considered and incorporated in the Update where applicable. The Project team provided responses either publically or privately depending on the question. Figure 1.6-6 displays the questions posed on the online forum. Table 1.6-7 provides information on the Trans Mountain website forum QandA. Since the filing of the Application, the public can continue to ask questions via the Info@ email address on the TMEP website.

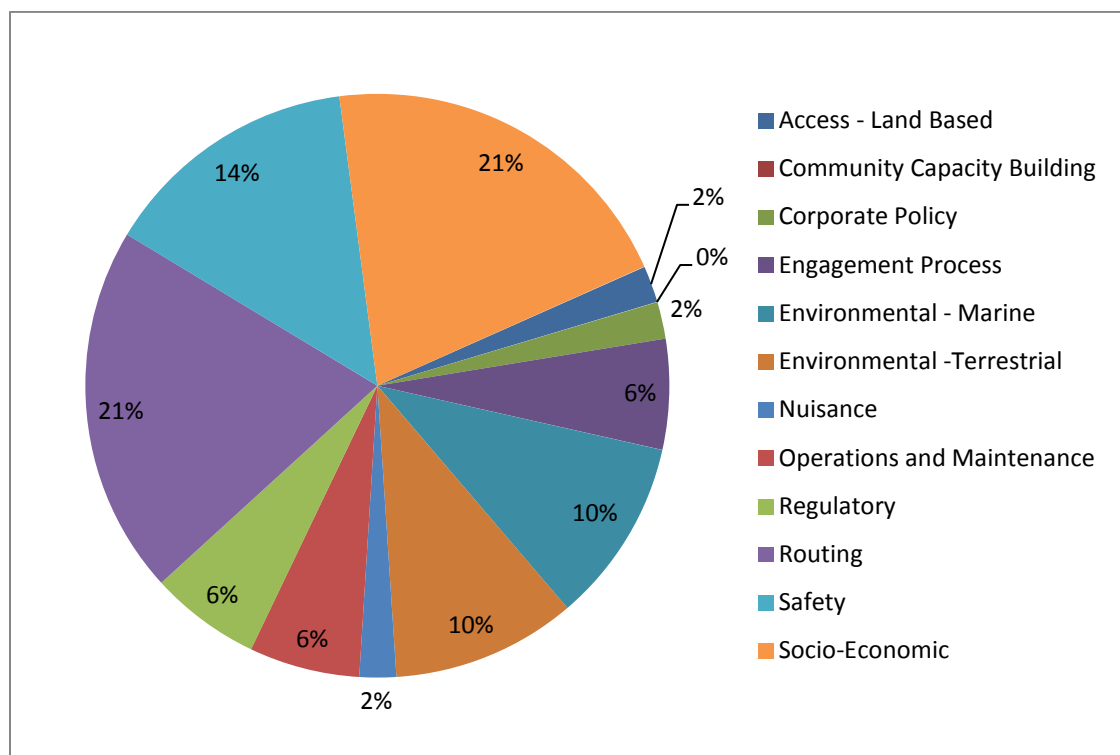


Figure 1.6-6 Questions Posed on the Online Forum

The 'Other' percentage covers off topics related to the engagement process, engineering, and general support and opposition, history, imports, landowner rights, social responsibility, sponsorship requests and stock market inquiries. Section 1.7.2 provides information on the questions.

Table 1.6.7 presents the stakeholder questions and Trans Mountain responses posted on the Website Forum QandAs and not previously addressed in the Facilities Application. The Website Forum QandA page was removed on the date of the filing, December 16, 2013, in order to archive old information and present consistent content to the public. Responses were provided at the time of the question and may not reflect information that became available after the question was posed, or is available in other communication forums. Trans Mountain did not respond to questions of a negative rhetorical nature or questions related to concerns beyond the scope of the Project. Names have been suppressed to protect the privacy of respondents, and in accordance with the *Privacy Act*.

TABLE 1.6-6

TRANS MOUNTAIN WEBSITE FORUM Qanda

Question	Answer
<p>How many oil tankers from the KinderMorgan TransMountain line were shipped to Qingdao in 2013 before it exploded?</p> <p>Please don't repeat the same spin that most shipments go to the US, as you keep arrogantly repeating on twitter. That isn't the question. It is rude to say you want "to ensure you are informed" and then fail to be honest with your response.</p>	<p>In response to your questions the incident in Qingdao was tragic and our thoughts are with those individuals and families who were affected.</p> <p>KMC operates the Trans Mountain pipeline system; in this regard our role is to provide safe petroleum transportation, from Alberta to the West Coast markets our pipeline serves. We do not participate in the production, marketing, or refinement of the petroleum product transported. Therefore we are not able to provide the specific information you are seeking.</p> <p>About 20% of the product that is currently shipped through the Trans Mountain Pipeline goes to the Westridge Marine Terminal. The destination of the product that is exported on tankers is determined by the shippers and thus we don't have direct knowledge of the destination. Historic patterns suggest that of the tankers loaded at Westridge approximately 80% are destined for California, 10% to Asia and the remainder to various other destinations. This would suggest that for the 51 tanker calls to Westridge in 2012 about five may have been destined for China.</p> <p>For more information about the exports of Canadian crude oil to foreign markets you may wish to contact the CAPP. As an agency representing Canadian petroleum producers they may be able to assist in answering any additional questions related to the destination of tankers.</p>
<p>Where will the diluent be produced and how will it be delivered to the Edmonton Terminal (or wherever it is that the Dilbit gets diluted before transport in the pipelines...)</p>	<p>The product in the Trans Mountain Pipeline is provided by the customers ready to transport - we do not add or remove any diluent. For the most part, the diluent is shipped along with the bitumen, or other crude oil products to the shipper's desired destination where it would become part of the refining process. A few companies that may be able to answer your questions about diluent are Cenovus, Husky, or Suncor.</p> <p>While the products in our pipeline belong to the customer, they must meet our specifications and tariff requirements. KMC's tariff rules and regulations are published here: http://www.kindermorgan.com/business/canada/transmountain_tariffs.cfm.</p>
<p>Do I have to register before I can ask a question?</p>	<p>No, you do not have to register before you ask a question. Please feel free to submit any questions you may have in the same manner you have sent this one, or via your own email account to info@transmountain.com.</p>
<p>I have been a rail car inspector for C.N. for a few years. I have been Honoured by the Governor General and the Queen for exemplary work in transportation. How do I submit a document outlining the horrific safety conditions of both C.N. and C.P. Rail?</p>	<p>Thank you for your interest in the proposed TMEP and congratulations on such a distinguished career.</p> <p>While we can only speak to the Project, I am sure the information you can provide is very valuable and we would suggest providing such information to the appropriate regulatory bodies, possibly the NEB, or Transport Canada.</p> <p>Thank you again and all the best.</p>
<p>Regarding the twinning of the pipeline in the Westsyde area of Kamloops, B.C. There was talk of the proposed new pipeline being placed west of the current pipeline in this area-did this come to fruition? If so, could the existing pipe line in this neighborhood also be placed west of its current position? This would eliminate any pipe lines in this now heavily populated residential area. We moved into this area, not knowing about the pipeline, and would be relieved to have it removed from our neighborhood. Thank you for your reply.</p>	<p>The proposed route in the Westsyde area has not yet been confirmed. Both the Westsyde neighbourhood and west alternative route options are still being considered. The route to the west includes a section of the Lac du Bois Protected Area as well as some crown land and private properties. We are currently working through the British Columbia Parks application process to consider the placement of the new pipeline in Lac du Bois, but we won't know the decision on that application for some time yet.</p> <p>If the Lac du Bois application is not successful, the proposed pipeline route will be through the Westsyde neighbourhood. You can see the proposed route through Westsyde here: http://talk.transmountain.com/document/show. <i>Note: this page was removed on the date of the filing, December 16, 2013, in order to archive old information and present consistent content to the public.</i></p> <p>KMC is not considering moving the existing pipeline in Westsyde, or anywhere along the pipeline corridor at this time. We will continue to operate the existing Trans Mountain pipeline system as it exists today, in its existing location.</p> <p>To ensure the continued safe and reliable operation of our pipelines, we use a multi-layered approach to pipeline safety that encompasses integrity management, damage prevention and emergency response programs. All these measures are designed to support the continued safe and reliable operation of our pipelines. For more information on pipeline integrity management, please visit: www.transmountain.com/pipeline-integrity-management.</p>

TABLE 1.6-6 Cont'd

Question	Answer
<p>From your tweet of November 19/13: "Trans Mountain @TransMtn19 Nov We estimate \$80 million on non-local worker spending in #Langley. @LangleyChamber #GLCC" From your tweet of November 27/13: "Trans Mountain @TransMtn5h During construction we'll spend approx \$80 million in Greater Vancouver w/\$33 mil of that on accommodations + \$18 mil on meals. @BurnabyBOT" Since your main operation is in Burnaby the \$80 mil for new construction and upgrading appears reasonable. But you also seem to have promised to spend an equal amount in Langley which does not seem to make sense.</p>	<p>Thank you for your observation. Sorry for any confusion. To clarify, the \$80 million estimate is actually for the Greater Vancouver area, which includes Langley and Burnaby, in reference to workforce spend.</p> <p>For additional information, here is a link to the Project's Benefits page, http://www.transmountain.com/benefits . On this page you will find a short, three minute video, which outlines the numerous benefits of the Project. We will also be adding community specific benefits shortly.</p> <p>Full information will be included in the Facilities Application, which we plan to file at the end of this. The Application will be available on the NEB's website, as well as at www.transmountain.com.</p> <p>Please note these numbers are as of November 2013, based on what we know about a building a pipeline. These numbers are outputs from economic modelling and will continue to evolve as we develop the Project.</p>
<p>You have not discussed the after installation maintenance and continued protection of the pipeline, as continuous monitoring of Cathodic protection levels, periodic depth of cover surveys on river crossings, etc.</p>	<p>Through operating the existing Trans Mountain Pipeline, we have established a multi-layered approach to pipeline safety that encompasses integrity management, damage prevention and emergency response programs, to ensure continued safe and reliable operations. We have a team dedicated to preventing damage and detailed ERPs for all our facilities. The pipeline is monitored 24/7 at a control centre equipped with sophisticated computerized sensing and control systems and we have automatic leak detection alarm systems, automatic shut off devices and devices that monitor the internal condition of the pipe.</p> <p>Should the proposed expansion project be approved it would also be subject to the same rigorous maintenance and protection standards as the existing pipeline.</p> <p>You can learn more about how we operate and maintain our pipeline at: http://www.transmountain.com/operating-our-pipeline .</p>
<ul style="list-style-type: none"> • How many tankers will be parked in Burrard Inlet/Indian Arm at a time? • How many in West Vancouver? • How much noise will be coming out of the terminal and from tankers? How far will the noise carry? • You can see the diesel exhaust coming out of the tugs and the tankers tethered off Cates Park and fumes will be released off the tank farm and oil pumping station. How much air pollution will be added to this air shed? How will that affect our health? • The tankers and the oil pumping operations will inevitably release small amounts of pollutants into the water. How will this affect the environment over time and who measures and accounts for this gradual degradation? • What is the impact of the wake from tugs and tankers on the beaches and wildlife in the area? • Will there be light pollution from the tankers and expanded terminal? 	<p>Many of your questions – those about tanker traffic, noise, environment and health, vessel wake, earthquakes, storage tanks and light pollution - are addressed in the detailed environmental and socio-economic studies that will be included in our Facilities Application. We plan to file our Application with the NEB by the end of this year and encourage you to check back on our website or the NEB's to see these studies.</p> <p>In the meantime, you can learn more about the studies and topics covered at http://www.transmountain.com/environmental-socio-economic. The NEB has outlined a list of issues that will be considered during the review process, which can be found here: http://www.neb-one.gc.ca/cf-nsi/rthnb/pplctnsbfrthnb/trnsmntnxpnsn/trnsmntnxpnsn-eng.html</p>
<p>How many storage tanks will be built?</p>	<p>In total, there would be 20 new storage tanks built: five at the Edmonton Terminal, one at the Sumas Terminal and 14 at the Burnaby Terminal.</p>
<p>What type of containment structures will be enclosing them?</p>	<p>Each tank is required, by engineering design codes, to have a dyked, lined area around the tank as a precaution should there be a spill from a tank. The dykes have an impermeable synthetic liner, overlain by a protective layer of gravel.</p>
<p>Will they be earthquake PROOF?</p>	<p>Detailed studies for both the Westridge and Burnaby terminals, including storage tanks and the pipeline, will be incorporated into the design of the terminal expansion, to ensure safe performance during earthquakes.</p>

TABLE 1.6-6 Cont'd

Question	Answer
<p>How will the new pipeline be earthquake proofed?</p>	<p>Through its experience with managing pipelines in a variety of terrains, KMC is very aware of the effect of the geologic environment on its pipeline infrastructure. Our Geohazard Management Program is one of the key tools for managing the risks associated with natural hazards to pipeline infrastructure.</p> <p>More details about our seismic safety measures and plans to ensure the proposed pipeline anticipates and mitigates effects of an earthquake can be found here, http://www.transmountain.com/seismic-safety-measures .</p>
<p>Would the old leaky pipeline get upgraded/replaced at the same time?</p>	<p>With a strong focus on regular maintenance, the application of the latest technology, and sound operating practices, the Trans Mountain Pipeline has an infinite lifespan.</p> <p>To ensure the continued safe and reliable operation of the Trans Mountain Pipeline, we use a multi-layered approach to pipeline safety that encompasses integrity management, damage prevention and emergency response programs. We have a team dedicated to preventing damage and detailed ERPs for all our facilities. The pipeline is monitored 24/7 at a control centre equipped with sophisticated computerized sensing and control systems and we have automatic leak detection alarm systems, automatic shut off devices and devices that monitor the internal condition of the pipe.</p> <p>You can learn more about how we operate and maintain our pipeline at http://www.transmountain.com/operating-our-pipeline .</p>
<p>Is it true that you had a spill recently (or over time) up past Chilliwack on the current pipeline?</p>	<p>In June, there were two releases that were detected as part of our integrity program. One approximately 40 km east of Hope, B.C.: http://www.transmountain.com/news-releases/update-pipeline-repairs-underway , and one near Kingsvale, B.C.: http://www.transmountain.com/news-releases/media-release . While the volumes of product released were both small, KMC's response was immediate and thorough with safety and the protection of people and the environment as top priorities</p>
<p>What does the statement mean that Canada is a signatory to international agreements on tanker ships being inspected by other countries? Does this mean that Canada recognizes inspections from other countries and therefore exempts these ships from Canadian inspection?</p>	<p>This means that Canada has signed and agreed to a certain set of standards.</p> <p>The international Port State Control agreements, to which Canada is a signatory, require Transport Canada to inspect foreign vessels. Vessels that do not meet safety standards are detained until their deficiencies have been corrected. Canada has its own set of requirements and inspection schedules, which are explained on the Port State Control page, here: http://www.tc.gc.ca/eng/marinesafety/oep-inspection-psc-menu-1120.htm</p> <p>More information about annual inspections and Port State Control can be found on the Tanker Safety and Spill Prevention on Transport Canada's website here: http://www.tc.gc.ca/eng/marinesafety/menu-4100.htm</p>
<p>How can you possibly reassure me that there will not be a disastrous spill?</p>	<p>While there are no guarantees, Trans Mountain has worked hard to develop a mature suite of programs to maximize the safety of the pipeline. It was while performing regular maintenance that we found this leak.</p> <p>These pipeline safety practices focus on preventing pipeline failures and minimizing their impact. They are all part of what is known as a Pipeline Integrity Management program. This program identifies all of the hazards that have the potential to affect the safety of the pipeline system and ensures that control measures are implemented to prevent or mitigate the occurrence and potential impact of each hazard.</p> <p>Additionally, we have plans to ensure we are able to respond in the event of an incident like this one. ERPs are constantly being updated to keep them current. The plans are location specific, identify locations of emergency response materials and equipment, and are regularly practiced through field deployment exercises. Because of this planning, we are able to be quickly contain any spilled material and immediately begin clean up and remediation.</p> <p>As part of an ongoing commitment to safety and environmental protection, Trans Mountain takes responsibility for the cleanup and remediation of spills and we work with pre-qualified and trained consultants and contractors to ensure any spill is cleaned up as quickly as possible while ensuring the safety of the public and minimizing impacts to the environment.</p>
<p>I'm sure there's a logical answer. I've always wondered why the pipeline has to stop at Kitimat which entails a very convoluted passage of ships thru some amazing shoreline and does not just continue to Prince Rupert that has an open harbour to the Pacific Ocean.</p>	<p>Trans Mountain is proposing an expansion of its current 1,150 km pipeline between Strathcona County (near Edmonton), Alberta and Burnaby, British Columbia. You can learn more about the route plans for the proposed TMEP here: http://www.transmountain.com/route-plans . <i>Note: this page was removed on the date of the filing, December 16, 2013, in order to archive old information and present consistent content to the public.</i></p> <p>The route you are referring to is that of the Northern Gateway Project by Enbridge.</p> <p>Please let us know if you have any questions regarding the proposed TMEP by KMC.</p>

TABLE 1.6-6 Cont'd

Question	Answer
<p>Given that much of the opposition to the overland route has been centred on spill risk why hasn't KMC proposed a larger twining line capable of transporting both existing oil and projected oil volumes with an end game to removing the existing 60 year old line?</p>	<p>With a strong focus on regular maintenance, the application of the latest technology, and sound operating practices, the Trans Mountain Pipeline has an infinite lifespan.</p> <p>To ensure the continued safe and reliable operation of the Trans Mountain Pipeline, we use a multi-layered approach to pipeline safety that encompasses integrity management, damage prevention and emergency response programs. We have a team dedicated to preventing damage and detailed ERPs for all our facilities. The pipeline is monitored 24/7 at a control centre equipped with sophisticated computerized sensing and control systems and we have automatic leak detection alarm systems, automatic shut off devices and devices that monitor the internal condition of the pipe.</p> <p>You can learn more about how we operate and maintain our pipeline at: http://www.transmountain.com/operating-our-pipeline.</p>
<p>As a resident of Michigan, I am horrified to read your answer to the question of cleaning up dilbit. In fact, you have no way of doing it, as was shown in the Kalamazoo spill. Also, you have no way of imagining that spills will not occur, as even with present controls, human error is rampant, and (reported) spills are averaging about 300 a year. "Don't worry, we can handle it" is not at all reassuring. How specifically will you be able to improve on methods and procedures presently in place to the point where dilbit transport is safe for the water and soil?</p>	<p>With a strong focus on regular maintenance, the application of the latest technology, and sound operating practices, the Trans Mountain Pipeline has an infinite lifespan.</p> <p>To ensure the continued safe and reliable operation of the Trans Mountain Pipeline, we use a multi-layered approach to pipeline safety that encompasses integrity management, damage prevention and emergency response programs. We have a team dedicated to preventing damage and detailed ERPs for all our facilities. The pipeline is monitored 24/7 at a control centre equipped with sophisticated computerized sensing and control systems and we have automatic leak detection alarm systems, automatic shut off devices and devices that monitor the internal condition of the pipe.</p> <p>You can learn more about how we operate and maintain our pipeline at http://www.transmountain.com/operating-our-pipeline .</p>
<p>You say that you have been loading diluted bitumen since the 1980s but I still don't know if that product is from the tar sands and how volatile and hard to clean up it is. The link you supplied (www.crudemonitor.com) does not go into any detail about the chemical makeup of the many products, only the specific gravity and I see no mention of bitumen or diluent. Could you please answer the question about the exact chemical formula of "diluted bitumen?"</p>	<p>If you are able to provide us with your phone number we can have one of our engineers call you. Adam would be able to answer your question more specifically and explain how the website works and direct you to the specific chemical makeups. In addition to a phone call, we can also answer your questions publicly, so that others are able to see the answer as well.</p> <p>Please let me know if you would like to speak to an engineer and have the questions answered publicly, or if you would just like us to answer publicly, with no phone call.</p>
<p>Updates on the Kalamazoo spill cleanup and a MSDS for dilbit indicate that it is heavier than water and defies cleanup using conventional surface response methods (booms, skimmers) even in the more amenable Michigan environment. How will you be able to clean up a spill of dilbit especially in remote and rugged mountain terrain?</p>	<p>Any product moved in the pipeline must meet KMC's tariff requirements which include the following limitations on product qualities:</p> <ul style="list-style-type: none"> • a maximum temperature of 38°C; • a maximum density of 940 kg/m³ (specific gravity of 0.94); • a maximum viscosity of 350 centistokes at Reference Temperature; • maximum impurities (bottom sediments and water) of 0.5% of volume; and • maximum Reid Vapour Pressure of 103 kPa. <p>The diluted bitumen shipped in our pipeline has a maximum specific gravity of 0.94, which is lighter than water (1.00) and seawater (1.03). (http://www.kindermorgan.com/business/canada/transmountain_tariffs.cfm)</p> <p>Additional research is taking place to quantify how the diluted bitumen reacts over time in water, with wave action, with fast-moving currents, with different sediment levels and with various other factors. You can learn more about Petroleum Liquids here: http://www.transmountain.com/about-petroleum-liquids .</p> <p>The most critical and responsible emergency preparedness strategy is to prevent a spill from occurring at all. However, in the case of a spill, Trans Mountain is prepared to respond quickly with detailed emergency procedures and trained professionals.</p> <p>ERPs are constantly being updated to keep them current. The plans are location specific, identify locations of emergency response materials and equipment, and are regularly practiced through field deployment exercises. Emergency Response Training is conducted 20 – 25 times per year. The training includes table top exercises, equipment deployment and classroom learning. The deployment exercises are conducted in varying scenarios, including remote locations, in all weather conditions, including snow and ice. http://www.transmountain.com/operating-our-pipeline.</p>

TABLE 1.6-6 Cont'd

Question	Answer
<p>I would like to know if KMC is currently piping any diluted bitumen or any product similar to it and putting it onto tankers to ship out of the Port of Vancouver. If so, I would like to know when this product was first shipped, and what plans are in place to clean up a spill of this toxic product in the port waters.</p> <p>Also, please specify the exact chemical makeup of these products (including the diluent).</p>	<p>Tankers have loaded diluted bitumen since the late 1980's from Trans Mountain's Westridge Marine Terminal. Transporting diluted bitumen is as safe as transporting other types of crude oil, as indicated in several reports found on Diluted Bitumen Information page: http://www.transmountain.com/diluted-bitumen-info? .</p> <p>Since its inception in the 1950's, tanker operations from Westridge have been conducted without any oil spills from tankers. We are dedicated to continuing to operate safely and without incident but if an oil spill should occur in the marine environment, multiple organizations quickly take co-ordinated action to mitigate public and environmental impacts.</p> <p>Transport Canada requires that all large vessels calling in Canada and all oil handling terminals must have a contract with a certified spill response organization, on the West Coast this is WCMRC http://wcmrc.com/.</p> <p>The Canadian Coast Guard is responsible for monitoring the response and ensuring that it takes place in an efficient manner. WCMRC provides response equipment and personnel trained specifically in responding to oil spills. WCMRC is funded by industry through a tariff charged on petroleum cargos handled in West Coast ports. On WCMRC's website, in the FAQ section you'll find information about their plans and experience in responding and cleaning up various products (http://wcmrc.com/faqs/).</p> <p>In terms of your question about product makeup and diluents, each product has a different makeup, but must meet the specifications of our pipeline. Diluent is light crude, such as synthetic crude (partially refined bitumen) or condensate (light oil recovered through natural gas production). Synthetic crude and condensate on their own have been produced and transported by pipeline for decades. The website http://www.crudemonitor.ca/home.php www.crudemonitor.ca has very detailed lists of the properties and makeup of Canadian products based on recent samples and also looking at 1 and 5 year averages.</p>
<p>i.m a land owner the pipeline goes through my hayfield i.m an unemployed truck driver a native would it be beneficial for you to hire me correct?</p>	<p>We appreciate your interest in joining our team. All opportunities with the TMEP Team and KMC are posted on KMC's website. We encourage you to visit http://www.kindermorgan.com/work/kmc_careers/ to view current opportunities available and apply by submitting your resume online.</p> <p>Additionally, you can sign up to receive project updates at http://www.transmountain.com/contact-us#newsletter and specify that you are interested in career opportunities with the TMEP. There are some opportunities that will arise in the near future, however the majority of the opportunities will be dependent upon final approval of the Project. For more information on project timelines, visit http://www.transmountain.com/timeline .</p>
<p>How deep will the new pipeline be buried where it goes under the Fraser River? What is the depth of the existing pipeline?</p>	<p>The existing 24-inch Trans Mountain pipeline across the Fraser River was installed in 2003 using horizontal directional drill. The depth of cover below the riverbed is at least 25 m.</p> <p>When looking at river crossings for the proposed Trans Mountain Pipeline expansion, we take into consideration location specific geotechnical conditions, construction techniques and the thickness and coatings on the pipeline, valve locations and other measures that can help protect sensitive environmental areas.</p> <p>The final depth of cover for the proposed new 36-inch pipeline will be determined during the detailed designed and engineering phase. However, as the proposed new crossing is at a different location from the existing 24-inch pipeline, the design will take into account the river profile and geotechnical conditions, as well as the diameter of the pipe which also affects pipeline profile. If horizontal directional drilling is used, the depth of cover will be a minimum of 10 m below the deepest part of the river.</p>
<p>Is it true that you are going to put a pipeline from Canada to China?</p>	<p>Trans Mountain is proposing an expansion of its current 1,150 km pipeline between Strathcona County (near Edmonton), Alberta and Burnaby, British Columbia. The proposed expansion, if approved, would create a twinned pipeline that would increase the nominal capacity of the system from 300,000 barrels per day (bbl/d), to 890,000 bbl/d.</p> <p>You can learn more about the proposed TMEP and the existing Trans Mountain Pipeline at www.transmountain.com and specifically about route plans at http://www.transmountain.com/route-plans.</p>

TABLE 1.6-6 Cont'd

Question	Answer
<p>Are you responsible at all for the tankers you will be loading the oil into and for any spills or leaks en route or in port?</p>	<p>Liability for a marine oil spill depends on the source of the spill:</p> <p>Marine Terminal-source spill: If oil were released directly from the Trans Mountain Westridge Terminal, KMC would be the Responsible Party. The potential volume and dispersal of a terminal spill is low because tanker loading is a manned operation, there is only a limited amount of oil in the terminal piping at any given time and the water side of the terminal is surrounded by a marine boom whenever a vessel is being loaded. KMC would cover the costs of cleaning up such a spill.</p> <p>Ship-source spill: If oil were released from a vessel, the vessel owner would be the Responsible Party. In addition to the ship owner's insurance, there are a variety of funding sources available to cover the costs of cleaning up such a spill.</p> <p>Although liability for such spills would not fall to the marine terminal owner, KMC has established programs to reduce the potential for ship-source spills (http://www.transmountain.com/safe-marine-operations). Vessels must pass a rigorous screening process set out by international and local governing bodies and KMC before being allowed to accept oil from the Trans Mountain Westridge Terminal. By ensuring that only the safest vessels are filled at Westridge, KMC reduces the risk of a ship-source oil spill. You can find more information about marine spill liability here: http://www.transmountain.com/marine-spill-liability.</p> <p>Regulatory and response organizations have established numerous preventative measures for marine traffic, including vessels subject to International Maritime Operations requirements, <i>Canada Shipping Act</i> and other federal legislation when in Canadian Waters and vessels must have arrangement with WCMRC for spill response before entering Canadian waters. In addition to Trans Mountain's screening and inspection, the vessel's flag state, vessel charter and insurers conduct inspections before contracting with any ship. The Port State Control program run by Transport Canada includes higher inspection frequency for tankers (first visit, or once per year) and sharing inspection reports under international agreement (Paris Memorandum of Understanding (MOU) and Tokyo MOU).</p> <p>Vessels travel well-established traffic lanes managed by US and Canada Coast Guards under scrutiny of marine communication and traffic services from both organizations. PMV regulations and oversight ensure safe conduct of shipping within Vancouver Harbour including passage through First and Second Narrows. WCMRC maintains spill response capability for the Port and the coastal waters of British Columbia.</p> <p>Loaded vessels have a second pilot on board.</p>

TABLE 1.6-6 Cont'd

Question	Answer
<p>Re proposed TransMountain pipeline expansion: what happens when an earthquake hits British Columbia? How prepared are you? How responsible are you in terms of returning my property or any flora or fauna affected by oil leaked from this pipeline? Up to what dollar value? Are you insured for earthquakes in British Columbia?</p>	<p>Historically, pipelines have performed well during earthquakes; however we are committed to reducing earthquake risks to the existing Trans Mountain Pipeline. We proactively assess earthquake hazards, considering advancements in understanding about how pipelines perform during seismic events. Where pipeline or facilities are determined to be at risk of damage from an earthquake, projects are completed to reduce the risk. An example of this work was the replacement of the pipeline crossing of the Fraser River between Surrey and Coquitlam by directional drilling in the mid 2000's to install the pipeline below susceptible soils.</p> <p>Through its experience with managing pipelines in the varied terrain of North America, KMC is very aware of the effect of the geologic environment on its pipeline infrastructure. Our Geohazard Management Program is one of the key tools for managing the risks associated with natural hazards to pipeline infrastructure.</p> <p>The design team is considering the ground motions that the proposed corridor would experience at any point along its route for an earthquake with a return period of 2475 years, as outlined in the National Building Code of Canada, and are accounting for both subduction and crustal type events.</p> <p>More details about our seismic safety measures and plans to ensure the proposed pipeline anticipates and mitigates effects of an earthquake can be found at: http://www.transmountain.com/seismic-safety-measures.</p> <p>Trans Mountain is prepared not only for oil releases, but a variety of other emergencies as well, such as fire, security breaches and natural disasters including earthquakes floods, lightning strikes and avalanches (http://www.transmountain.com/seismic-safety-measures) Teams prepare for these worst-case scenarios using the Trans Mountain ERP and the ICS (http://www.transmountain.com/land-spills).</p> <p>Trans Mountain takes responsibility for the cleanup and remediation of spills by responding immediately to any release from the pipeline system, regardless of size or cause, and with the intent of returning the impacted area to its original state. Trans Mountain may be entitled to recover from insurance funds or from third parties and their insurance funds if they are legally responsible for causing the spill. Trans Mountain has a comprehensive risk management policy and substantial spill liability insurance to manage the risk of spills.</p> <p>To ensure there are sufficient funds to remediate a spill, Trans Mountain is covered by insurance necessary to respond to spills or releases from our pipelines and facilities. KMC monitors the insurance program continuously, and makes annual adjustments as necessary to ensure adequate coverage.</p>
<p>I have a new map showing the KMP in the kamloops area going on the west side of the Lac La June Hwy as a new Ajax Mine proposal is being brought forward to change the location of the Tailings Storage area. Is KMC allowing for this possible Ajax mine change in construction as this map shows and assisting their proposal?</p>	<p>We are aware of the recent announcement by the Ajax Mine proponent about a change in the Project plans. However, we have not yet had an opportunity to review the new plan and learn how it may impact the current Trans Mountain system or the proposed TMEP. Pipeline integrity continues to be our primary priority and we will continue to work with the Ajax mine proponent to ensure the safety of the current and proposed pipeline.</p>
<p>As a disabled Burnaby resident with no car and on a fixed income, what possible financial or environmental or social benefit could doubling the risk of filling my backyard and basement with bitumen oil and crowding Georgia Strait with tankers full of oil bring me? I don't really understand the details of either your proposal or the horror stories of past and possible pipeline mishaps, and so, is there any tangible, simple benefit this expansion would bring me as I mow my lawn in the hot August sun? I don't believe Fortis BC needs more oil to heat my little house in the winter. So?</p>	<p>In order to more accurately answer your question about how your property may be affected, could you please let us know your mailing address? Once we have your address, we can determine if your specific property could potentially be affected by the proposed expansion.</p> <p>In terms of financial benefits, the Project is anticipated to generate substantial provincial and municipal tax revenue for British Columbia. Over the life of the Project (based on an assumption of six years of design and construction and 30 years of operations), approximately \$355 million in increased provincial tax revenues are anticipated in British Columbia, as well as additional municipal tax revenues of about \$600 million (\$22 million annually). These financial benefits would also have a link to social benefits, depending on how the taxes are spent by provincial and municipal governments.</p> <p>Our corporate philosophy for the TMEP is to create a "net benefits" impact throughout the pipeline corridor. This means, that in some way, we will leave things a little better than we found them, and create a meaningful legacy for those communities. Additional information on net benefits and our commitment to environmental responsibility is available on our website here http://www.transmountain.com/environmental-responsibility.</p> <p>You can read more about Trans Mountain's spill history at http://www.transmountain.com/spill-history.</p> <p>For more details about the proposed expansion you can call us at 1-866-514-6700, or email us at info@transmountain.com.</p>

TABLE 1.6-6 Cont'd

Question	Answer
<p>How will it be built to withstand a 9.0 magnitude earthquake in British Columbia's mountains, valley, rivers and lakes?</p>	<p>Through its experience with managing pipelines in the varied terrain of North America, KMC is very aware of the effect of the geologic environment on its pipeline infrastructure. Our Geohazard Management Program is one of the key tools for managing the risks associated with natural hazards to pipeline infrastructure.</p> <p>Historically, pipelines have performed well during earthquakes; however we are committed to reducing earthquake risks to the existing Trans Mountain Pipeline. We proactively assess earthquake hazards, considering advancements in understanding about how pipelines perform during seismic events. Where pipeline or facilities are determined to be at risk of damage from an earthquake, projects are completed to reduce the risk. An example of this work was the replacement of the pipeline crossing of the Fraser River between Surrey and Coquitlam by directional drilling in the mid 2000's to install the pipeline below susceptible soils.</p> <p>Earthquakes with magnitudes around 9.0 have occurred historically off the West Coast of Vancouver Island, Washington, Oregon, and northern California. The last such earthquake occurred approximately 300 years ago, and they tend to recur, on average, every 500 years. These great earthquakes are limited to subduction zones off of the West Coast of North America. The closest of these is over 100 km west of Vancouver. However, ground-motion intensity dissipates with distance from an earthquake source.</p> <p>The largest crustal earthquake expected near the pipeline corridor (Magnitude 7.5) would cause stronger shaking than a distant (Magnitude 9) subduction earthquake. The design team is considering the ground motions that the proposed corridor would experience at any point along its route for an earthquake with a return period of 2475 years, as outlined in the National Building Code of Canada, and are accounting for both the subduction and crustal type events.</p> <p>More details about our seismic safety measures and plans to ensure the proposed pipeline design accounts for the possibility of an earthquake can be found on the Seismic Safety page http://www.transmountain.com/seismic-safety-measures.</p>

2.0 REFERENCES

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British Columbia Ministry of Environment. 2010. Provincial Protected Area Boundary Adjustment Policy, Process and Guidelines. Website:
http://www.env.gov.bc.ca/bcparks/planning/docs/boundary_adj_guide.pdf. Accessed:
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APPENDIX A

EMERGENCY MANAGEMENT WORKSHOPS MATERIALS

Handouts:

- ERP Summary Booklet

PowerPoint Presentations:

- Sample PowerPoint used in Edmonton on September 24, 2013



TRANS MOUNTAIN

EMERGENCY RESPONSE PROGRAM SUMMARY



PROPOSED TRANS MOUNTAIN EXPANSION PROJECT

September 23, 2013

TABLE OF CONTENTS

Trans Mountain Pipeline System	3
Emergency Response System Introduction	4
Leak Detection	5
Safe Response Procedures	6
Other Hazards	8
Notifications	9
Incident Command Team	9
Incident Response Organizational Chart	10
Spill and Site Assessment	11
Spill Recovery	12
Protection of Sensitive Areas	15
Wildlife	16
Regulatory Compliance	17
Conclusion	17

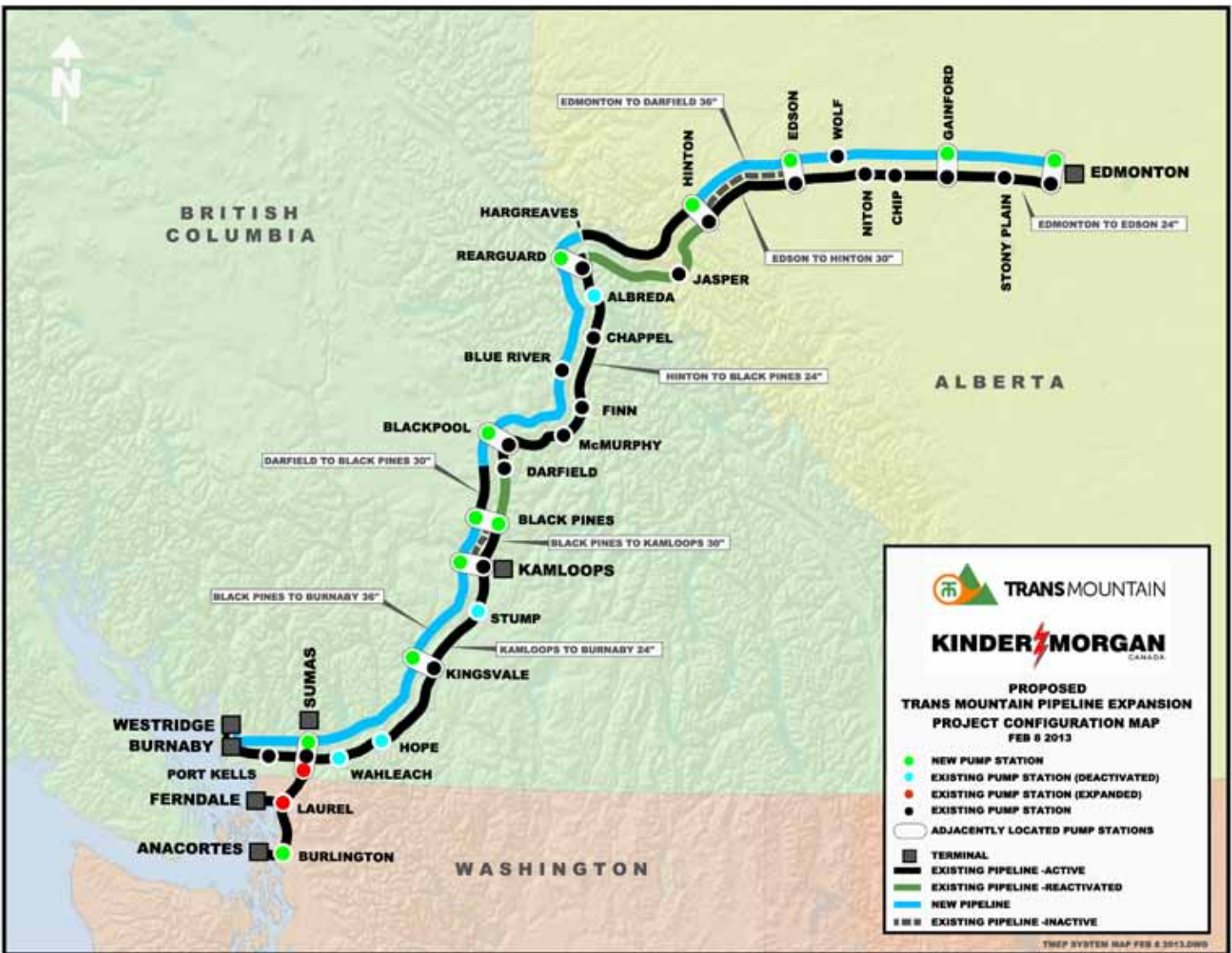
This document describes the Emergency Response Plan in place today. Kinder Morgan Canada continues to engage with communities along the pipeline corridor to review existing plans and consider additional needs in light of the proposed pipeline expansion.



TRANSMOUNTAIN

TRANS MOUNTAIN PIPELINE SYSTEM

The Trans Mountain Pipeline, in operation since 1953, is the only pipeline system in Canada that transports both crude oil and refined products to the West Coast. Spanning 1,150 kilometres, the pipeline moves product from Edmonton to the central BC region, the Metro Vancouver area and the Puget Sound area in Washington State, as well as to other markets such as California, the US Gulf Coast and overseas through the Westridge Marine Terminal in Burnaby.





TRANSMOUNTAIN

The Trans Mountain pipeline transports crude oil, refined and semi-refined products together in the same line. This process, known as “batching,” means that a series of products can follow one another through the pipeline in a “batch train.”

The pipeline varies in diameter from 24 inches to 36 inches and carries a wide variety of product from heavy crude oil to lighter refined products such as gasoline and diesel. The originating terminal in Edmonton has 19 storage tanks with a total capacity of more than 2.5 million barrels of storage. Other intermediate stations also have some tankage for system flexibility with Burnaby being the next largest at 13 tanks allowing about 1.6 million barrels of storage. The scale of these facilities underlines the important role this system plays in providing energy to British Columbia and Washington State.

Emergency Management Response System Introduction

Trans Mountain is committed to being prepared for emergencies across the system. The most important aspect of this preparedness is to prevent an emergency from occurring at all. The company has a number of programs in place to prevent problems including community and contractor awareness programs, pipeline integrity verification programs and regular surveillance of activity near the right-of-way (ROW). Trans Mountain also has 24-hour monitoring by dedicated control centre operators backed by leak detection programs.

However, if a pipeline leak or other emergency should occur, Trans Mountain is prepared to react quickly and effectively. This summary outlines the basic standards and training procedures that Trans Mountain regularly undertakes to use in the event of an emergency.

Trans Mountain uses the Incident Command System (ICS) to manage incidents. ICS outlines clear roles and responsibilities with respect to emergency response and includes Unified Command for co-ordination with federal, provincial, municipal and Aboriginal agencies. We work closely with local emergency responders and regularly practice table-top and deployment exercises. If an incident were to occur, we can act quickly to protect our employees and the public as well as mitigate any harm to the environment or property.

This system allows each group to focus on its own specific tasks, knowing that others have full responsibility for other work. This prevents multiple groups from trying to accomplish the same task.



TRANS MOUNTAIN

The system recognizes that some emergency situations are smaller in magnitude than others and breaks them down into three categories:

Level 1 – Involves moderate public and environmental exposure and can be handled locally

Level 2 – Involves potential issues beyond the resources of local management with significant public and environmental exposure

Level 3 – Requires maximum Trans Mountain and third-party response

Leak Detection

Pipeline leaks can be identified in many different ways but the primary methods are through automated leak detection systems or reports from company personnel and the public. Trans Mountain makes sure that its emergency phone number is highly visible on signage across the system and that land owners know what to do if a line leak is suspected.

Pipeline operating conditions are monitored 24 hours a day, seven days a week by personnel in control centres using a Supervisory Control and Data Acquisition (SCADA) computer system. This electronic surveillance system gathers data such as pipeline pressures, volume and flow rates and the status of pumping equipments and valves. Whenever operating conditions change, an alarm warns the operator on duty and the condition is investigated. Both automated and manual valves are strategically placed along the pipeline system so the pipeline can be shut down immediately and sections can be isolated quickly if necessary.

Visual inspections of the pipeline right-of-way are conducted by air and/or ground on a regular basis. The right-of-way is a narrow strip of land reserved for the pipeline. Above ground marker signs are displayed along the ROW to alert the public and contractors that the pipeline is there.





Safe Response Procedures

In the event of a release that could impact local residents or the environment, Trans Mountain will call 911 to notify and activate local community emergency response organizations. Based on the significance of the event, company personnel will also notify local residents by going door to door, supplemented by periodic press releases.

When releases occur, the company sets up an air monitoring program for the protection of responders and local area residents. In the unlikely event that hydrocarbon vapours reach unsafe concentrations in the community, the local police force will be advised to begin evacuation.

When a pipeline issue occurs, the natural inclination of first responders is to immediately travel to the site to solve the problem. This response can be dangerous and may compound the existing problems. First responders must first assess the situation and make sure that responders and the public are kept safe during the response.

The Trans Mountain Pipeline system contains a number of oil products that need to be understood before a response plan is undertaken. These products vary from light hydrocarbons like gasoline to heavy liquids such as heavy oil and many others in between. Some of these fluids contain small amounts of hydrogen sulphide (H₂S) and benzene which can be harmful with exposure. In addition, all pipeline products have a certain level of volatility when exposed to air and potential ignition sources.





The first responder needs to understand these issues and develop an initial health and safety plan before moving into a response mode. This plan should include:

- Initial hazard assessment and potential concerns specific to the site
- Types of safety equipment required for first responders
- Isolation of the spill area from the public and affected parties
- Notification of other parties that may be affected
- Assignment of responsibility for those on site

The initial plan should assume material with high volatility that produces potentially hazardous breathing conditions and is unhealthy for eye or skin contact. This conservative approach is warranted until the actual conditions have been tested. Only those with the appropriate safety equipment and emergency response training should be allowed on (or near) the site.

The initial health and safety plan must be fairly comprehensive with rules for those responding to follow:

- Muster personnel upwind and uphill of the spill area whenever possible
- Vehicles and other potential sources of ignition should be kept well away from the site
- Approach the spill from uphill and upwind if possible
- Only enter the spill area once the initial plan is completed and full safety gear is in place
- Any movement in the restricted zone requires the “buddy system” at all times
- A decontamination site should be established early in the response planning

Any initial response personnel will have to be equipped with the following:

- Standard safety gear such as hard hat, safety boots, safety glasses, work gloves and fire-resistant coveralls
- Respiratory protection which may include carbon filter respirators and/or breathing air tanks
- Vapour monitoring equipment to measure potential explosive atmosphere and air quality

Once the initial on-site inspection of the spill has been completed, a more comprehensive spill response and safety plan can be developed for the area.



Other Hazards

In addition to spills, Trans Mountain personnel must be prepared to deal with a number of other natural hazards that could threaten personnel safety and the integrity of the pipeline system. These hazards include:

- Fire and explosion at facilities
- Natural disasters:
 - Tornadoes
 - Earthquakes
 - Floods
 - Avalanches
 - Forest Fires
- Security incidents:
 - Bomb threat
 - Breach of security

All of these hazards need to be recognized and mitigated where possible by careful operating and maintenance practices. The largest risks are when one of these hazards sets off an uncontrolled release of petroleum products from the system. Generally, the response to these threats involves appropriate initial response from the control centre and local operations personnel who are trained in these situations.

Notification of a hazard usually goes to the control centre from Trans Mountain operations, municipal first responders or the public. This notification starts a process that quickly moves to risk mitigation and on-site verification of a concern. The primary concern is safety of the public and employees, so steps have been developed to address the risks.

If the control centre considers the risks to be great, the pipeline system will be shut down and isolated. In some cases, the problem is isolated from the main operation and can be handled locally. In other cases, a comprehensive evaluation of an area is needed to determine any damage to the pipeline or right-of-way before restarting.

Operations groups across the pipeline system maintain a close working relationship with emergency first responders in their area and work together to prepare for situations that require multiple resources to respond. These key relationships are important when dealing with major problems near the pipeline.



Notifications

Trans Mountain has in place a comprehensive contact list of individuals, municipalities and organizations that might be affected in the event of a spill. This includes regulators such as the Transportation Safety Board and the National Energy Board (NEB).

The first contact for a potential spill is the control centre operator, who manages the pipeline system operation at all times. The operator then implements the Emergency Response Line System which initiates a conference call for company employees to discuss incident information, immediate safety requirements, government and other notifications as well as response actions.

Incident Command Team

Initial notification of a pipeline spill activates the ICS team. An incident commander is designated early in the process to provide a unified approach to the problem and to make sure that all parties are being guided by a single, responsible individual. Depending on the complexity of the problem, team leaders will be designated for the roles of operations, planning, logistics and finance. In some cases, a Unified Command may be established with government agencies.

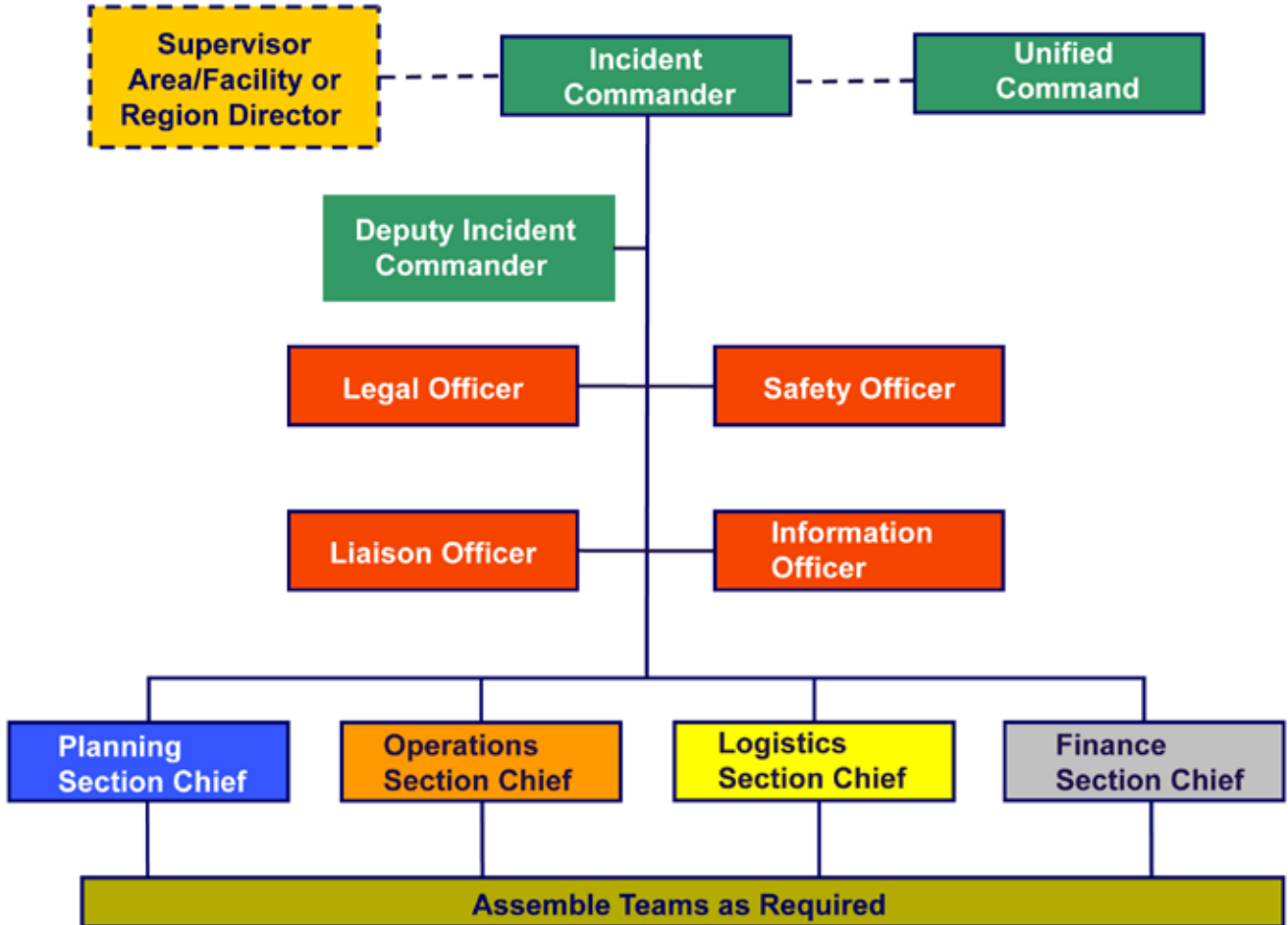
Other functions assigned early in the process are safety officer, liaison officer and information officer. The safety officer must establish the initial health and safety plan for the site and identify hazards. This officer will then develop hazard mitigation plans so the response team can engage the spill in a safe manner.

The liaison officer makes sure that all necessary groups are contacted, made aware of the issues and kept up to date as the situation changes. This role of ongoing contact and regular updates is an important part of the success of any emergency response. Trans Mountain's goal is to provide full notification to the regulatory bodies (such as municipalities, fire departments and fisheries) based on their requirements.

The information officer will be the primary contact for all external communications including the public and the media. This person must establish contact and set up a communication plan to make sure these parties have the necessary information about the incident. This includes setting up a media relations centre and providing regular media updates.



Emergency Response Team





Spill and Site Assessment

The assessment of a potential spill site is an important step in developing mitigation plans. This information is needed quickly and must be performed by knowledgeable staff who understand spill response and capabilities. However, it is most important that this assessment is done safely since the number of unknown variables are likely higher than at any other time.

Safety gear and equipment are necessary to protect those performing this task. Site assessment team members wear respirators for all initial assessments and adjust the equipment required based on the initial findings at the site. Team members will not remain in the area if the LEL (lower explosive limit) meter reads more than 10 per cent.

The tasks of the initial assessment team are varied and include:

- Vapour monitoring including wind direction
- Assistance to any potentially injured parties
- Confirmation of spill source if possible
- Isolation of spill source if practical and safe
- Estimation of spill volume, rate and direction of travel
- Redirection or blocking of spill contents if practical and safe
- Assessment of whether spill is reaching water channels or drainage systems

Another potential component of the initial assessment is a shoreline assessment, which is usually done on foot. The assessment team will try to approach any shoreline contamination from the safest area, but will be limited by the terrain and shoreline conditions. Issues such as tides, winds, debris and wildlife may affect the approach to the site. This assessment may be completed later than the original site assessment and the on-water assessment, depending on conditions as they develop. All of these assessments can only be done under safe conditions. If the team detects unsafe conditions, the assessment teams will be pulled back until safe working conditions can be re-established.



Spill Recovery

Spill recovery is usually most effective if it takes place close to the initial spill location. While public risk and other site conditions must be considered, avoiding contamination of intermediate waypoints away from the spill site is required.

Trans Mountain has stationed a number of large truck trailers filled with spill recovery equipment across the system. Called Oil Spill Containment and Recovery (OSCAR) trailers, they contain the protective and recovery equipment required on a spill site.

If required, Trans Mountain can call on a number of highly qualified spill response contractors including the Transport Canada certified Western Canada Marine Spill Response Corporation

Since all oil products are liquids, like water they will seek channels to flow elsewhere. One of the primary goals of the spill recovery team is to control migration away from the spill site.





Emergency response plans include designation of control points along rivers and streams. These control points are pre-determined locations that may be favourable for the recovery of oil in a watercourse, depending on the conditions at the time. These locations usually include:

- Safe working space for emergency response personnel
- Good access for spill recovery equipment
- Slower water speeds to improve recovery effectiveness
- Favourable anchor points to improve boom installation

A significant amount of work goes into designating these locations, mapping the sites and developing specific plans for spill recovery. Trans Mountain crews use these exact locations periodically to prove their effectiveness and train for possible problems.

Oil can be blocked using a number of different techniques, which are taught to crews during training exercises. Often local materials and/or sandbags can be used to develop containment berms. Interceptor trenches can be used to direct free oil to areas so vacuum trucks can evacuate the material. Speed of recovery is a significant factor in the recovery success. Oil that is not recovered quickly can evaporate into the atmosphere or penetrate into the ground.



Inverted weir dam allows clean water to flow from the bottom so floating oil is blocked at the surface

If oil has already entered a local watercourse, the techniques for recovery become more complex. The smaller creeks and streams may accommodate a weir of sand bags with an inverted pipe to allow clean water to bypass while trapping the oil on the surface behind the weir. This will usually only work in areas of low flow and if there is enough room to establish a calm area upstream to allow the oil to stay on the surface.



TRANSMOUNTAIN

Techniques used to recover oil vary significantly depending on the recovery location and conditions. Some of the factors that influence the techniques are:

- Water velocity
- Wind conditions
- Turbulence
- Temperature
- Type of material
- Access to site from land
- Boating conditions

Water velocity is important since oil recovery booms are generally more effective in low velocity areas. Teams will use areas of low velocity or back-channels to allow the recovery crews to stabilize and recover oil from the water. Booms are used to redirect surface oil to a central point and allow it to concentrate to improve recovery success with oil skimmers. Often multiple booms will be used for deflection or secondary containment, depending on access and availability.



Multiple deflection booms deflect floating oil towards shore



Spills that occur in frozen conditions are particularly challenging, but Trans Mountain crews are trained in specialized techniques to recover oil. Cold weather exercises are attended regularly by Trans Mountain crews to learn the skills necessary to address these safety and recovery issues. The OSCAR trailers that are located across the Trans Mountain system have specific cold weather recovery equipment for such situations.

Protection of Sensitive Areas

Trans Mountain has identified sensitive areas along the pipeline route so they will be immediately recognized as such in an emergency. These sensitive areas can vary from wetlands and vulnerable shorelines to Aboriginal fishing areas. These areas will receive a high priority for protection using techniques such as deployment of isolation booms or sorbent material installed adjacent to the sensitive area.

The intent of this isolation is to minimize the activity in the area and deflect material to a less sensitive area for recovery and clean up. If this material cannot be deflected, significant effort will be applied to the site while still attempting to minimize any effects on the environment.



Ice auguring creates pathways for oil to float to the surface for removal



Exclusion boom is deployed across or around sensitive areas and anchored in place to deflect or contain approaching oil



Deflection boom diverts oil away from the sensitive area to a less sensitive location for recovery



Skimmers are used on concentrated quantities of pooled oil

Cleaning any residue from a sensitive area will be done after consultation with government agencies and other stakeholders. Disposal of contaminated materials including soils and emergency response items will be handled according to regulations in consultation with the appropriate regulators.

Wildlife

An important component to any pipeline incident is to minimize the effect on wildlife. Although birds are often the most recognized wildlife affected by spills, planning for the protection of wildlife includes fish, reptiles, mammals, amphibians and invertebrates. Trans Mountain recognizes that an effective response includes standard systems and procedures for protecting animal welfare, but also requires significant technical knowledge of the types of issues that can affect animals in these situations.



A proactive response strategy involves encouraging wildlife to move from the area and putting in place a system early to deal with wildlife that has already been affected. This may involve setting up search and collection teams, setting up cleaning stations and bringing in expertise to deal with specific animal species. Trans Mountain uses specialized wildlife contractors who will be brought in to assist with the detailed and persistent workload of dealing with animals under stress. All groups in wildlife rehabilitation need to be trained in the health and safety issues associated with cleaning oil products from animals.



Regulatory Compliance

The Trans Mountain pipeline crosses two provinces and into the United States, and is therefore federally regulated. The primary regulations of the system is the Onshore Pipelines Regulations (NEB) but a number of other regulations also affect the daily operation of the system. These include:

- Canada Fisheries Act
- Canadian Environmental Protection Act
- Transportation of Dangerous Goods Act
- Alberta Environmental Protection and Enhancement Act
- Provincial Emergency Response Programs
- BC Waste Management Act

Trans Mountain is committed to complying with these regulations and co-operating with the regulators in the event of a pipeline emergency.

Conclusion

Trans Mountain operates a large diameter pipeline over some very challenging terrain in Alberta and British Columbia. The company's goal is to make sure that all employees receive the training necessary to protect themselves, the public, the local community and the environment during an incident. The staff understands the necessary steps to react effectively in the event of a pipeline spill or other emergency. Safety and environmental protection are important issues and crews are regularly trained in actual field locations to practice the skills necessary in an actual incident.

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Trans Mountain Emergency Response Management

Dean Monterey, Emergency Management Specialist
September 24, 2013
Edmonton, AB



For Discussion



- Trans Mountain Pipeline
 - History
 - Current Operations
 - Proposed Expansion
- Emergency Response Management
 - Current ERP
 - Pipeline safety features
 - KMC and first responder emergency response procedures
 - KMC emergency response exercises
 - Planning for proposed expansion
- Conclusion & Next Steps

CELEBRATING



YEARS OF SERVICE **1953** to **2013**

Trans Mountain Pipeline – 60 Years of History

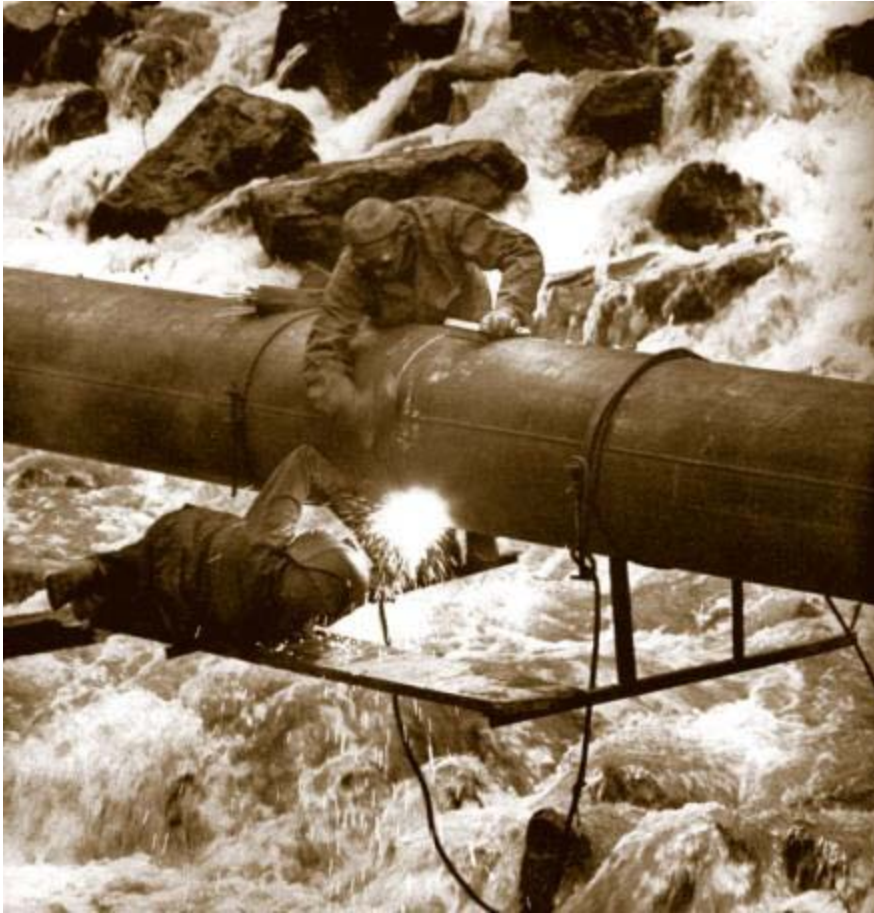


Origin



- Conceived in 1950 as a strategic asset for a reliable energy supply to the defensive strength of Canada and the United States
- The Parliament of Canada passed the Act that created the Trans Mountain Oil Pipeline Company on March 13, 1951

Building



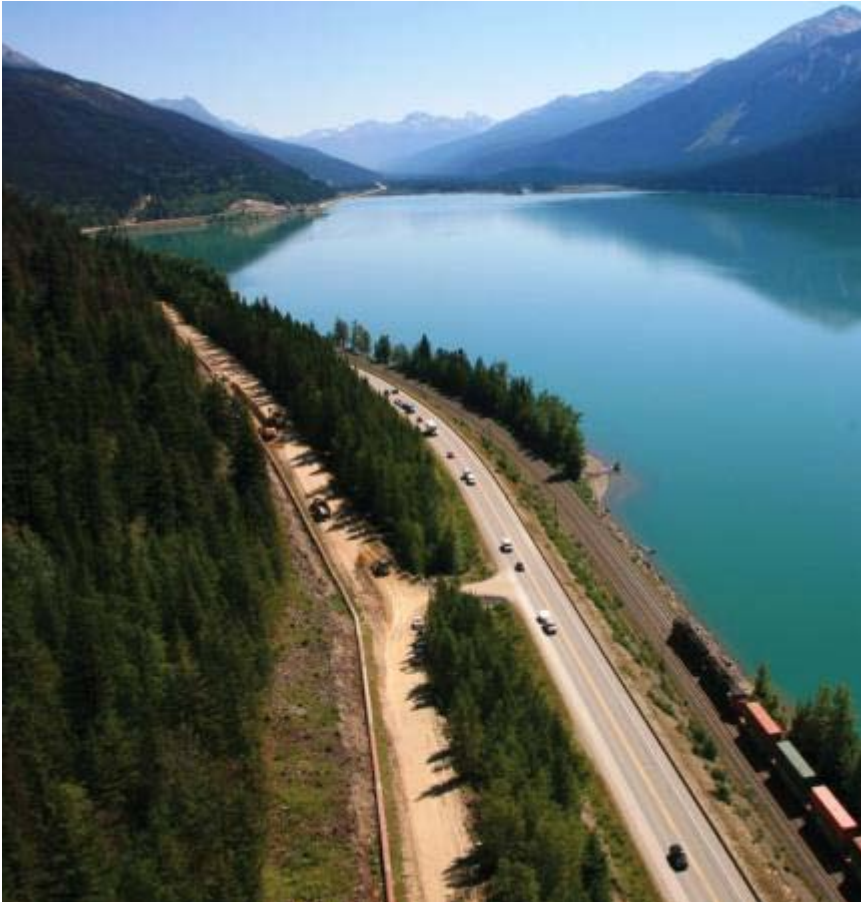
- With cooperation between Canada and the US and the oil industry, the Trans Mountain Pipeline was built in 1952
- Extraordinary engineering accomplishment
- Line crosses Rockies and mountains in Central BC
- Crosses under Fraser River into Burnaby

Operation



- First oil flowed through the 1,150-kilometre line on October 17, 1953
- Initial capacity was 150,000 barrels per day with four pump stations along the line and a marine loading dock
- Trans Mountain is part of more than 100,000 km of underground pipeline in Canada that transport our daily crude and natural gas production

Today



- About 30 per cent of the system has been twinned
- Moves crude oil and refined petroleum products
- Current capacity is 300,000 barrels per day
- Kinder Morgan Canada does not own the products that are transported
- Products belong to customers
- Westridge Marine Terminal in Burnaby: only western Canadian marine loading facility connected to a federally-regulated pipeline

Supply

- Current capacity 47.7 million litres or 300,000 barrels capacity per day



- Equivalent to a tanker truck leaving Edmonton for Vancouver every minute
- Ability to transport multiple products in batches up to 350 km long travelling at 5 km/hr:

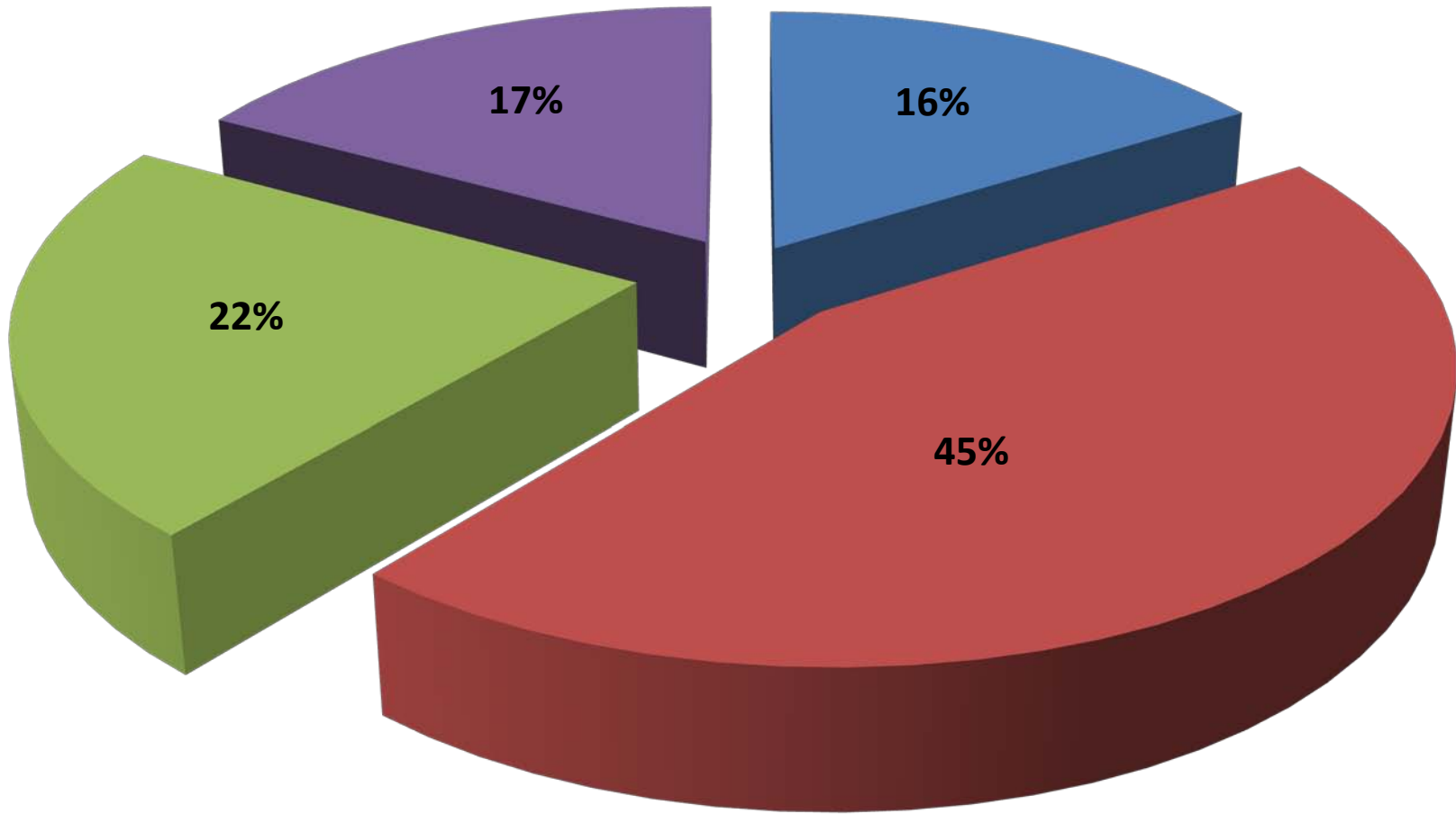


TMPL Throughput 2012



2012 Trans Mountain Pipeline Throughput by Product Type

■ Refined Products ■ Light Crude ■ Heavy Crude ■ Synthetic Crude



Pipeline Terminus

- Main pipeline from Edmonton ends at Burnaby Terminal
 - Short-term storage of crude oil and refined products
 - Distribution point for refined products to Suncor and Imperial Oil and crude oil to Chevron Refinery and Westridge Marine Terminal
- Westridge Marine Terminal current marine traffic
 - Approximately five tankers per month
 - Less than 3% of marine traffic in Port Metro Vancouver





TRANS MOUNTAIN – PROPOSED EXPANSION PROJECT

Proposed Scope of Expansion Project



- Jan. 10, 2013: Kinder Morgan announced an update to the proposed scope of the project
- This update is based on revised 15- and 20-year commitments from shippers to use the line
- The proposed expansion to increase capacity to 890,000 barrels per day
- Projected capital cost: Approximately \$5.4 billion



Proposed Scope of Expansion Project



- Result: a dual-line operation – twinned pipeline (approximately 980 km of new pipeline) with:
 - Existing line– lighter products
 - The proposed new line for heavier oils
- 36-inch pipeline diameter
- 11 new pump stations for a total of 35 pump stations along the route

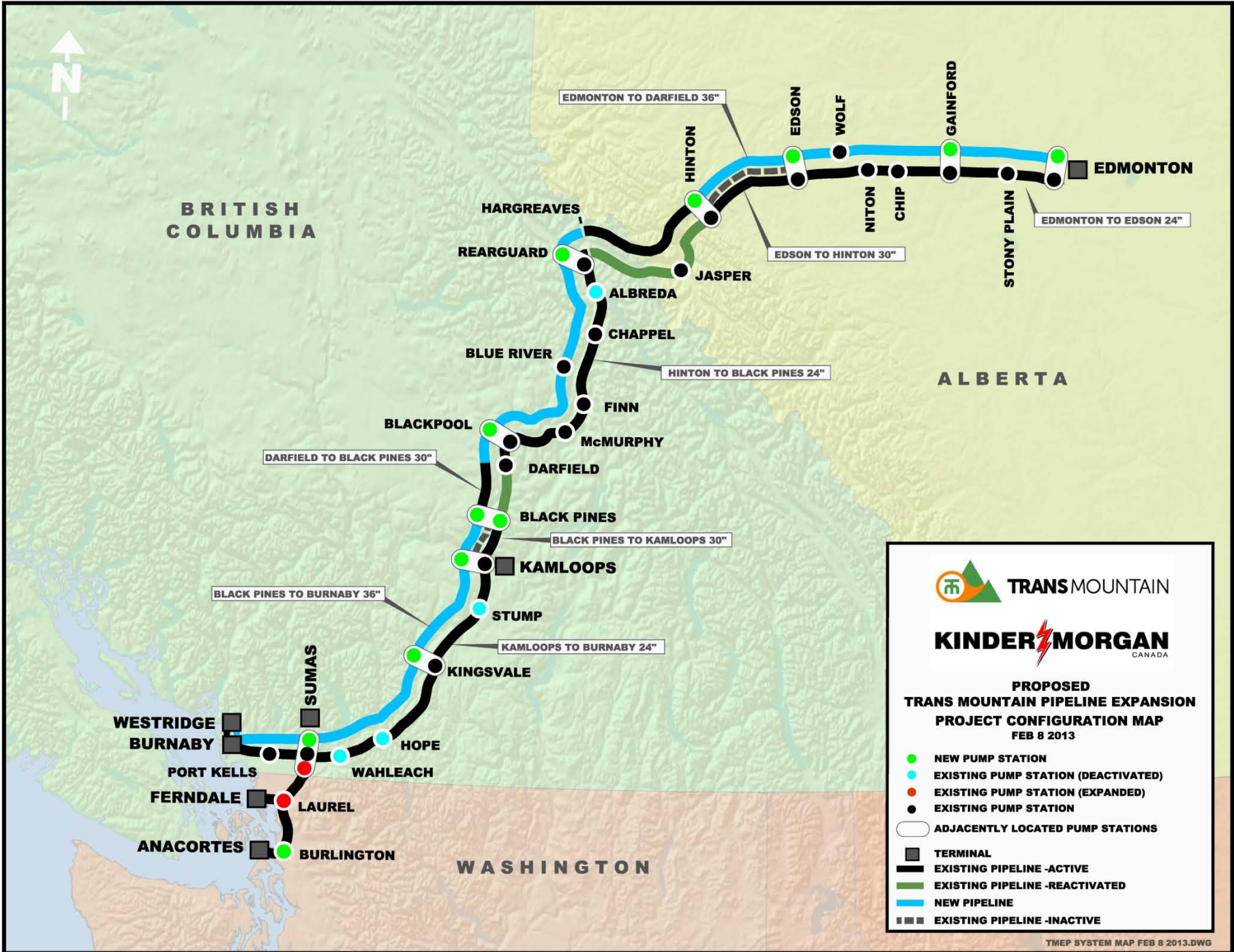


Proposed Scope of Expansion project



- Estimated 21 new storage tanks at existing facilities in Edmonton, Sumas and Burnaby for a total of 61 tanks along the route
- Three loading berths plus one utility berth at the Westridge Marine Terminal





Trans Mountain Expansion Schedule



Application Preparation
1.5 years

Commercial
(Tolling)
Approvals

Regulatory Approvals
2 years

Construction
2 years

2012

2013

2014

2015

2016

2017

**Start of
Operations**

Next Steps

- Facilities Application to be filed to the National Energy Board in late 2013
- This will initiate the NEB's comprehensive review of the application
- Public participation in the review
- Decision to be made in 2015





PIPELINE SAFETY AND EMERGENCY RESPONSE

Pipeline Safety



Pipelines remain the safest and most efficient method for transporting petroleum products

Introduction: Pipeline Safety today



- The most important aspect of preparedness is to prevent an emergency from occurring at all
- There are a number of programs in place to prevent problems including:
 - community and contractor awareness programs
 - pipeline integrity verification programs
 - regular surveillance of activity near the right-of-way
 - 24-hour monitoring and leak detection programs

CAER Program



Community
Awareness
Emergency
Response



Signage



Road Markings

- Marks pipeline in roadways

Aerial Patrol Marker

- Used for right-of-way (ROW) surveillance

Casing Vent

- Three-inch pipe for conducting vapour tests of interior of casing

Vent Marker

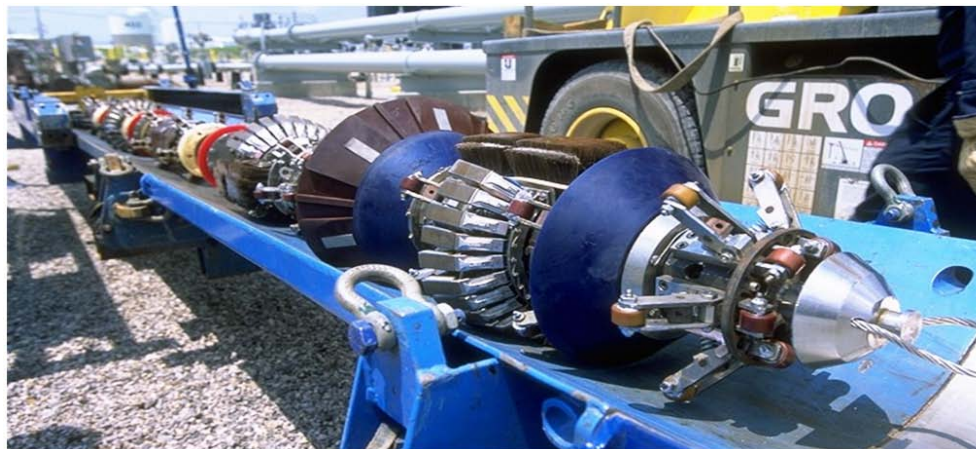
- Shows where a vent is located

Right-of-Way Sign

- Signs installed on the ROW **DO NOT** indicate the exact location of the pipe – they are only there to mark the proximity of a pipe and provide information
- Emergency information is on all signs
- On average, 70m apart/220 feet

Pipeline Integrity

- The pipeline has anti-corrosive protective coatings and a cathodic protection system to prevent rust and corrosion
- “Smart Pig” tools are a technology used to detect changes in pipeline condition and wall thickness



- We conduct regular aerial and ground patrols of the pipeline to look for any irregularities or unauthorized activities along the pipeline corridor

Leak Detection



Trans Mountain is committed to being prepared for emergencies across the system:

- Control Centre Operations staff operate and monitor the pipeline 24/7 year round from a Control Centre in Edmonton
- The Supervisory Control and Data Acquisition (SCADA) system monitors the pressures and operating conditions of the pipeline
 - Information is transferred from SCADA to the Leak Detection system in real time
 - If pipeline flow or pressure changes outside of prescribed norms, an alarm will alert the operator
- Both automated and manual valves strategically placed along the pipeline system so the system can be shutdown if necessary to isolate sections of the pipeline for investigation

Emergency Actions



What KMC does:

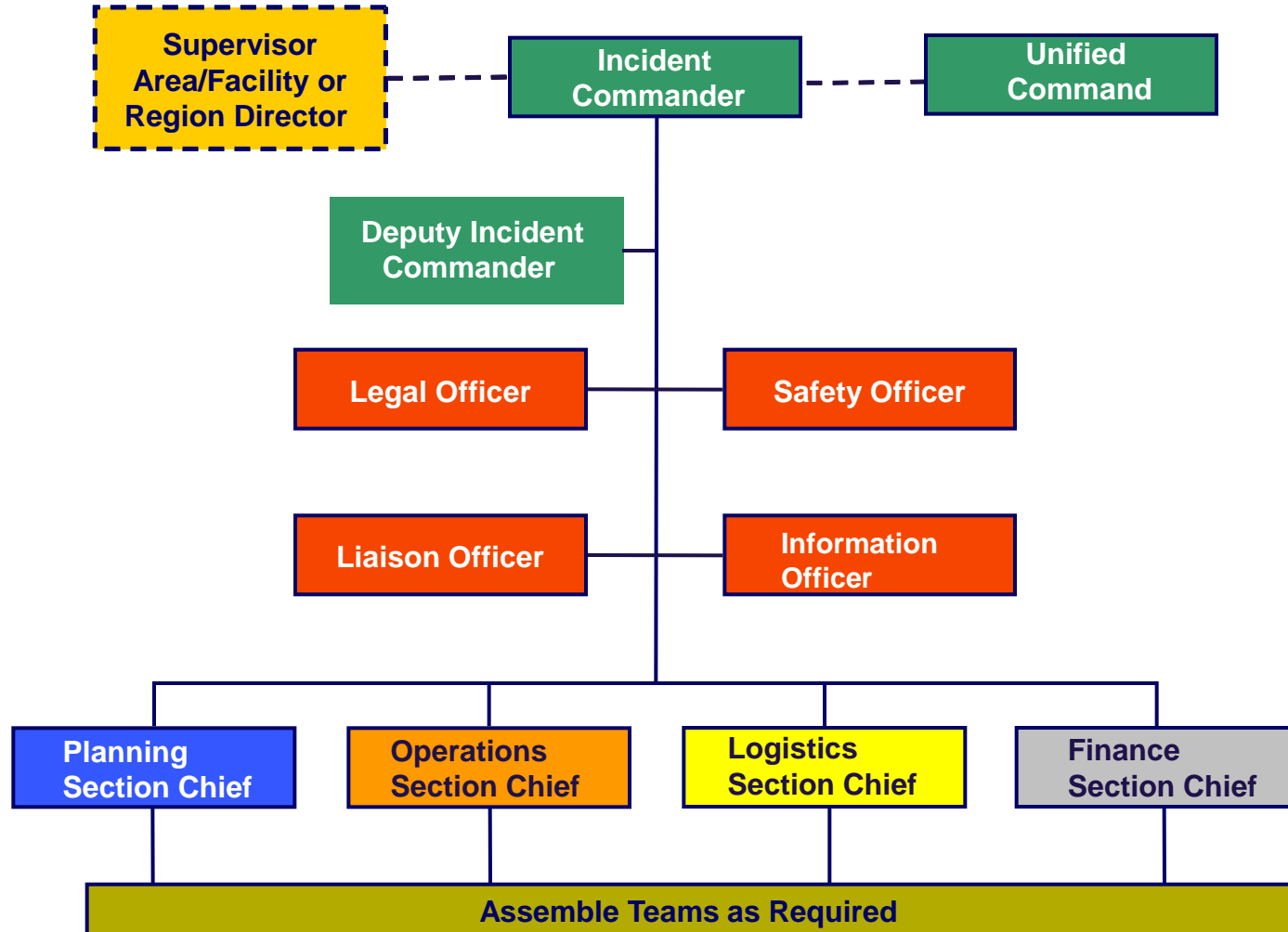
- Shut down the pipeline
- Isolate the pipeline segment
- Identify products in the pipeline
- Monitor and assess hazards (incl. air monitoring)
- Manage spill containment and recovery
- Provide technical information to first responders

Team Approach



- Establish a Unified Command – outlines roles and responsibilities for operations, planning, logistics and finance.
- Safety Officer - establishes the initial health and safety plan for the site and identifies hazards
- Liaison and Information Officers
 - Provide community contact
 - Provide agency liaison
 - Provide media relations

Incident Command



Spill and Site Assessment

Tasks of the initial assessment team are varied and include:

- Vapour monitoring including wind direction
- Assistance to any potentially injured parties
- Confirmation of spill source if possible
- Isolation of spill source if practical and safe
- Estimation of spill volume, rate and direction of travel
- Redirection or blocking of spill contents if practical and safe
- Assessment of whether spill is reaching water channels or drainage systems
- Shoreline assessment

Assessments will only occur under safe conditions

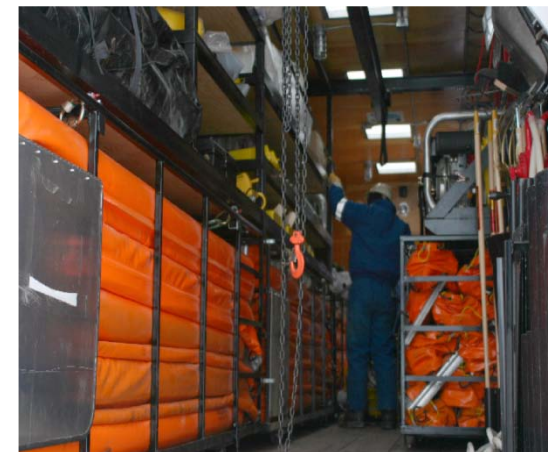
Spill Recovery and Containment

Trans Mountain is responsible for cleanup and remediation of incidents related to its operations along the pipeline corridor

- Recovery takes place close to the initial spill location
- Equipment strategically stored at field sites
- Recovery speed is the critical factor in success
- Can be on site within minutes to three hours of equipment call

OSCAR Trailer

- Oil Spill Containment and Recovery = OSCAR
- # of trailers along the line???
- 1,200 ft of 12-inch river boom
- Personal protective equipment
- Generators, skimmers
- Pumps
- Portable storage
- Other ERP-related equipment



Spill Recovery and Containment



- One of the primary goals of the spill recovery team is to control migration away from the spill site.
- Emergency response plans include designation of control points along rivers and streams.
 - Control points are pre-determined locations
 - Identified as favourable for the recovery of oil in a watercourse, depending on the conditions at the time.
- Control points usually include:
 - Safe working space for emergency response personnel
 - Good access for spill recovery equipment
 - Slower water speeds to improve recovery effectiveness
 - Favourable anchor points to improve boom installation

Recovery and Containment Techniques

- Containment berms of local materials and/or sandbags
- Interceptor trenches direct free oil to areas so vacuum trucks can evacuate the material
- Booms redirect surface oil on waterways to a central point and allow it to concentrate to improve recovery success with oil skimmers
- Factors which influence choice of techniques include:
 - Water velocity
 - Wind conditions
 - Turbulence
 - Temperature
 - Type of material
 - Access to site from land
 - Boating conditions



Protection of sensitive areas & wildlife



- Sensitive areas identified along the pipeline range from wetlands and vulnerable shorelines to Aboriginal fishing areas
- Areas receive high priority for protection
 - Goal is to minimize the activity in the area and deflect material to a less sensitive area for recovery and clean up
 - Disposal of contaminated materials including soils and emergency response items will be disposed of appropriately in consultation with regulators
- Planning for the protection of wildlife includes fish, birds, reptiles, mammals and invertebrates
 - Early on wildlife is encouraged to move from the area and a system is put in place to deal with wildlife that has already been affected

Other Hazards

- Fire and explosion at facilities
- Natural disasters:
 - Tornadoes
 - Earthquakes
 - Floods
 - Avalanches
 - Forest Fires
- Security incidents:
 - Bomb threat
 - Breach of security

Regulatory Compliance



The primary regulations of the system is the Onshore Pipelines Regulations (National Energy Board) but a number of other regulations also affect the daily operation of the system. These include:

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- Transportation of Dangerous Goods Act
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- BC Waste Management Act

Trans Mountain is committed to complying with these regulations and co-operating with the regulators in the event of a pipeline emergency.



PLANNING FOR A PROPOSED EXPANSION

Trans Mountain Expansion Schedule



Application Preparation
1.5 years

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(Tolling)
Approvals

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2 years

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2 years

Start of
Operations

2012

2013

2014

2015

2016

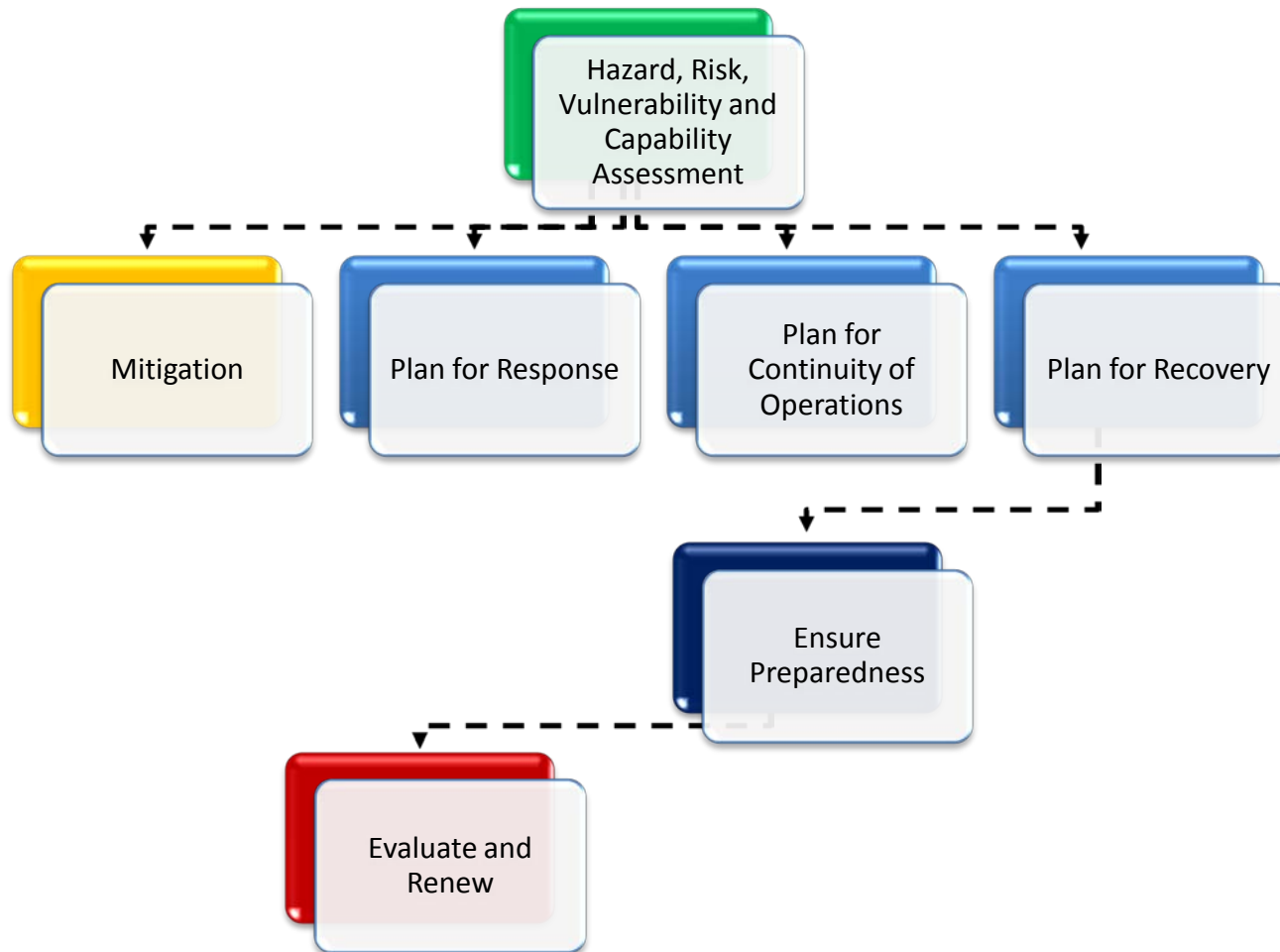
2017

Emergency Response



- KMC's top priority is pipeline safety and emergency response
- From engagement to date, pipeline safety and emergency response consistently topic of most interest
- KMC supportive of BC Government's Five Conditions, two related to emergency response
- As part of the proposed TMEP, next steps include
 - Continuous improvement of KMC's emergency response equipment and strategies
 - Review and enhancement of Emergency Response plans with input from BC Provincial Government, municipal Emergency Managers and First Responders
 - Addition of resources where required (equipment or training) to KMC's complement

Seven Objectives



Two Biggest Risks

- Third Party Strikes
- Geotechnical



Proposed Expansion - Approach



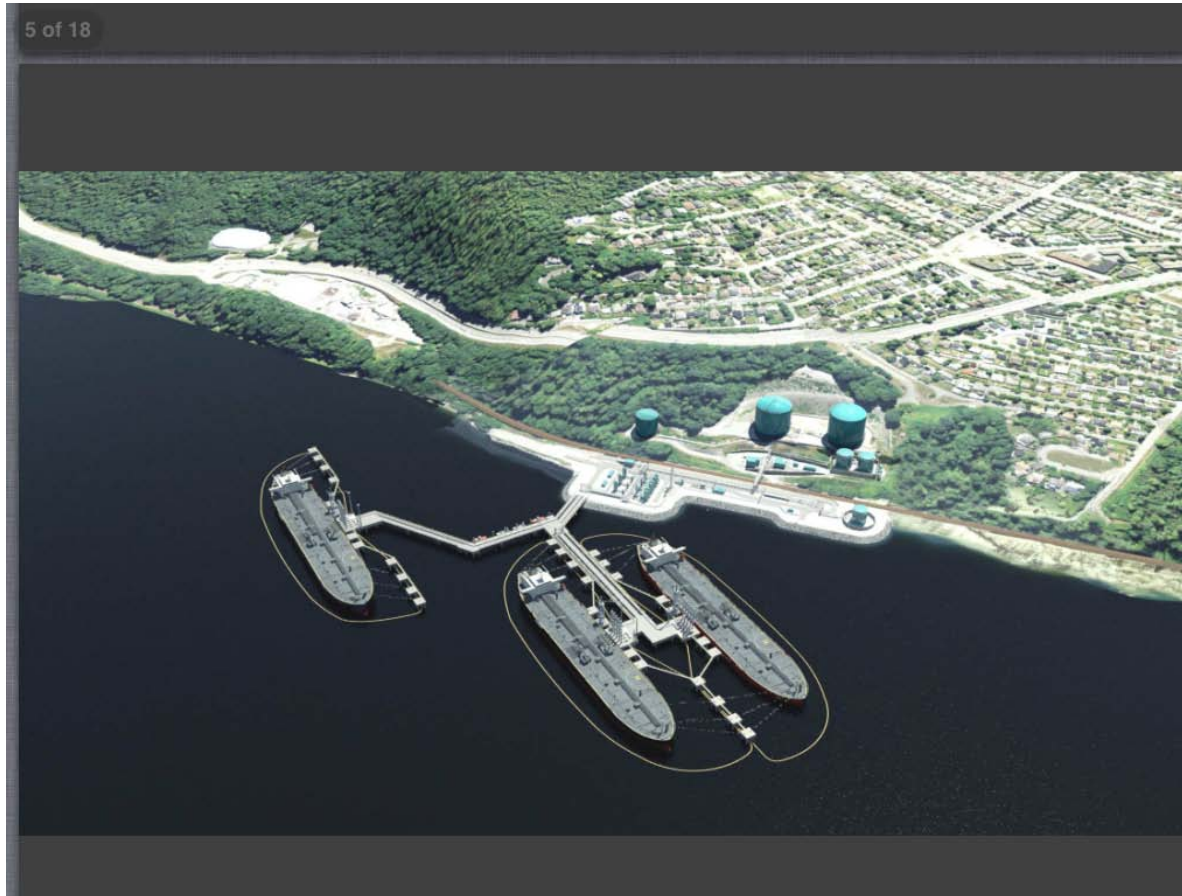
- Continue with ICS compatible with ICS Canada
- Modify ERP's to reflect new facilities/ops
- Refresh Control Points – move to tactical worksheets
- Meet BC Conditions that affect emergency management
- Fire systems – saltwater backup pumps etc.

Engagement

- Expand engagement program



Westridge Terminal



Bottom Line

- We want to:
 - Prevent it
 - Reduce it
 - Hit it Fast
 - Hit it Hard
 - Restore it Quickly



We want to hear from you



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APPENDIX B

LAC DU BOIS GRASSLANDS TOUR MATERIALS

Handouts:

- Planning and Permitting a 36" Diameter Pipeline Through a UNESCO World Heritage Site: Jasper National Park and Mount Robson Provincial Park, Canada
- Restoration of the TMX - Anchor Loop Project in Jasper National Park
- Proposed TMEP Draft Study Corridor Map - Kamloops to Jacko Lake Area, BC
- Existing and Proposed Alternates Map for the Lac du Bois Grassland Protected Area

Planning and Permitting a 36" Diameter Pipeline Through a UNESCO World Heritage Site: Jasper National Park and Mount Robson Provincial Park, Canada

Jason K. Smith, TERA Environmental Consultants, Margaret Mears, Kinder Morgan Canada Inc. and Howard Heffler, H.R. Heffler Consulting Ltd.

The Trans Mountain pipeline system was constructed in 1952 and 1953 and is the only Canadian crude oil pipeline to service markets on the west coast of Canada. The Trans Mountain Expansion (TMX) - Anchor Loop Project (or "the Project") entailed looping a portion of this pipeline system which traverses Jasper National Park and Mount Robson Provincial Park, a United Nations Educational, Scientific, and Cultural Organization (UNESCO) Canadian Rocky Mountain Parks World Heritage Site. The UNESCO designation recognizes areas of: exceptional natural beauty and aesthetic importance; significant landforms or geomorphic features; outstanding examples of plant and animal communities and ecosystems; and biological diversity and threatened species. Planning and permitting was initiated in 2004 and construction of the pipeline was completed in 2008. This paper explores the strategic planning and decision-making that went into receiving project approval, from the unique stakeholder engagement process that resulted in no interventions at the public hearing by non-governmental organizations at the public hearing, and the extent to which the Project went beyond merely minimizing impacts and in some instances enhancing the ecological and commemorative integrity of the parks. Consequently, the research and field work conducted in support of the environmental assessment report exceeded normal industry practice for any similar project of which the authors are aware. The concept of 'net gain' to the parks and to various stakeholders was a fundamental underpinning of the consultation process. Examples of the additional care and net gains are presented.

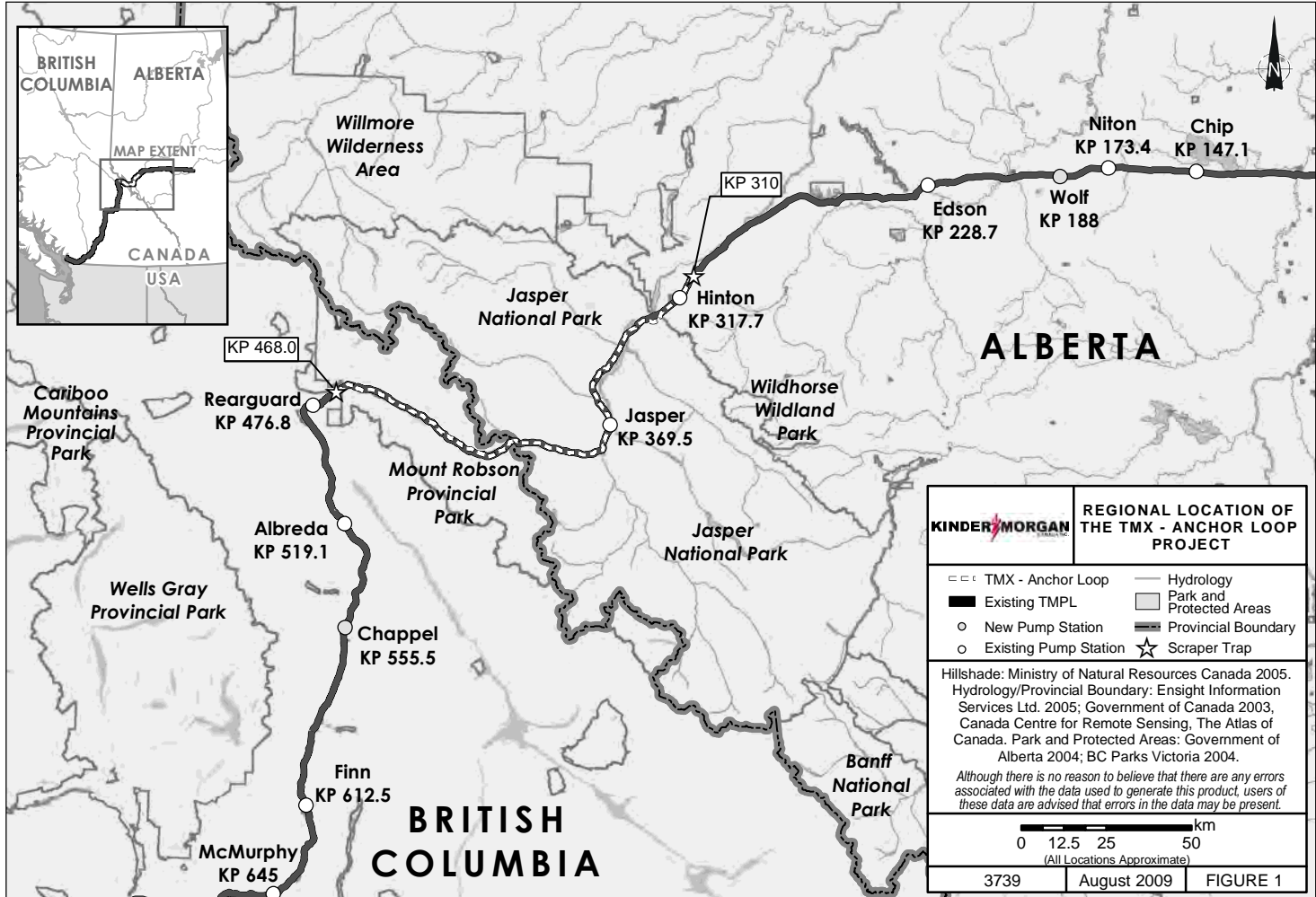
Keywords: TMX - Anchor Loop, stakeholder engagement, ecological integrity, parks and protected areas

INTRODUCTION

Kinder Morgan Canada Inc. (Kinder Morgan), owner of Trans Mountain Pipeline L.P., operates the Trans Mountain Pipeline (TMPL) system, a 1,146 km, 610 mm Outside Diameter (O.D.) (24-inch) low vapour pressure oil pipeline from Edmonton, Alberta to Vancouver, British Columbia (BC), Canada. On February 17, 2006, Kinder Morgan applied to the National Energy Board (NEB), pursuant to Section 52 of the *National Energy Board Act*, for a Certificate of Public Convenience and Necessity (CPCN), for the Trans Mountain Expansion (TMX) - Anchor Loop Project (or "the Project"), to loop a portion of its existing NEB-regulated oil pipeline system. NEB Certificate OC-49 was issued on November 23, 2006 for construction of the Project.

The TMX - Anchor Loop Project involved the construction of 7 km of 762 mm (30-inch) and 151 km of 914 mm (36-inch) diameter pipe from the Hinton Pump Station near Hinton, Alberta, to a location near Rearguard, BC (see Figure 1). The Project traversed federal, provincial and private lands, including Jasper National Park (JNP) in Alberta and Mount Robson Provincial Park (MRPP) in BC, both of which are part of the Canadian Rocky Mountain Parks United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site. The Project also included installation of two new pump stations along the Trans Mountain Pipeline, one in Alberta and one in BC, as well as two new scraper traps. These permanent facility sites are located outside park boundaries on provincial Crown lands and private lands in Alberta and BC.

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Construction of the Project was completed in two spreads from August 2007 to April 2008 (JNP Spread) and June to November 2008 (MRPP Spread). Restoration activities commenced in June 2008 and were completed in fall 2009. Construction of the permanent facilities was completed concurrently with completion coincidental with pipeline construction on the JNP Spread.

Kinder Morgan deferred construction of a loop within JNP and MRPP, as long as possible. A pipeline “loop” is a common and widely used term describing an additional segment of pipeline parallel to, and interconnected with, an existing pipeline system and is a method of adding capacity and operational flexibility to an existing pipeline system. In order to meet demand for capacity on the system, it became necessary to remove the bottleneck on this portion of the system. Electrical power constraints within both parks effectively precluded increasing the pumping capacity through this segment of the Trans Mountain system, which made looping necessary. At the time of application, production of crude oil from the Western Canadian Sedimentary Basin was expected to increase to 580,000 m³/d (3,650,000 bpd) by 2010. The TMX - Anchor Loop added an additional capacity of 6,360 m³/d (40,000 bpd) of refined and unrefined petroleum products, thereby increasing the total capacity of the system to approximately 47,696 m³/d (300,000 bpd), depending on the characteristics of the petroleum transported.

The original Trans Mountain pipeline system was constructed in 1952 and 1953. For over 50 years, Kinder Morgan and its predecessors have safely and efficiently operated the Trans Mountain system, which is the only pipeline that carries Alberta crude oil and refined products to the west coast. The Trans Mountain system has been modified over the years to accommodate changing markets and customer needs. These modifications have included the addition and removal of pump stations and the construction, de-activation and re-activation of various pipeline loops.

To reduce the likelihood that further expansion will be required through JNP or MRPP, Kinder Morgan selected a 914 mm (36-inch) diameter pipe for the Project design based on hydraulic modelling that satisfies current and future expansion requirements.

APPROACH

In the early development stage of the Project, Kinder Morgan was faced with a task that many in the industry felt was impossible. For most pipeline companies, the idea of crossing a national and provincial park to reach a delivery point is typically a "non-starter". However, the Trans Mountain pipeline system was an existing pipeline with agreements in place between the owner company and the federal government. In 1951, a Government of Canada Order in Council authorized construction of the Trans Mountain system through JNP, and future consideration of looped pipelines as may be proposed. A 1952 BC Order in Council granted a right-of-way through MRPP for one or more pipelines. Although the original right-of-way granting documents were still valid, the *Canada National Parks Act* had been revised twice in the intervening time since original construction. It was a challenge to ensure the intent of the modern day Act could be honoured. Acceptance by the federal and provincial governments to entertain the idea of a pipeline expansion in the parks was the first step; however, Kinder Morgan still faced the daunting task of not only having to meet but in most cases exceed all federal and BC provincial regulatory requirements, including the *Canada National Parks Act*, and expectations of stakeholders and aboriginal communities.

Recognizing the Project location within a national and a provincial park, Kinder Morgan had its consultants:

- consider route alternatives in and around the parks and protected areas.

- undertake an environmental and socio-economic assessment to a level of detail that exceeded what is normally required for a project like the TMX - Anchor Loop outside of parks;
- conduct a comprehensive public consultation and Aboriginal engagement program; and
- conduct consultations and field work with complete regard for parks' visitors' safety and enjoyment of these special areas.

Route Selection

Similar to other pipeline projects, the route selection process is often the primary, and arguably the most important mitigation tool, to help avoid and minimize environmental and social impacts, and TMX - Anchor Loop was no exception. The existing Trans Mountain pipeline system is located in an established transportation corridor of historic and contemporary significance. The original pipeline route was selected to take advantage of the Yellowhead Pass at the western edge of JNP, one of the few suitable low elevation passes through the Continental Divide and the Canadian Rockies. The Yellowhead Pass has long been used as a transportation corridor by the Canadian National (CN) Railway, Yellowhead Highway (Highway 16), Trans Mountain and other utilities. The JNP Management Plan (Parks Canada 2000) and MRPP Master Plan (BC Ministry of Environment, Lands and Parks 1992) both recognize the importance of Yellowhead Pass as a national transportation corridor.

Early in the route selection process, Kinder Morgan considered locating the TMX - Anchor Loop elsewhere in JNP and MRPP, or to the south or north of these parks. It was concluded that these options were not feasible. A different route would lose the benefit of important operational synergies of following the existing Trans Mountain right-of-way and negate the environmental merits of following the existing pipeline or other linear facilities. Routes to the north or south would require crossings of protected areas such as Banff National Park and Willmore Wilderness Area, where there are currently no pipelines. Routing around these protected areas was not considered feasible given the extensive length of additional pipe that would be required as well as operational synergies would be lost. It became obvious that the most feasible option was to follow the existing Trans Mountain pipeline corridor.

Beginning in the summer of 2004, Kinder Morgan initiated detailed route selection studies. The primary routing criterion was to follow the existing Trans Mountain right-of-way ("the Existing Route") to the maximum extent practical, deviating from the route only when necessary to reduce environmental and social impacts or to address technical or safety issues. Construction of the TMX - Anchor Loop along the existing route is technically feasible (as evidenced by the fact that the existing pipeline was located there in 1952) but it was not preferred in some sections. Over 50 potential route alternatives were identified and considered from an engineering and construction perspective for the 80 km of pipe that traverses JNP. If Kinder Morgan wished to not parallel the existing Trans Mountain pipeline with the TMX - Anchor Loop, a strong technical, ecological or cultural argument was needed before consideration would be given by Parks Canada and BC Ministry of Environment (BC Parks) officials.

The route selection process included extensive consultation with JNP and MRPP officials as well as representatives of other federal, provincial and municipal departments and agencies. Environmental non-government organizations (ENGOS), Aboriginal groups, landowners and other stakeholders in the Project also provided input into the route selection process.

Regulatory Framework

The TMX - Anchor Loop traversed a combination of federal, provincial and private lands, and crossed the provincial boundary between Alberta and BC. The Project required a CPCN pursuant to Section 52 of the

NEB Act. The Project also required other federal approvals or authorizations which trigger the *Canadian Environmental Assessment Act (CEA Act)* including:

- permission pursuant to the *Canada National Parks Act* from Parks Canada for those parts of the Project within JNP;
- authorization by the Minister of Fisheries and Oceans Canada (DFO) pursuant to subsection 35(2) of the *Fisheries Act*;
- approval by the Minister of Transport Canada pursuant to subsection 5(1) of the *Navigable Waters Protection Act* or subsection 108(2) of the *NEB Act*; and
- possible approval by the Canadian Transportation Agency pursuant to subsections 98(2) and 101(3) of the *Canada Transportation Act*.

Since much of the Project was located in JNP, Parks Canada was the lead Responsible Authority (RA) under the *CEA Act*. Other departments and agencies also designated as RAs under the *CEA Act* included the NEB, DFO, Transport Canada and Canadian Transportation Agency. Environment Canada, Health Canada and Indian and Northern Affairs Canada provided expert advice to the other federal RAs. The Canadian Transportation Agency was a RA since the TMX - Anchor Loop paralleled the CN Railway easement through MRPP for 17 km and used railway lands for temporary workspace during installation of the pipeline. Although it is not common that provincial agencies are actively involved in NEB-regulated pipeline applications, the BC Ministry of Environment (BC Parks) was engaged throughout the federal environmental assessment process in a similar capacity to that of an RA under the *CEA Act*. Alberta and BC provincial permits, approvals or authorizations were also required for the Project, most notably permission pursuant to the *BC Parks Act* for those parts of the Project within MRPP. Kinder Morgan worked closely with BC Parks to ensure that the information contained within the Environmental Assessment (EA) report met the requirements of the BC Parks Impact Assessment Process.

Through the Canadian Environmental Assessment Agency (CEA Agency) process to develop the Terms of Reference (TOR), several RAs made the determination that an Environmental Screening of the Project be conducted and a screening report prepared. These RAs included DFO, Parks Canada and the NEB. As per Section 15 of the *CEA Act*, the scope of the Project in relation to the EA was determined by the RAs. The draft TOR was distributed to groups who might have an interest in the Project, and requested that any comments be submitted to Kinder Morgan or the CEA Agency by July 15, 2005.

Public Consultation and Aboriginal Engagement

Kinder Morgan initiated a public consultation program early in the planning process in order to:

- identify all potential interested parties as early as possible and provide opportunities for engagement at levels appropriate to their interests;
- engage Aboriginal communities appropriately;
- provide an opportunity for potentially affected parties to become informed about the Project at the earliest possible project development phase;
- initiate consultation and engagement activities early to enable stakeholder input to be considered in project design and routing decisions;

- provide various communication channels to make information available to stakeholders and Aboriginal peoples;
- notify all potential stakeholders about the Project and their opportunity to participate in a manner appropriate to their needs; and
- meet or exceed NEB, CEA Agency and other external expectations.

The consultation program identified the following stakeholders for the Project:

- staff of JNP and MRPP;
- landowners on the proposed pipeline right-of-way;
- local community area residents from Hinton, Jasper and Valemount;
- ENGOs and individuals with an interest in national or provincial park policies, conservation issues, wilderness protection or ecological concerns; and
- federal, provincial and local government representatives.

Consultation methods for the Project involved direct one-on-one contact, a number of open houses, three environmental issue workshops with parties interested in engaging in detailed consultation on environmental footprint issues, the formation of a multi-stakeholder group to identify opportunities to enhance the ecological and commemorative integrity of the parks, the establishment of a toll-free line, and numerous telephone and electronic communications.

Issues raised through the consultation program were recorded and tracked by Kinder Morgan. The EA identified within the appropriate sections of the report, measures, studies or other elements that were developed to address environmental and socio-economic issues raised during the consultation program. A number of environmental concerns were identified through consultation with environmental organizations or individuals with an interest in conservation and protection of ecological resources in national and provincial parks.

In conjunction with the consultation program, Kinder Morgan established an Aboriginal Engagement Program with specific goals to develop mutually beneficial working relationships with Aboriginal people. Kinder Morgan developed specific processes with each Aboriginal community to address community-specific concerns. The majority of issues expressed by the Aboriginal communities included the Project's impact on the environment and the need for Aboriginal participation in the economic opportunities arising from construction of the pipeline. Members of the communities participated in various environmental field studies in support of the EA report. Economic interests of Aboriginal communities were addressed with contract and employment opportunities during and after construction of the pipeline and where appropriate, Mutual Benefits Agreements were established. Kinder Morgan developed procedures and dedicated individuals to work closely with all Aboriginal contractors throughout the construction period.

Environmental Assessment Report

A substantial amount of existing environmental information was reviewed to describe the environmental setting of the Project and assist in the identification of potential environmental and socio-economic effects. One of the benefits of conducting an environmental assessment in a national and provincial park was the large amount of scientific research available to the Project. This information was supplemented

with numerous discussions and meetings with provincial and federal agencies, Aboriginal communities, ENGOs, local stakeholders, landowners and the general public.

These studies were designed to focus on subject areas and/or locations where existing information did not provide an appropriate level of detail to identify potential concerns, develop mitigation or assess potential impacts, or, in some instances, to supplement existing time-sensitive information that was not current. The scope of these studies focused on the Local Study Areas and/or Project Footprint associated with both the Proposed (TMX - Anchor Loop) and Existing (Trans Mountain pipeline) routes, and at temporary and permanent facilities in order to assist in route and site selection. The methodology used to conduct the technical studies as well as the complete results of these studies were compiled in a series of technical reports. Up to 30 supporting environmental and socio-economic technical studies were completed and prepared to supplement the existing information available for the Project area over a 2 year timeframe.

The identification of Valued Ecosystem Components (VECs) early on in the planning process of the project enabled the environmental assessment to focus on the most important and known sensitive resources which might be affected by the project. For this Project, VECs were identified for applicable physical, biological and socio-economic elements through the TOR provided by the RAs (includes those VECs identified within JNP and MRPP), a workshop with interested stakeholders and ENGOs as well as through the professional judgment of the assessment team.

In recognition of the unique setting of the TMX - Anchor Loop, the requirements outlined in the TOR, and comments received during public consultation, Kinder Morgan undertook a Cumulative Effects Assessment that went beyond established project-specific precedent and considered past and hypothetical future scenarios in addition to likely future activities. This evaluation was designed to put the proposed TMX - Anchor Loop in a regional context to evaluate its effect on ecological integrity and to identify cumulative effect management priorities.

The 'A Landscape Cumulative Effects Simulator' (ALCES®; www.foremtech.com) model developed by Forem Technologies was selected to evaluate potential cumulative effects on selected indicators. ALCES was used to help visualize both past and likely future natural and human disturbance patterns in the Regional Study Area and associated ranges of natural variability for aquatic and terrestrial habitats and species. The regional study area (RSA) included a 9,319 km² area covering ten 1:50,000 map sheets that could be affected by the Project. Range of Natural Variability (RNV) was used as a surrogate of terrestrial and aquatic ecological integrity. An understanding of natural patterns is a precursor to ecosystem-based management where human land use is planned to remain within or approximate RNV.

An Environmental Protection Plan (EPP) was prepared and submitted with the NEB application which identified general and specific measures to be implemented by Kinder Morgan contactors during all phases of the construction program, including reclamation, to avoid and minimize environmental effects during the construction of the Project.

A comprehensive Restoration Plan was also submitted with the NEB application, and built on the EPP and identified additional measures and activities to restore the ecological and commemorative integrity of JNP and MRPP after Project construction. The development of the Restoration Plan entailed extensive additional consultation with parks staff, academia, other stakeholders and the general public.

Net Gains / Benefits

Net Gains / Benefits were a fundamental underpinning of the consultation completed, particularly with Parks Canada, BC Parks and the ENGOs through the multi-stakeholder group. The TMX - Anchor Loop

team, in conjunction with the multi-stakeholder group identified opportunities to enhance ecological and commemorative integrity in JNP and MRPP. The term “Net Benefit” was used to describe the "positive environmental legacy" Kinder Morgan will fund as part of the TMX - Anchor Loop Project. This was mutually agreed to by Kinder Morgan and the ENGOs to be supplementary to what was needed for regulatory approval. The construction phase also provided economic synergies because the scope or extent of Project-specific mitigation, restoration, and enhancement measures were practically extended to accommodate selected “net gain” initiatives and since Kinder Morgan was proposing a route that in many areas was not contiguous with the existing Trans Mountain pipeline, Parks Canada had to consider granting a new easement under Section 15(1)(b) of the *Canada National Parks Act* as an “alteration or deviation”. Since more than half of the TMX - Anchor Loop through JNP did not abut the existing Trans Mountain pipeline, for the federal Minister to exercise his discretion in granting this approval, Kinder Morgan was required to demonstrate to Parks Canada officials a positive increase in ecological and commemorative integrity, otherwise referred to as a Net Gain.

DISCUSSION

Route Selection

At the conclusion of the route identification and selection process, two routes were selected for complete environmental and technical assessment – the Existing Route and the Proposed Route, which follows the Existing Route for 64% of its length in JNP and 47% in MRPP. In total, the TMX - Anchor Loop was contiguous with the existing Trans Mountain pipeline for 56% of its length and is on, or abuts, other linear rights-of-way (*i.e.*, highways, roads, powerlines and abandoned railway grades) for 43% of its length. The remaining 1% of the TMX - Anchor Loop represents segments that are connections from one existing right-of-way to another.

Two of the key routing factors were to avoid wetlands through which the existing Trans Mountain pipeline is routed, and also to avoid or substantially reduce multiple instream crossings of major watercourses. The TMX - Anchor Loop avoids these features.

- The TMX - Anchor Loop resulted in 20% fewer waterbody crossings than the Existing Route; it crossed 27 fewer fish-bearing waterbodies (39 vs. 66), including 25% fewer very large fish-bearing watercourses, and over 50% fewer large fish-bearing watercourses.
- The TMX - Anchor Loop traversed nearly 30% less wetland area than the Existing Route (29.1 ha vs. 43.3 ha).

Kinder Morgan believed that with appropriate construction and mitigation techniques the potential effects of constructing the Project along the Existing Route through the waterbody crossings and wetlands avoided by the Proposed Route would not be significant. However, avoiding these areas by following the Proposed Route reduced the potential effects, fostered ecological integrity of the parks and was more consistent with the JNP Management Plan (Parks Canada 2000) and MRPP Master Plan (BC Ministry of Environment, Lands and Parks 1992).

As a result of the extensive route selection process, Kinder Morgan concluded that the TMX - Anchor Loop route was superior to the Existing Route, particularly with respect to:

- environmental and social considerations;
- pipeline integrity;

- health and safety (both worker and public safety);
- constructability; and
- operations and maintenance.

Kinder Morgan had its environmental consultants study the Existing Route to the same level of detail as the TMX - Anchor Loop, to ensure that all interested parties, including RAs, ENGOs and other stakeholders could assure themselves of the merits of the Proposed Route. The detailed technical and environmental studies completed on both routes supported this conclusion.

Regulatory Outcomes

On October 27, 2005, the *Scope and Requirements of the Environmental Assessment for the Kinder Morgan (Trans Mountain) Inc. TMX – Anchor Loop Project* was released by the cooperating agencies:

- Parks Canada Agency;
- National Energy Board;
- Fisheries and Oceans Canada;
- Transport Canada;
- Environment Canada;
- Canadian Transportation Agency; and
- BC Ministry of Environment.

Direction as to the factors to be assessed within the EA report was also the responsibility of the RAs and had been provided in the TOR, NEB Filing Manual (NEB 2004) and the mandatory factors listed in Section 16(1)(a) to (d) of the *CEA Act*. The TOR also included the following to be considered in the EA report:

- factors referred to in Section 16(1)(e) of the *CEA Act*;
- *Species at Risk Act*;
- Parks Canada Acts, Plans and Policies, including the notion of ecological integrity; and
- sustainable development.

Specifically, the TOR provided direction with regard to:

- the VECs to be assessed within the EA;
- the spatial and temporal boundaries to be considered;
- the considerations associated with cumulative effects; and

- the content of the EA report.

Early in the regulatory review process, Parks Canada determined that an Environmental Screening under the *CEA Act* was appropriate for the Project. Subsequent to this determination, the NEB and CEA Agency issued an information request for further justification of this decision as many would have anticipated a Comprehensive Study or Panel Review under the *CEA Act*. The level of environmental assessment depends largely on the scale and complexity of the likely effects of the project. A comprehensive study is typically required for large-scale and environmentally sensitive projects. The Comprehensive Study List Regulations prescribe those projects for which a comprehensive study is required. The TMX - Anchor Loop project may have triggered a comprehensive study under two main sections of these regulations:

- (1) Part I - National Parks and Protected Areas: The proposed construction, decommissioning or abandonment in relation to a physical work in or on a national park (*i.e.*, Jasper National Park) that is contrary to its management plan, and/or the proposed construction, decommissioning or abandonment, in a wildlife area or migratory bird sanctuary, of an oil or gas facility or oil and gas pipeline. (“Wildlife area” means wildlife area as defined in Section 2 of the *Wildlife Area Regulations*, SOR/99-439, s. 1.);

and

- (2) Part IV – Oil and Gas Projects: The proposed construction of a pipeline more than 75 km in length on a new right-of-way.

The *CEA Act* defines a new right-of-way and an existing right-of-way as follows:

- “new right-of-way” means land that is subject to a right of way that is proposed to be developed for an electrical transmission line, an oil and gas pipeline, a railway line, or an all-season public highway and that is not alongside and contiguous to an existing right of way.
- “existing right-of-way” means land that is subject to a right of way and that is developed for an electrical transmission line, an oil and gas pipeline, a railway or an all-season public highway.

In the context of the *CEA Act*, “new right-of-way” excludes rights-of-way that are “alongside and contiguous to an existing right of way”. It was Kinder Morgan's view that this included electrical transmission lines, oil and gas pipelines, railways, and highways. Since the TMX - Anchor Loop was located in a new right-of-way that was contiguous to an existing right-of-way of either an electrical transmission line, another pipeline, a railway or a highway, it was not deemed to be “new” as per the definition of “new right-of-way” under the *CEA Act*. It was concluded and accepted by the RAs that a Comprehensive Study would not be required as the Project did not require more than 75 km of new right-of-way. Furthermore, a Panel Review was not requested by Kinder Morgan, Parks Canada or the federal Minister of Environment and was reflective of the level of public and Aboriginal engagement programs that had been completed for the Project.

Public Consultation and Aboriginal Engagement

A key issue raised during the consultation process was the extent to which the Project would go beyond merely minimizing Project impacts to enhancing the ecological and commemorative integrity of the parks. These issues were addressed through a series of environmental issue workshops and a multi-stakeholder group charged with assessing opportunities for enhancing the ecological integrity of JNP and MRPP through Net Gain / Benefit initiatives. The EA identified and addressed a number of proposed and

potential net gain measures identified through consultation. During the public consultation process, several critical project design or scope changes resulted. These included:

- route refinements to minimize stream crossings and wetlands;
- additional species added to environmental assessment wildlife studies in response to feedback from environmental organizations and stakeholders;
- a commitment to provide financial support to ENGO participants to retain technical experts for the purpose of reviewing the EA document; and
- establishment of a Net Benefits initiative to identify opportunities to enhance the ecological integrity of MRPP and JNP with the assistance of a multi-stakeholder group. The multi-stakeholder group has been established and is in the process of identifying opportunities for Net Benefit.

Through the public consultation process, Kinder Morgan requested that stakeholders and Aboriginal participants review the EA report and provide feedback to Kinder Morgan prior to submittal of the application to the NEB. Kinder Morgan offered stakeholders, aboriginal groups, third-party technical experts and federal and provincial governments a 60-day review period of the EA prior to submittal to the NEB. The purpose was to demonstrate the high level of stakeholder input to the application. After receipt of the completed application, the NEB began the normal thorough review and interrogatory process. Meanwhile, consultation with Parks Canada and BC Parks happened in parallel on a more informal basis as Kinder Morgan, Parks Canada and BC Parks representatives worked through the various issues. As with all Section 52 applications under the *NEB Act*, a public hearing was held in Calgary, Alberta. The public hearing took place over 4 days with one Aboriginal group intervening in regards to the federal Aboriginal involvement processes. In the end, the NEB ruled that the process was fair and motion to delay the hearing was denied.

Environmental Assessment Report

The environmental and socio-economic effects associated with the construction and operation of the TMX - Anchor Loop were not unlike those routinely encountered during pipeline and associated facility construction in a forested setting despite the unique location predominately within a national and provincial park. Potential environmental and socio-economic effects associated with the Project related to biophysical and socio-economic elements including:

- physical elements such as physical environment, soil capability, water quality and quantity, greenhouse gas (GHG) and air quality, and acoustic environment;
- biological elements such as fish and fish habitat, wetlands, vegetation, wildlife and wildlife habitat, and species at risk;
- socio-economic elements such as human occupancy and resource use, heritage resources, traditional land and resource use, social and cultural well-being, human health, infrastructure and services, and employment and economy; and
- accidents and malfunctions.

However, Kinder Morgan had its consultants study the TMX - Anchor Loop and Trans Mountain routes in unique detail in recognition of:

- the location of the Project within a national and a provincial park, and the heightened public sensitivity to environmental impacts in that setting;
- the high ecological, recreational, and symbolic values associated with land preservation represented by JNP and MRPP.
- the socio-economic impacts associated with locating a workforce within a national and provincial park; and
- Aboriginal interests in the Jasper and Mount Robson areas.

Consequently, the research and field work conducted in support of the EA report exceed normal industry practice for any similar project of which the authors are aware (TERA Environmental Consultants/Westland Resource Group 2005). Examples of the additional care and attention that was taken included:

- completed detailed field surveys on two routes;
- an invertebrate survey;
- an intensive amphibian survey;
- a grizzly bear and black bear assessment;
- a wetland function assessment;
- a comprehensive nonvascular plant survey;
- a Forest Health Assessment;
- a Viewshed Modelling Analysis;
- a Palaeontological Overview; and
- application of the ALCES model for cumulative effects assessment.

Numerous mitigation strategies were proposed to avoid or minimize the impacts of the Project including: avoidance through route selection; scheduling of activities to avoid sensitive periods; development of detailed, practical and effective mitigative measures to address numerous site-specific and general issues; development of compensation programs to address those issues which cannot be technically mitigated; inspection during construction to ensure that planned mitigation is implemented and effective; continuing the maintenance and operation of the pipeline system with a high standard of environmental excellence; and the development of a Restoration Plan to ensure that the overall Project will result in a net ecological and cultural gain to JNP and MRPP.

Landscape simulation modelling and relevant studies indicate that the most important sources of cumulative ecological effects in the RSA were:

1. human-caused mortality of wide-ranging carnivores, primarily direct mortality from road and railway collisions, and hunting and poaching on provincial lands;

2. habitat alteration created by natural disturbances (fire, insects, avalanches) and fire and insect management;
3. habitat loss and alteration (including loss of habitat effectiveness and movement barriers) created by human recreational, residential, and industrial features and activities; and
4. ongoing expansion of non-native fish and plant species.

Through the implementation of the mitigative strategies, all residual effects associated with the construction and operations of the Project were considered overall to be not significant, including those within JNP and MRPP. Furthermore, the TMX - Anchor Loop was evaluated with respect to the actions, objectives and goals of the JNP Management Plan, MRPP Master Plan and the MRPP Ecosystem Management Plan (BC Ministry of Environment, Lands and Parks 2001), respectively. In all instances, the planning, design, construction or operation of the Project were consistent with key actions or objectives of the park plans. In addition, for each element, it was shown that the Project did not hinder either Parks Canada's ability to fulfill their management goals or BC Parks to fulfill their management objectives.

Net Gains / Benefits

During field investigations, the TMX - Anchor Loop team identified opportunities to enhance ecological and commemorative integrity in JNP and MRPP. Additional opportunities were identified by Parks Canada, BC Parks, ENGOs and various stakeholders and were the topic of discussion at several workshops. These opportunities were assessed and rated in terms of their value and contribution to the parks system. In the end a suite of net gains and benefits were agreed to by all. These initiatives, related to soils, wetlands, fish and fish habitat, vegetation, wildlife, visual resources and heritage resources, were shown to be consistent with key actions or objectives of the applicable park plan.

The EA report listed 15 initiatives proposed and considered by Kinder Morgan to restore or enhance valued ecological, heritage, and cultural resources in JNP and MRPP. Many of the net gain initiatives involved measures to be undertaken in the project area and, therefore, required further refinement through discussions with appropriate authorities and interested groups and individuals. The EA report described how these initiatives helped enhance ecological and commemorative integrity, conserve biological diversity, and contribute to sustainable development.

CONCLUSION

The TMX - Anchor Loop was required to meet existing demand for crude oil transportation to markets currently served from the Trans Mountain system. Construction of the Project contributed and continues to offer substantial economic benefits at the national, regional and local level. The Project also needed to demonstrate that it met and in many cases exceeded federal and provincial environmental regulatory requirements to be accepted by the agencies, ENGOs, public members and Aboriginal communities.

The Project design, which included Project-specific mitigation, restoration and enhancement measures was practically extended to accommodate Net Gain / Benefit initiatives, whereby the Project resulted in a 'positive environmental legacy', or 'demonstrable net benefit' to the parks .

In addition, the TMX - Anchor Loop was explicitly designed to maintain or enhance ecological and commemorative integrity. Specific examples included:

- increasing pipeline size to accommodate all reasonably foreseeable system expansion opportunities to avoid future looping and pump station demand;
- a commitment to installing automated main line block valves on the Trans Mountain pipeline once re-commissioned and increasing the number of main line block valves on the TMX - Anchor Loop in the parks;
- accommodating future highway widening or twinning through the parks;
- restoring native montane vegetation, particularly the valued early seral vegetation by controlling non-native plant species and reclaiming old gravel pits previously used by Parks Canada;
- restoring aquatic habitat connectivity where this does not increase risk to native fish species by removing culverts and installing single span bridges;
- minimizing mortality risk along the Trans Mountain and TMX - Anchor Loop rights-of-way; and
- documenting newly discovered surface and buried heritage resources.

Based on the analysis provided in the EA, the TMX - Anchor Loop was concluded to:

- be consistent with management plans in the four jurisdictions;
- result in no significant adverse residual effects;
- represent a net gain to ecological integrity in JNP relative to looping along the existing Trans Mountain alignment;
- enhance ecological integrity and maintain commemorative integrity within JNP;
- conserve biological diversity of natural ecosystems and maintain recreation values within MRPP; and
- reflect sustainable development, *i.e.*, “development that meets the need of the present without compromising the ability of future generations to meet their own needs”.

As monitoring is an integral part of the post-construction program for TMX - Anchor Loop, this was further supported within the certificate conditions issued by the NEB and Parks Canada's Management Objectives and Desired End Results requiring that post-construction monitoring be conducted for a minimum 5 years. This program will be one method in determining the effectiveness of measures taken to mitigate the adverse environmental effects of the Project. In addition, a follow-up program under the *CEA Act* was requested by Parks Canada for the aesthetics and forest health disciplines and both the NEB and Parks Canada requested follow-up programs for calcareous soils and wetlands to be completed over a 5 year period.

In the end, Parks Canada, DFO, Transport Canada and NEB concluded that the TMX - Anchor Loop Project was not likely to cause significant adverse environmental effects. The government of BC granted a temporary boundary amendment to Kinder Morgan to install the pipeline within MRPP and at the end of 2009; the lands will be returned to the park as to avoid any net loss in area to the park. In JNP, Kinder

Morgan was granted two easements through the park with a combined total width of 6.1 m. In segments where the pipeline rights-of-way were not abutting one another, each right-of-way was 3.05 m wide. Both Parks have granted Kinder Morgan authority to access their rights-of-way to maintain and operate the pipelines.

ACKNOWLEDGMENTS

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Restoration of the TMX - Anchor Loop Project in Jasper National Park

David Novak and Gina Fryer, TERA Environmental Consultants

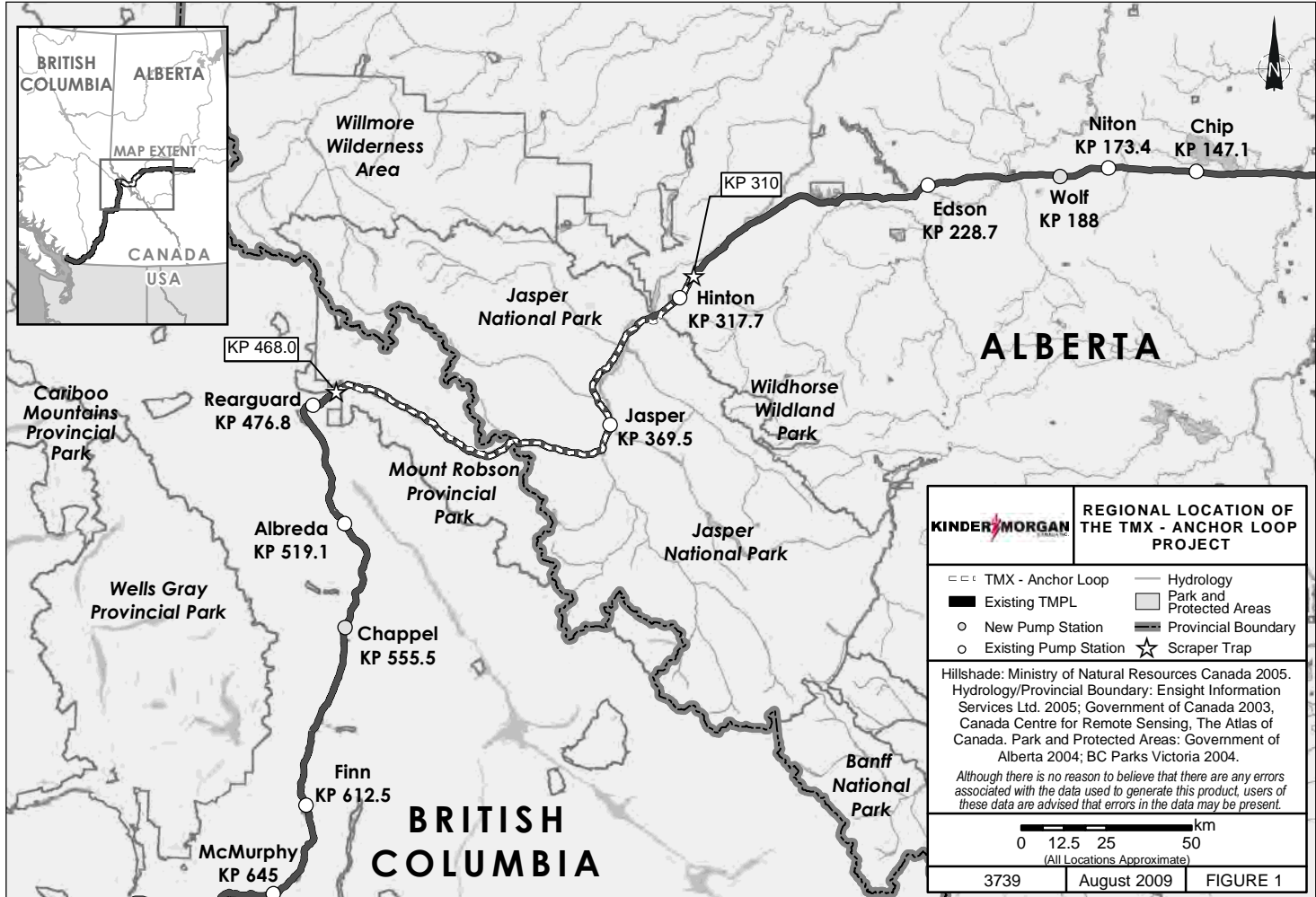
In June 2008, restoration was initiated on the Trans Mountain Expansion (TMX) – Anchor Loop Project, a National Energy Board-regulated oil pipeline system. The project entailed the construction of 158 km of 30" and 36" O.D. pipeline between a location west of Hinton, Alberta and a location near Rearguard, British Columbia (BC). This unique project area encompasses federal, provincial and private lands, including Jasper National Park in Alberta and Mount Robson Provincial Park in BC, both of which are part of the United Nations Environmental, Scientific and Cultural Organization (UNESCO) Canadian Rocky Mountain Parks World Heritage Site. In recognition of this setting and through consultation with stakeholders and various government agencies, Kinder Morgan Canada Inc. implemented a number of restoration measures at particularly sensitive areas, with the objective of restoring ecological integrity of these lands and watercourses. Using locally collected plant material, over 220,000 native plants were propagated for restoration of riparian areas and sensitive ecosites. Two examples of the unique approaches to restore lands in a sensitive setting include: seeding with reclamation unit-specific native species; seeding with supplementary native seed mixes for special situations within reclamation units (calcareous soils, non-attractant areas); and establishing forb plant islands along the right-of-way to aid seed dispersion and support biodiversity. Intensive post-planting irrigation and plant protection programs were also warranted to promote survival and preserve the quality of plants from desiccation and wildlife grazing and browsing. The Post-Construction Monitoring Program commenced in the spring of 2009 to monitor the success of the restoration program.

Keywords: pipeline right-of-way, Jasper National Park, restoration, native seed mixes, native forbs, natural regeneration, vegetation management, construction panel fencing, forb island plantation, Integrated Pest Management

INTRODUCTION

Kinder Morgan Canada Inc. (KMC) commenced construction of the Trans Mountain Expansion (TMX) - Anchor Loop Project (Anchor Loop) in the summer of 2007 and completed construction in the fall of 2008 (Figure 1). The project added needed transportation capacity and operational flexibility to the existing pipeline system. The Anchor Loop enters Jasper National Park (JNP) at a location approximately 27 km west of Hinton, Alberta and traverses lands within the park for a distance of 81 km before entering Mount Robson Provincial Park (MRPP) to the west at the Alberta/British Columbia (BC) border. Within JNP, the Anchor Loop shares or abuts the Trans Mountain Pipeline (TMPL) right-of-way for a distance of approximately 52 km. The remaining 29 km entails 1 km of greenfield routing as well as paralleling current and historic transportation rights-of-way. Timber clearing and grading activities along the route commenced in August 2007. After adjusting the right-of-way width for terrain features, slopes and sidebends, the average construction right-of-way width is 35 m and the total area of disturbance is approximately 285 ha. Pipe installation activities followed thereafter with 50 open cut waterbody crossings including 19 wetlands and ponds, and 35 watercourses; rough clean-up of the right-of-way was completed in mid-April 2008. Standard pipeline topsoil salvage and replacement techniques were used.

Pre-Publication Draft from Proceedings of the Ninth International Symposium on Environmental Concerns in Rights-of-Way Management held in Portland, Oregon, USA - September 27-30, 2009.



Final clean-up for this project was defined as returning the profile and grade to a stable condition and replacing the topsoil. Restoration is defined as the process of establishing the original ecosystem characteristics that existed prior to land disturbance (Gerling et al 1996, Society for Ecological Restoration, Science and Policy Working Group 2002). Both activities commenced at right-of-way, temporary facilities and access roads locations during the first week of June 2008. In April 2008, the segment of new pipeline within JNP was brought into service with the remaining segment of the project being activated in October 2008.

SETTING

The pipeline right-of-way traverses the lower elevations for most of its length, with the exception of the Windy Point and Little Windy Point areas. In these valley bottom areas, there are rivers, highway and railroad transportation corridors, including wildlife movement corridors. Some of the challenges of the project included the abundance and diversity of large herbivores found in these areas (e.g., elk, deer, sheep). JNP along with the Willmore Wilderness Area and Mount Robson Provincial Park form a continuous protected area within the Yellowhead ecosystem (Minister of Public Works and Government Services Canada 2000). More than one million people visit the park every year, with an estimated 1.4 million additional people passing through on their way to other destinations (Minister of Public Works and Government Services Canada 2000). In addition, the project experienced media coverage on a national scale, with many stakeholders expressing an interest in the project (Figure 2).



Figure 2. View of bighorn sheep grazing on the right-of-way adjacent to Highway 63 (April 2009).

The pipeline in JNP is located within the following three Natural Subregions: the Lower Foothills; the Montane; and Lower Sub-Alpine (Natural Regions Committee 2006). These three Natural Subregions represent some of the coolest regions in Alberta with the shortest growing seasons. All of these areas are characterized by high annual precipitation as compared to other Natural Subregions in Alberta, with only the Alpine Subregion receiving more precipitation. The topography and geology of these regions is highly variable. This variability results in very complex vegetation and soil patterns, influenced by changes in elevation, aspect and substrate (Natural Regions Committee 2006). Closed coniferous stands are dominant at lower elevations in the Subalpine Subregion, with the canopy opening at increasing elevations. The Montane Subregion consists of a mixture of grasslands and forests with mixedwood forests on south and west aspects, and conifers dominating north aspects and at higher elevations. Upland sites within the Lower Foothills Subregion are dominated by deciduous or mixedwood forests.

PROJECT OBJECTIVES

The objective of most pipeline transmission companies, is to return the land to equivalent land capability without compromising operations and maintenance requirements. In recognition of the unique setting of this project, several restoration measures beyond normal pipeline practice were undertaken, both during and after construction. Restoration rather than reclamation was the mandate. The goal for this project was to set the right-of-way on the right successional trajectory to meet the Management Objectives / Desired End Results (MO/DERS) established by Parks Canada. The expectation of visitors and regulators was that pipeline construction would not impact the ecological and commemorative integrity of the park or their experience of the park (Figure 3).



Figure 3. Looking east at a Montane grassland above Jasper Lake (July 2008).

Special measures were undertaken to meet the objectives as follows:

- vegetation management of non-native invasive species commenced the season prior to the start of construction and continued after restoration;
- where unique habitat or vegetation features were encountered, the right-of-way was narrowed down so as to avoid these discrete areas;
- native sod was salvaged during construction and replaced following construction;
- local genotypes of project plant material were maintained through collections made on or adjacent to the construction right-of-way, within JNP or, purchased from collections made in the same Natural Subregions traversed by the project in JNP;
- greenhouses were constructed on-site to ensure plant material propagated for the project was maintained in optimum quality over the period of restoration;
- fencing of riparian and special restoration areas was implemented to protect plantings from wildlife browsing;
- an irrigation program was designed and implemented at riparian and special restoration areas to help minimize plant moisture stress; and
- wildlife habitat trees were erected and wildlife visual barriers created to reduce the line of sight along the pipeline right-of-way.

The reestablishment of naturally regenerating, seeded and planted native plant material would be challenged by a short growing season, variability of weather and rainfall patterns, exposed windy sites, animal herbivory, non-native invasive plant species growth and anthropogenic activities.

Site-specific native seed mixes were determined through consultation with government representatives. Native seed was then procured and native grass, forb and coniferous plant species were propagated. An extensive planting program was conducted in the summers of 2008 and 2009. At the same time, irrigation and protection of plantings was also undertaken to maximize survival of the plantings. Vegetation management was an important consideration and was implemented before, during and after construction. The following sections describe these measures.

SEQUENCE OF RESTORATION PLANNING, ACTIVITIES AND METHODS

Restoration Planning

Restoration measures were employed prior to and during construction, as outlined in the Environmental Protection Plan (EPP) (TERA Environmental Consultants / Westland Resource Group 2007a). These measures addressed pre-clearing non-native invasive species control, native plant material salvage, woody material salvage and soil/strippings salvage during construction.

To meet the re-vegetation goals as set out by the various regulators, in particular Parks Canada, discussions to determine native woody, forb, coniferous and grass species plant material for use in restoration were initiated by TERA Environmental Consultants (TERA)/KMC in collaboration with the University of Alberta (U of A) and the Alberta Research Council (ARC), who represented the initiatives

and wishes of Parks Canada. This iterative process included discussions with the U of A and ARC; plant material collectors, propagators and retailers; eventually yielding a base species listing.

The results of these discussions included seven native grass seed mixes, native species for use in forb islands, and native woody shrubs and coniferous species for use in riparian and other special restoration areas.

The project-specific Restoration Plan outlined in detail the restoration of special restoration areas and unique restoration methods (TERA Environmental Consultants / Westland Resource Group 2007b).

To meet the MO/DER's as outlined by the project approval and provide the best opportunity for re-vegetation success and plant community reestablishment, plant material originating on or adjacent to the construction right-of-way was collected and propagated. Where constraints of time or quantity restricted collection and propagation of certain plant materials, genotypes located within a geographic area nearest the project were selected.

Native Plant Material Selection, Collection, Propagation and Procurement

Propagation of native species seed and vegetative plant material began in the winter of 2007/2008 for use during restoration planting activities scheduled to commence in June 2008.

Native Grass Seed Species and Mixes

Native grass seed procurement began in the spring of 2007. As the genetic origin of all plant material was identified as a critical element to the selection of appropriate plant material to be used in JNP, seed retailers were asked to identify the geographic origin or "genotype" of the seed. Seed retailers were also requested to, provide a Certificate of Analysis (COA) that would identify the purity, germination or Pure Living Seed (PLS) of each seed lot. From this information, the most suitable seed lots were selected (Figure 4).



*Figure 4. View of a native grass plot that is being used to multiply fowl bluegrass (*Poa palustris*) seed collected from a genotype east of Jasper National Park, this genotype was used on the project (July 2007)*

Following the seed lot selection process, a portion of the total seed requirement was purchased from the 2006 seed crop to hedge against possible seed crop shortages in the 2007 crop year. The balance of the seed was purchased in the fall of 2007 from the 2007 new seed crop.

Native Woody Shrub Plants

Woody shrub plant material was collected from locations on or adjacent to the construction right-of-way or from locations suggested by Parks Canada. Plant material collected in the summer and fall of 2007 was processed, packaged and stored appropriately to maintain and/or enhance rooting and germination during propagation. Commercial growers propagated the selected native woody shrub species from seed, hardwood and semi-ripe cuttings plant material (Figure 5). These species, plant material collection and propagation dates are outlined in Table 1.

Table 1. Shrub Species Propagated for the TMX Anchor Project

Species	Propagation Material Type	Plant Material Collection Date	Plant Material Propagation Date
Willow (<i>Salix spp.</i>)	Hardwood cuttings	October 2007	March 2008
Green alder (<i>Alnus viridis</i>)	Seed	August 2007	February 2008
River alder (<i>Alnus tenuifolia</i>)	Seed	August 2007	February 2008
Balsam poplar (<i>Populus balsamifera</i>)	Seed/hardwood cuttings	June/October 2007	March 2008
Aspen (<i>Populus tremuloides</i>)	Seed	June 2008	June 2008
Canada buffaloberry (<i>Sheperdia canadensis</i>)	Seed	July 2007	February 2008
Shrubby cinquefoil (<i>Potentilla fruticosa</i>)	Seed	July 2007	February 2008
Silverberry (<i>Elaeagnus commutata</i>)	Seed	February 2008	February 2008
Common bearberry (<i>Arctostaphylos uva-ursi</i>)	Semi-ripe evergreen cutting	January 2008	January 2008



Figure 5. View of establishing willow from hardwood cuttings (June 2009)

Native Forb and Grass Plants

Native forb seed was collected on or adjacent to the construction right-of-way or from locations suggested by Parks Canada during the summer and fall of 2007. As expected, the volume of seed of some species collected in 2007 fell short of that required to meet the project's projected propagation numbers. The balance of the seed was purchased from a commercial operation that collected its seed from locations in Montane, Lower Foothills and Subalpine Natural Subregions along the east slopes of the Rocky Mountains adjacent to Banff National Park, Alberta (Figure 6).

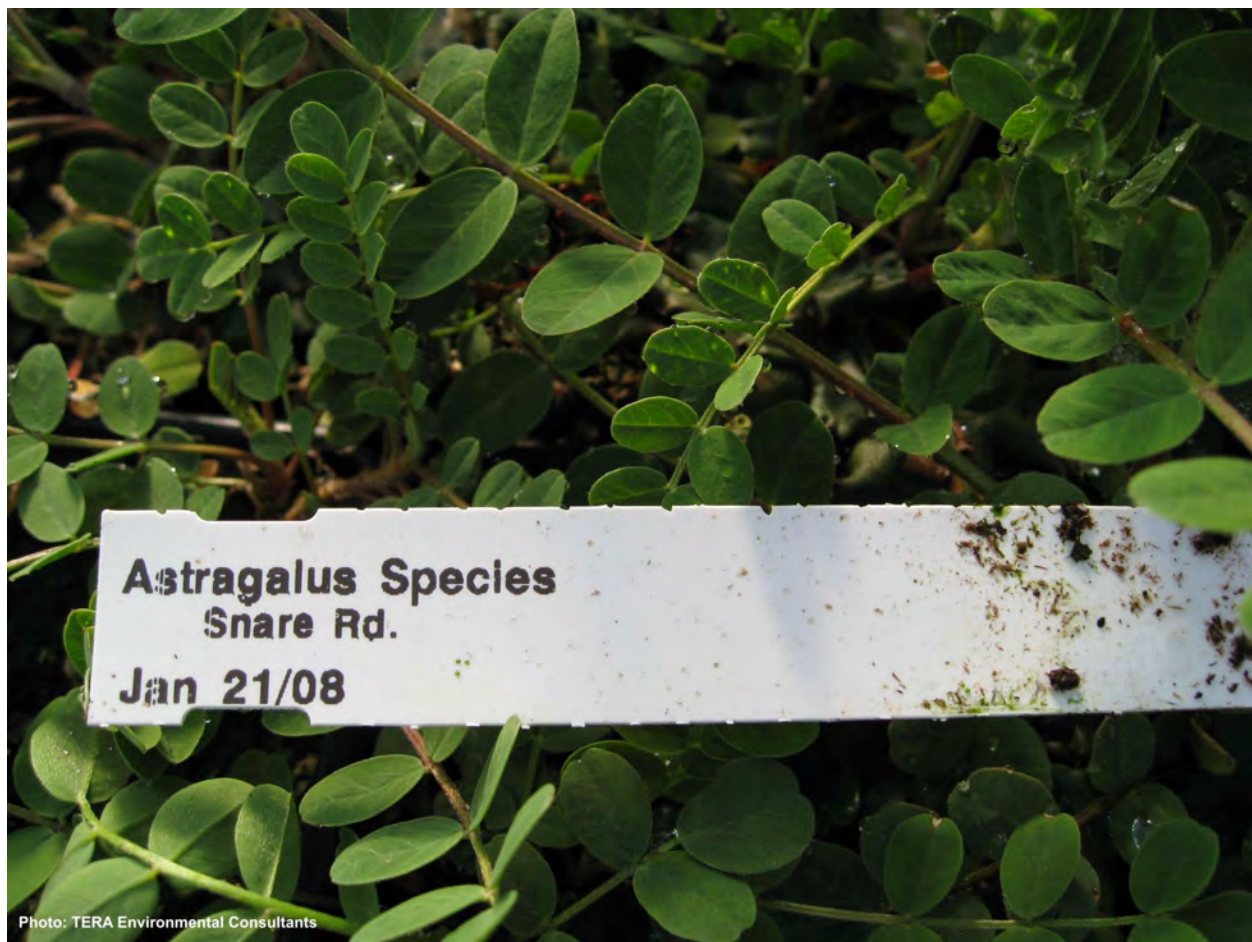


Figure 6. View of vigorously growing American milk vetch (Astragalus americanus) prior to shipment to Jasper (January 2008).

Seed of rare plants and species of special interest to Parks Canada such as Hooker's cinquefoil (*Potentilla hookeriana*), Sitka columbine (*Aquilegia formosa*), poverty oatgrass (*Danthonia spicata*), Richardson needle grass (*Stipa richardsonii*), yellow mountain avens (*Dryas drummondii*) and common fireweed (*Epilobium angustifolium*) were collected in JNP from plants identified during plant surveys conducted prior to right-of-way clearing activities.

Forb species propagated, propagation material type and propagation material collection dates are outlined in Table 2. Alpine milk vetch (*Astragalus alpinus*) and showy aster (*Aster conspicuus*) proved difficult to propagate in the quantities required for the project due to either low viability and/or persistent seed dormancy.

Table 2. Forb and Grass Species Propagated for the TMX Anchor Project

Forb/Grass Species	Propagation Material Type	Propagation Material Collection Date
Decumbent goldenrod (<i>Solidago decumbens</i>)	Seed	2007
Northern bedstraw (<i>Galium boreale</i>)	Seed	2007
Blanketflower (Gaillardia) (<i>Gaillardia aristata</i>)	Seed	Summer 2007
Alpine hedsyarum (<i>Hedysarum alpinum</i>)	Seed	Summer 2007
Showy locoweed (<i>Oxytropis splendens</i>)	Seed	Summer 2007
Pussytoes (Racemose everlasting) (<i>Antennaria racemosa</i>)	Seed	Summer 2007
Cream-colored vetchling (<i>Lathyrus ochroleucus</i>)	Seed	Summer 2007
Wild strawberry (<i>Fragaria virginiana</i>)	Stolons	Spring 2008
American milk vetch (<i>Astragalus americanus</i>)	Seed	Summer 2007
Wild vetch (<i>Vicia americana</i>)	Seed	Summer 2007
Hooker's cinquefoil (<i>Potentilla hookeriana</i>)	Seed	Summer 2007
Sitka columbine (<i>Aquilegia formosa</i>)	Seed	Summer 2007
Poverty oat grass (<i>Danthonia spicata</i>)	Seed	Summer 2007
Richardson needle grass (<i>Stipa richardsonii</i>)	Seed	Summer 2007
Sweet grass (<i>Hierochloe hirta ssp. arctica</i>)	Rhizomes	September 2007

Native Coniferous Plants

Lodgepole pine (*Pinus contorta*), white spruce (*Picea glauca*) and Douglas fir (*Pseudotsuga menziesii*) seed cones were collected during right-of-way clearing activities at tree processing sites or at locations where trees were felled on the right-of-way (Table 3). Seed cones were processed and the seed stored appropriately prior to seeding. Seed was sown in the winter of 2008 using standardized silviculture growing techniques. Semi-ripe evergreen cuttings from ground juniper (*Juniperus communis*) and creeping juniper (*Juniperus horizontalis*) were collected from locations adjacent to or within the vicinity of the cleared right-of-way in January 2008. Plant material was immediately propagated (Figure 7).

Table 3. Coniferous Species Propagated for the TMX Anchor Project

Coniferous Species	Propagation Material Type	Propagation Material Collection Date
Lodgepole pine (<i>Pinus contorta</i>)	Seed	August 2007
White spruce (<i>Picea glauca</i>)	Seed	August 2007
Douglas fir (<i>Pseudotsuga menziesii</i>)	Seed	August 2007
Ground juniper (<i>Juniperus communis</i>)	Semi-ripe evergreen cuttings	January 2008
Creeping juniper (<i>Juniperus horizontalis</i>)	Semi-ripe evergreen cuttings	January 2008



Figure 7. View of right-of-way collected conifer seed being prepared for further processing following extraction from seed cones (September 2007).

Restoration Equipment, Materials and Methods

A Master Restoration Plant Material Installation document was developed for the project. The document identified the planting location of all seed and plant materials, including information regarding the location of rare plant transplants, seed collection and re-seeding areas.

Greenhouses

Two greenhouses each measuring approximately 10 m x 58 m were erected in April 2008 to provide a holding facility for the project's container propagated plants, in the main Jasper construction yard. Irrigation water was provided through overhead solid set sprinkler and manual hose/hand wand systems. Geo-textile fabric was installed on the ground surface to eliminate weeds and provide a dry and even work area (Figure 8).



Figure 8. View of a project greenhouse being used to harden-off and maintain quality of the plants prior to field installation (June 2008).

Plants were shipped to the Jasper greenhouses beginning in mid-May 2008 from five commercial greenhouse/nursery locations. While in the holding greenhouses, plants were acclimated for a minimum 10 day period prior to planting. The plants that were scheduled to be placed later in the season were watered, fertilized and pruned as required.

Native Grass Seed and Granular Fertilizer Placement

Final clean-up of right-of-way, temporary facilities and access roads began In June 2008. Subsoil was graded to match preconstruction and off right-of-way contours. Stockpiled topsoil was spread using hoes and dozers, and all areas were track packed to provide seed safe sites. Placement of the native grass seed mixes and fertilizer commenced immediately following topsoil replacement.

As a result of preconstruction tree clearing activities and the natural accumulation of woody plant material on the forest floor, variable amounts of woody debris not disposed of during burning activities was stripped off with the topsoil during the topsoil salvage activity. The additional woody debris increased the carbon to nitrogen ratio of the soil.

In an effort to re-balance the soil carbon/nitrogen ratio and prevent poor plant growth induced by a soil nitrogen deficiency, soil nitrogen fertilization was implemented. To support plant establishment,

phosphorus was added to the fertilizer blend to form a final analysis of 27-27-0 (N-P₂O₅-K₂O). Fertilizer application rates varied from 150 to 300 kg/ha depending on the amount of woody debris that was present in the replaced topsoil. All sites received a minimum application rate of 150 kg/ha and calcareous soils received 300 kg/ha of granular fertilizer.

Native Woody Deciduous and Coniferous Plant Material Installation

Some riparian areas adjacent to watercourses were replaced during final construction clean-up activities to match the preconstruction contour using soil or willow brush/stake layering while other areas received log crib walls, coir erosion control matting and compost soil amendment. At select upland locations, such as Windy Point and Little Windy Point, large diameter logs were placed perpendicular to the slope to form log berms that sheltered plants from the wind and provided a catchment for precipitation.

The planting density was determined for each site based on moisture regime, exposure to wind and sunlight, substrate, existing preconstruction woody plant density and commitments made to the regulators.

A visual survey of the planting site and adjacent off right-of-way areas was conducted prior to planting by the planting crew lead. This survey provided information on those locations where site growing conditions best suited each plant species and allowed the plant species to be strategically planted in a manner that would blend into the natural aesthetic of the off right-of-way vegetation.

Most of the woody deciduous plant material propagated for the project was installed at riparian areas using standardized silviculture equipment and techniques. Where coir matting was installed during final construction clean-up, an opening in the material was cut large enough to facilitate plug placement. At locations with a cobble/boulder soil substrate, local fine-textured soil was placed behind coir lined log crib walls to form planting beds. Where this was not practical, hand tools were used to excavate a planting hole. All completed plantings received an immediate irrigation “mudding-in” to reduce transplant shock and encourage root egression into the surrounding soil (Figure 9).



Figure 9. View of a riparian planting and woody plant material thriving behind a log retaining structure at Snaring River (August 2009).

Native Forb and Grass Plant Material Installation

Native forb and grass species plants were installed to supplement similar naturally regenerating species removed from looped segments of the construction disturbed Trans Mountain Pipeline right-of-way and to introduce those species adapted to new clearings in deciduous and coniferous forests.

To facilitate post-planting irrigation, right-of-way vegetation management and monitoring of plant recolonization through seed dispersion and vegetative spread, four to eight forb and/or grass plants were planted into island clusters. These ‘forb islands’, were constructed on the seeded right-of-way by raking soil from a central point outward to form a small berm (to contain the irrigation water) with a final diameter of approximately 0.75 m. Container-grown plants were installed within the perimeter berm.

The forb islands were spaced approximately 20 m apart along the right-of-way. Sites were selected to provide the best opportunity for survival of the plant species and for the spread of plant material across the right-of-way. At the time of planting, the following right-of-way conditions were considered during site selection: shading from off right-of-way trees to help reduce evapotranspiration and moisture stress; moisture receiving areas at the base of slopes or at lower slope positions; and available microsites created from naturally-occurring rocks or woody debris, or water diversion structures such as berms and logs. At locations with a uniform moisture regime, sites were planted through the centre of the right-of-way; water was applied immediately following planting.

Plugs of sedges and rushes were salvaged from adjacent areas and transplanted onto the right-of-way within two wetlands and one watercourse during restoration in order to expedite natural regeneration on the right-of-way. Survival of the sedges was >90% and the plugs will be monitored in future years to determine the spread of material across the right-of-way (Figure 10).



Figure 10. View of forb island and establishing forb plants at a location where the right-of-way was narrowed down to preserve the integrity of a historic rail bed (August 2009).

Prior to the commencement of seeding activities, previously purchased single species seed was blended into seven seed mixes developed in cooperation with Parks Canada and the University of Alberta. Seed mixes were shipped to the Jasper main yard and stored in rodent-proof, vented Sea-cans. All the seed mixes were applied at a rate of 18 kg/ha and cover crop seed was applied at a rate of 10 kg/ha, where required. Granular fertilizer was purchased and shipped to the main yard in mini-bulk (1,000 kg) and 25 kg poly bags.

Hydroseeding was used to place seed, fertilizer, wood fibre mulch and tackifier onto areas where soils were particularly sensitive to erosion, on areas with steep side cuts and at locations with important views.

A contractor with extensive experience using various seeding methods in mountainous terrain was tasked with the placement of seed and fertilizer with the following broadcast spreading equipment; tractor drawn air boom broadcast spreader; hydroseeding unit; all-terrain vehicle (ATV) with mounted broadcast

spreader; helicopter with mounted hopper/spreader; and shoulder slung hand crank-type spreader. A helicopter with mounted hopper/spreader was used to apply a hydroseeder prepared mixture of seed, fertilizer, wood fibre mulch and tackifier onto steep terrain areas located at Windy Point and Little Windy Point. Hand broadcasting using a shoulder slung hand spreader was used in confined or small isolated locations, and where soft/moist ground conditions limited the use of other methods.

Plant Material Protection Methods

To protect newly installed woody deciduous plants from ungulate browsing, riparian and other special restoration areas were fenced using a number of methods or were treated with a foliar applied spray-on chemical repellent.

Three fencing designs were used singularly or in combination. Construction panel fencing was the primary method of protecting riparian plantings. The fencing consisted of portable/self supporting 2.5 m high by 3.1 m wide panels constructed of tubular steel frames that held green chain link wire inserts. The panels were easily connected together with bolt clamps into appropriate lengths and configurations that conformed to the planting area shape. Approximately 1,150 panels were purchased and shipped to the Jasper yard where they were stored and, when required, transported by pick-up truck to the riparian site prior to planting. Support for the fence panels was provided by 15 cm wide by 75 cm long flat metal bases positioned perpendicular to the vertical panels, along with positioning the panels in a zigzag pattern to provide additional support where required (Figure 11).



Figure 11. View of construction panel fencing being anchored with sand bags at a location know for high wind speeds. The majority of these fencing installations required no supplemental bracing or anchoring (June 2009).

At riparian plantings, stucco wire was used along the watercourse channel, where large riprap was placed along the channel or across small channels to connect panel fencing installations. The 1.2 m high wire was held vertically using 1.8 m long T-posts driven into the ground approximately 30 cm and spaced from 2 to 3 m apart depending on ground and slope conditions.

Modified Russell Rail fencing was installed at Cottonwood Creek along the main entrance to the Jasper town site and at the Maligne Lake outflow. At these high visibility locations, the rail fencing provided a more traditional design and blended into the natural aesthetic of the surrounding landscape.

Tree Guard® animal repellent was used at locations where fencing was impractical due to the size of the plantation, where slope gradients were excessive or terrain irregular, or where ungulate browsing was believed to be of a lower intensity. The repellent was sprayed onto the foliage of deciduous and coniferous plants in the fall of 2008 and spring of 2009 to coincide with a potential seasonal increase of herbivory at ungulate winter range and sheep lambing areas.

Irrigation

Due to unpredictable rainfall patterns along the route, supplemental water was provided to riparian and special restoration upland planting areas immediately following plant installation and at regular intervals through 2008 and 2009. The irrigation operation was intended to help minimize plant moisture stress which could lead to delays in plant establishment and potential losses. Riparian areas adjacent watercourses, forb islands located along the right-of-way and other upland plantings including Windy Point and Little Windy Point were irrigated.

Two irrigation methods were employed along the route. The most common method utilized ATVs fitted with 200 L water tanks that travelled along the right-of-way and access roads between riparian and upland plantings. Larger 2,000 L water tanks, placed along the route, served as fill points for the ATVs. These tanks, in-turn, were filled by an 8,000 L water tanker that obtained water withdrawn from watercourses along the route.

Where access was limited to foot travel, small gas-powered 2.5 cm discharge water pumps with an appropriately screened intake hose, discharge hose, nozzle and spill tray were carried in to riparian locations where water was withdrawn directly from the watercourse and applied onto the plantings. A Water Diversion Permit issued by Parks Canada outlined select watercourses, the quantity of water available for diversion, intake hose screen size requirement and seasonal use guidelines.

Vegetation Management Methods

Management of non-native invasive plant species was implemented as identified in the EPP, a full season prior to the commencement of right-of-way clearing in August 2007. Vegetation management was undertaken during construction at locations identified as containing invasive species of concern. Following final clean-up of the right-of-way in 2008, completed areas were monitored for weed emergence and, where warranted, the appropriate weed control method was chosen.

JNP has identified the non-native invasive plant species of concern as low, medium and high priority (McPhee et al 2005). Those species with a low priority occurring on the right-of-way were to be maintained at a level not to exceed 2% of a localized plant population. Species identified in the medium to high priority category were to be controlled/eradicated.

An Integrated Pest Management Plan was prepared by KMC each year and reviewed and approved by Parks Canada. The plan identified those chemicals and mechanical control methods proposed for use in the JNP. Tracking of all weed suppression or control methods was the responsibility of KMC which was followed-up by a prepared report sent to Parks Canada each year.

Low priority species were typically managed using mechanical methods unless the population density was high and localized, and then chemical controls were used. Weed species identified as a moderate to high concern were controlled using chemical control methods and, where these species occurred adjacent to watercourses, mechanical control was used.

Chemical application of herbicides was undertaken using the following techniques: high pressure hand gun broadcast application; low pressure hand gun spot application; hand wicking spot application; ATV-mounted spray boom broadcast application; and low pressure backpack hand wand spot application.

Mechanical weed control was undertaken using gas-powered weed whips, tractor-driven rough cut mowers and hand weeding.

Post-Construction Monitoring Program

Kinder Morgan is required, as a condition of approval, to conduct a Post-Construction Monitoring Program for 5 years following construction. The initial post-construction report was the Post-Construction Environmental As-built Report prepared for the project following construction (National Energy Board 2004, TERA Environmental Consultants 2009).

Many of the successes identified in the Post-Construction Monitoring Program can be attributed to the implementation of those measures outlined in the Restoration Plan, that were implemented both prior to and during construction. Following are the preliminary results from the Post-Construction Monitoring Program.

- Preconstruction consultations with Parks Canada and their associates regarding vegetation management and the selection and/or collection of suitable plant material for use in restoration, was imperative to align objectives and goals for the restoration program.
- Collection of plant material prior to clearing and topsoil salvage activities allowed for the preservation and replacement of the JNP's genetic heritage.
- Where grubbing was minimized, adjacent to the TMPL roach and watercourses, native volunteer plants are re-establishing.
- Salvage, storage and replacement of topsoil allowed for the soil seed bank and vital plant growth factors to be replaced.
- Natural regeneration is an effective means of revegetation where topsoil is salvaged and replaced promptly, and where soil erosion is not a substantial concern.
- Naturally occurring and installed native seed has variable germination rates. While seed of some species was quick to germinate, others have not yet been observed. For example, the yellow mountain avens and common fireweed seed sown on the right-of-way has yet to germinate. Likewise, some forb species seed was problematic to propagate and could not be included in plantings despite their appropriateness for the area.
- Weed issues are reduced following construction if a vegetation management program is implemented prior to construction.
- Tree Guard® repellent appears to limit browsing in areas with a high density of herbivores.
- Although undertaken as a trial, native sod plot salvage and replacement were successful. Timing of the sod salvage (in the fall) and replacement activities (in the spring) led to this success (Figure 12).



Figure 12. View of native sod plots, right-of-way revegetation and adjacent off right-of-way conditions (June 2009).

- Native forb islands appear to be establishing well and setting seed, and will provide a source of native seed for dispersal onto the right-of-way. Likewise, sedge/rush plug transplanting appears to have been successful.
- Construction panel fencing worked very well at restricting wildlife access to establishing riparian and special restoration plantings. Where moderate to high winds are common, the fencing needs to be well braced.
- Prevention of plant desiccation due to winds is a substantial concern in the establishment of plantings; wind protection is required.

The Post Construction Monitoring Program will continue to report on the progress of restoration. The learnings already identified will be used to address those areas of the project that require further remedial measures to meet the MO/DERS as outlined by Parks Canada.

ACKNOWLEDGMENTS

The authors would like to thank TERA personnel and Bob Zeleny of Kinder Morgan Inc. for providing technical review of this paper. The authors wish to thank Kinder Morgan for the opportunity to work on this project.

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- TERA Environmental Consultants / Westland Resource Group. 2007b. Restoration Plan for the Terasen Pipelines (Trans Mountain) Inc. TMX - Anchor Loop Project. Revision 2 - March 2007.
- TERA Environmental Consultants. 2009. Post-Construction Environmental As-Built Pipeline Report for the Trans Mountain Pipeline L.P. TMX - Anchor Loop Project.

AUTHOR PROFILE

David Novak, B.Sc. P.Ag.

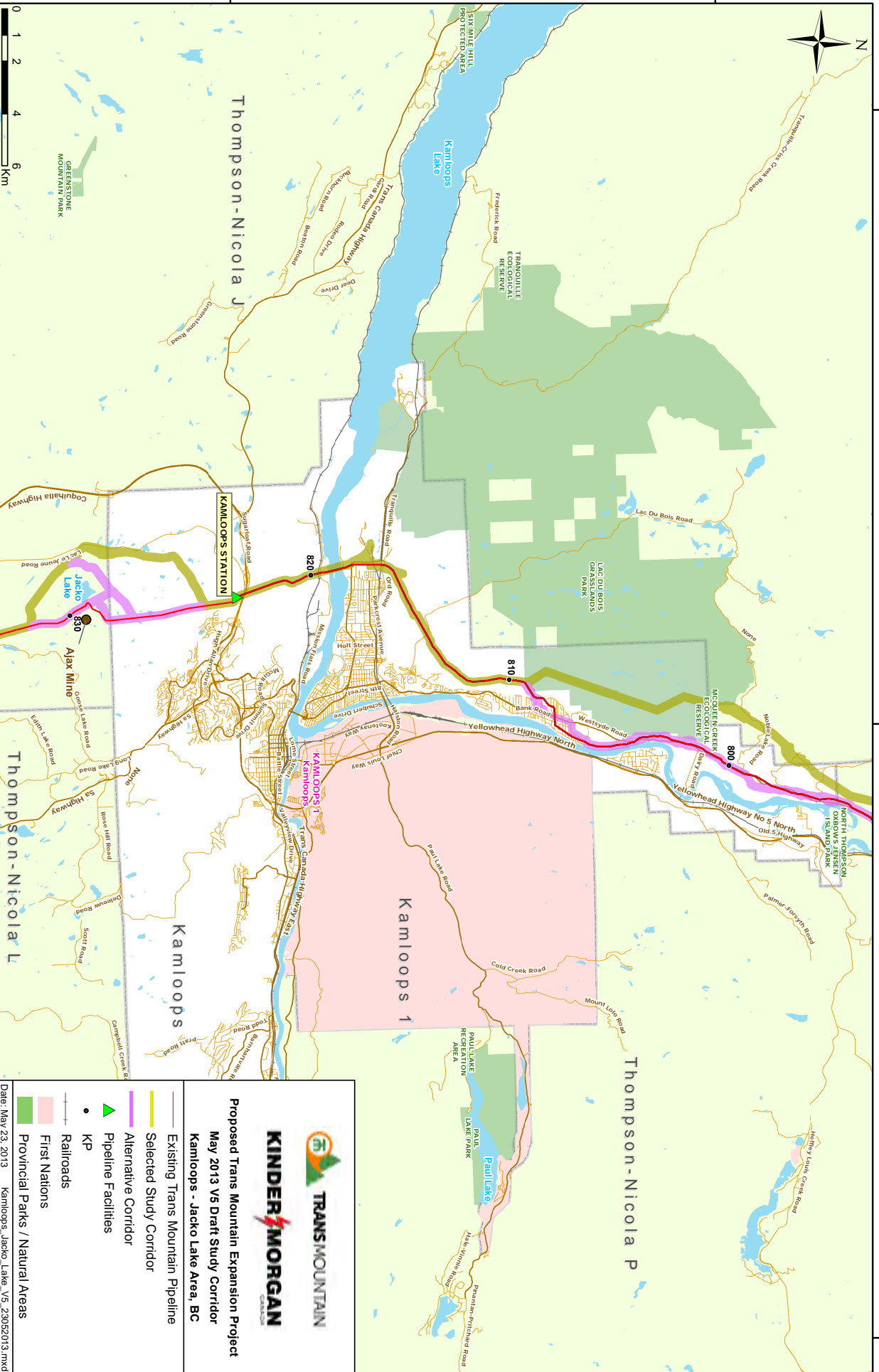
*TERA Environmental Consultants, Suite 1100, 815 - 8th Avenue S.W. Calgary, Alberta T2P 3P2
Canada, dnovak@teraenv.com - 403-265-2885*

Mr. Novak is a Professional Agrologist and Environmental Planner/Reclamation Specialist, and has been with TERA since 2005. Mr. Novak has been involved with restoration project planning, including native plant prescription and planting system development in Alberta and British Columbia and has extensive experience in soil and vegetation assessment and management, and woody plant propagation. Additionally, he has implemented numerous projects that have included restoration of riparian areas, song bird habitat and First Nation indigenous fruit species, as well as vegetation visual screening. Mr. Novak has participated in the development and procurement of native grass species mixes for several large National Energy Board regulated pipeline projects.

Gina Fryer, M.Sc. P.Biol.

*TERA Environmental Consultants, Suite 1100, 815 - 8th Avenue S.W. Calgary, Alberta T2P 3P2
Canada, gfryer@teraenv.com - 403-265-2885*

Ms. Fryer is a Professional Biologist and Senior Environmental Planner, and has been with TERA since 1990. Ms. Fryer has served as Project Manager on numerous provincial and federal oil and gas projects in Alberta, BC, Saskatchewan and Manitoba and has extensive experience in vegetation assessment, sensitive vegetation community and rare plant mitigation, reclamation planning and environmental impact assessment. Over the years, she has conducted several rare plant surveys and coordinated numerous vegetation assessments. Ms. Fryer has managed the vegetation components as well as the post-construction monitoring programs of several large NEB-regulated pipeline projects.




0 1 2 4 6 Km


120°40'0"W

120°20'0"W

120°0'0"W









TRANS MOUNTAIN



KINDER MORGAN

Proposed Trans Mountain Expansion Project
 May 2013 VS Draft Study Corridor
 Kamloops - Jacko Lake Area, BC

	Existing Trans Mountain Pipeline
	Selected Study Corridor
	Alternative Corridor
	Pipeline Facilities
	KP
	Railroads
	First Nations
	Provincial Parks / Natural Areas

Date: May 23, 2013 Kamloops_Jacko_Lake_VS_23052013.mxd

50°40'0"N

50°50'0"N

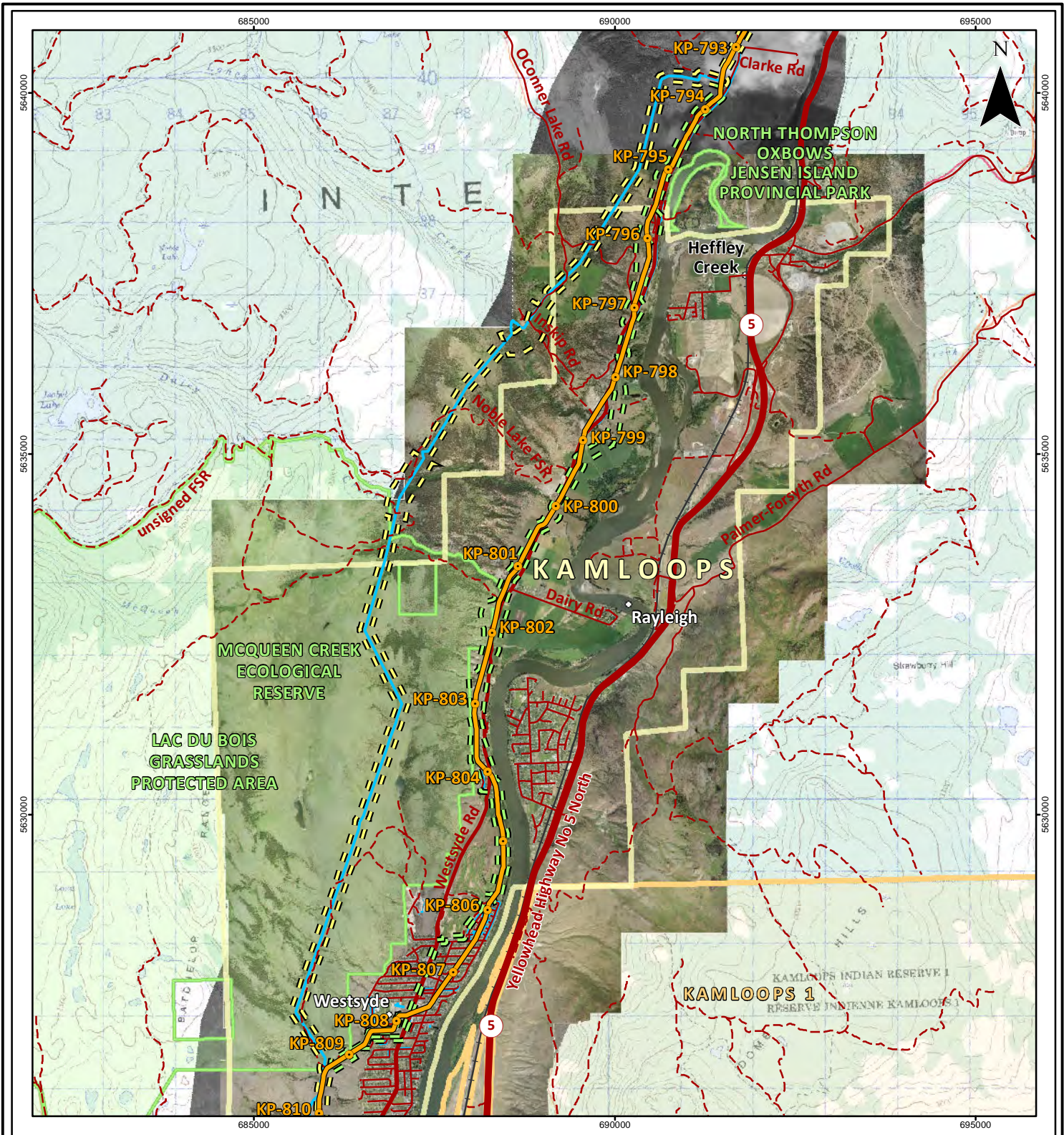
50°40'0"N

120°40'0"W

120°20'0"W

120°0'0"W





SCALE: 1:75,000



ALL LOCATIONS APPROXIMATE

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

MAP NUMBER 201306_MAP_TERA_PER_00294_REVO	PAGE SHEET 4 OF 9
DATE 05 Jun 2013	TERA REF. 7894
SCALE 1:75,000	REVISION 0
PAGE SIZE 8.5 x 11	DISCIPLINE PER
DRAWN CMR	CHECKED TGG
	DESIGN TGG

- Kilometre Post (KP)
- Existing Trans Mountain Pipeline (TMPL)
- Existing Spectra Pipeline
- Existing Telus Trench
- Village / Hamlet
- Highway
- Paved Road
- Resource Road
- Railway
- Trans Mountain Expansion Proposed Pipeline Corridor (P1 V5) - Preferred
- Trans Mountain Expansion Proposed Pipeline Corridor (P2 V5) - Alternate
- City / Town
- Indian Reserve / Métis Settlement
- Park / Protected Area
- Municipal / District Boundary

Projection: NAD 1983 UTM Zone 10N. Route Revision: 0 (Baseline TMPL Existing Centreline), Telus Trenches and Spectra Pipelines provided by KMC, 2012; Facilities, B/W & Colour Imagery: 2008-2012: provided by KMC, 2013; Proposed Pipeline Corridor, Revision V5: provided by IPP May 23, 2013; Transportation: BC FLNRO, 2012; Natural Resources Canada, 2012; Geopolitical Boundaries: Natural Resources Canada, 2003, IHS Inc., 2011, BC FLNRO, 2007; First Nation Lands: Natural Resources Canada 2013; Government of Canada, 2013; Parks and Protected Areas: Natural Resources Canada, 2013, BC FLNRO, 2008; 1:50,000 NTS Map © 2013 Department of Natural Resources Canada. All rights reserved.

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LAC DU BOIS GRASSLANDS PROTECTED AREA

EXISTING AND PROPOSED ALTERNATES TRANS MOUNTAIN EXPANSION PROJECT

201306_MAP_TERA_PER_00294_Rev0.mxd

APPENDIX C

ECONOMIC BENEFITS PRESENTATION MATERIALS

Handouts:

- \$50 Million A Day brochure from the Canadian Chamber of Commerce
- TMEP Connect with Local Opportunities postcard
- TMEP Employment Opportunities fact sheet

PowerPoint Presentations:

- Edson and District Chamber of Commerce, November 20, 2013
- Resource Industry Suppliers Association (RISA), November 25, 2013
- Hinton and District Chamber of Commerce, November 25, 2013
- Hope and District Chamber of Commerce, October 21, 2013
- Kamloops Chamber of Commerce, November 8, 2013
- Clearwater and District Chamber of Commerce, November 18, 2013
- Blue River Economic Development Group, November 21, 2013
- Valemount and District Chamber of Commerce, November 21, 2013
- Merritt and District Chamber of Commerce, November 22, 2013
- Vancouver Board of Trade, November 5, 2013
- Surrey Board of Trade, November 6, 2013
- Tri-Cities Chamber of Commerce, November 14, 2013
- Abbotsford Chamber of Commerce, November 15, 2013
- Greater Langley Chamber of Commerce, November 19, 2013
- Burnaby Board of Trade, November 27, 2013
- Chilliwack Chamber of Commerce, November 28, 2013

THE CANADIAN CHAMBER OF COMMERCE

LA CHAMBRE DE COMMERCE DU CANADA



LACK OF MARKET ACCESS HAS COST CANADA
AS MUCH AS **\$50 MILLION** A DAY



Canada's failure to diversify its energy market is leaving millions of dollars on the table every day. We are at a critical point. What's at stake for Canada is millions of jobs, tax revenues and other economic benefits. The cost of inaction is enormous.

Oil and gas, its transportation and its environmental and social impacts have become one of the most pressing policy debates of the last few years. There are key facts every Canadian needs to understand about the issue. It is time to have a balanced discussion about what it means to be an energy nation in the 21st century. The lack of reliable access to tidewater for oil and gas and its attendant effects on the Canadian economy is a key barrier to competitiveness with negative implications for the nation.

Balancing the essential contribution oil and gas makes to our standard of living with environmental and social responsibility is not easy. At the Canadian Chamber of Commerce we are committed to having this discussion. The choices we make will shape our economy for years to come.

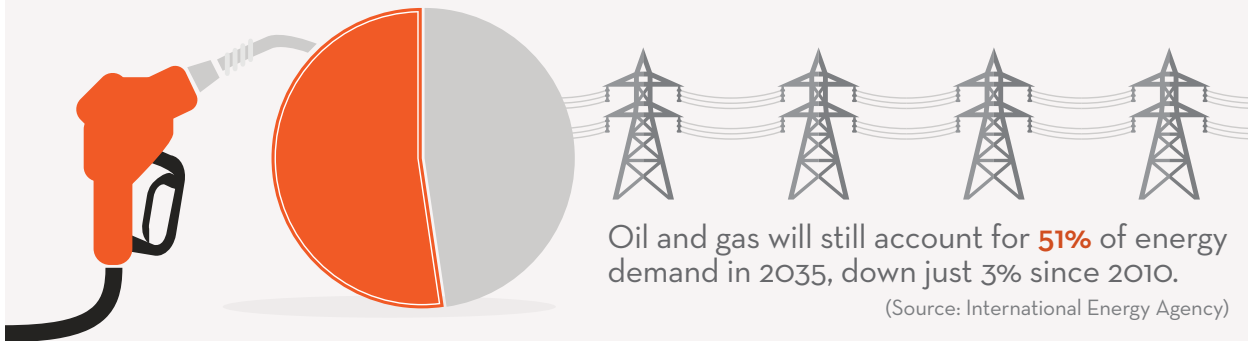
As Canadians, we all need to be part of this discussion.

A handwritten signature in black ink that reads "Perrin Beatty". The signature is written in a cursive, flowing style.

Perrin Beatty
President and Chief Executive Officer

The world will rely on oil and gas for the foreseeable future.

If Canada does not export oil and gas, the world will not stop using hydrocarbons; Canada will simply miss out on a rare opportunity.



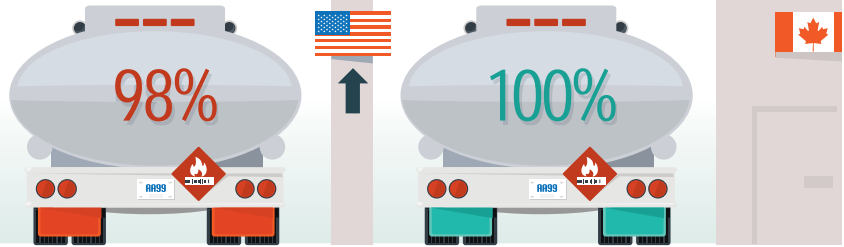
Oil and gas will still account for **51%** of energy demand in 2035, down just 3% since 2010.

(Source: International Energy Agency)

THE PROBLEM

BORDER

Canada can no longer rely on the U.S. as the destination for virtually all its oil exports.

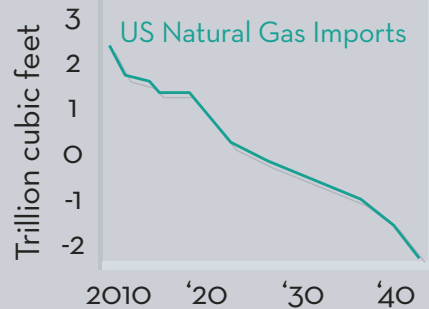
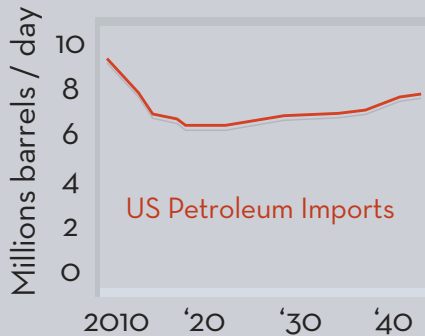


Current U.S. exports:

Petroleum

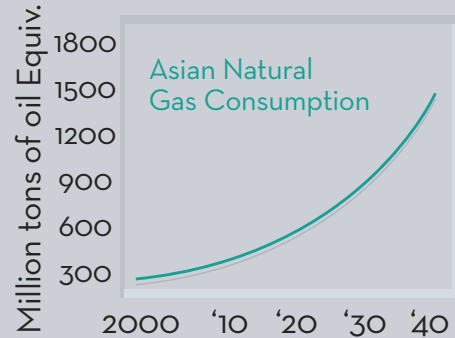
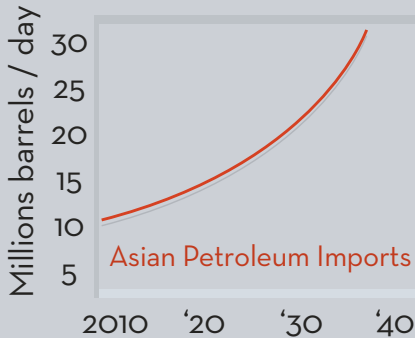
Natural Gas

The U.S. is predicted to drastically reduce its oil and gas imports over the next 25 years



THE ASIA OPPORTUNITY

Asia will see its energy imports increase dramatically in the future.



Canada currently lacks the infrastructure to get energy to tidewater and overseas.



The lack of access to global markets often forces Canadian oil producers to accept lower prices. This has cost Canadian producers as much as **\$50 million a day in lost revenues**.

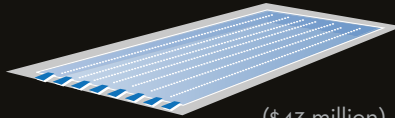
WHAT \$50 MILLION A DAY REALLY MEANS TO CANADIANS:



3/4th of the costs of the tidal energy project in the Bay of Fundy

(\$86 million)

\$50 million could pay for the Saint-Laurent Sports Complex in Montreal



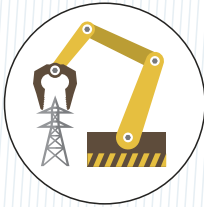
(\$43 million)



A year's worth of medical, laboratory and drug supplies for the Hospital for Sick Children (\$72 million - 2013)

Getting Canadian oil and gas to Asia would mean billions in additional investment

Over the next 25 years, anticipated investment of **\$386 billion** in Canada's natural gas sector will provide:



131,000
additional jobs
per year

Almost as much as the entire
machinery manufacturing sector



\$3.1B
in taxes per year

Enough to cover health care
spending in Newfoundland



\$364B
in additional GDP

(Conference Board of Canada)



What is the safety record of oil and gas transport in Canada?

Canadian railways are experienced in transporting dangerous goods.

1.5 trillion litres of oil were transported by pipeline in 2011 with a success rate of **99.999%**



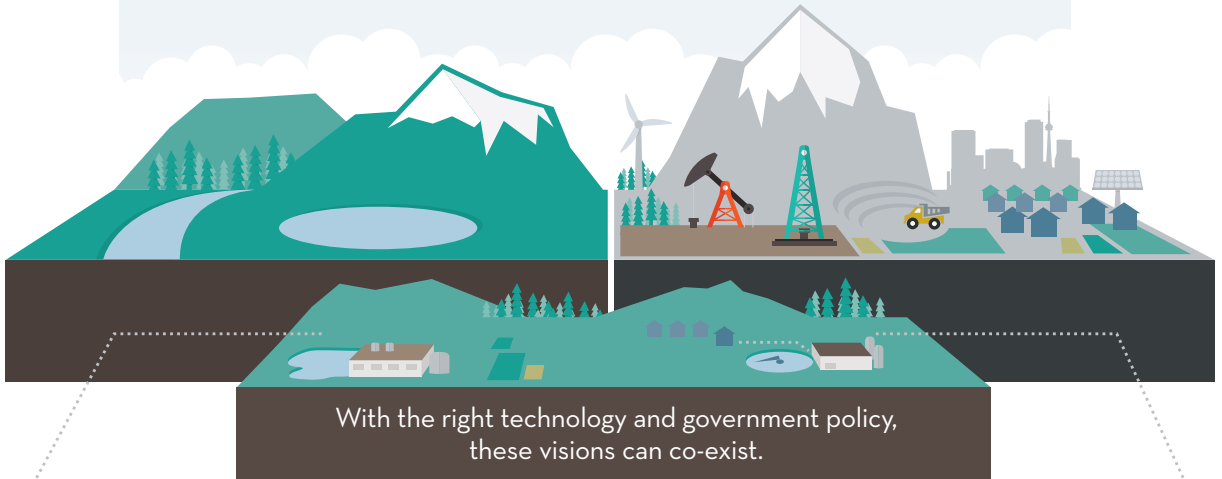
Canadian oil tankers recorded zero spills in the 2000s

PERCEPTION vs REALITY

Canadians are struggling to reconcile two visions of their country

Pristine wilderness and
natural beauty

A globally important producer
of natural resources.



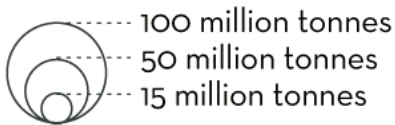
An Albertan demonstration plant is being developed to use algae to transform carbon emissions from oil sands facilities into products like biofuels

Shell diverts municipal sewage, treats it and uses it in natural gas production instead of water from river and lakes.

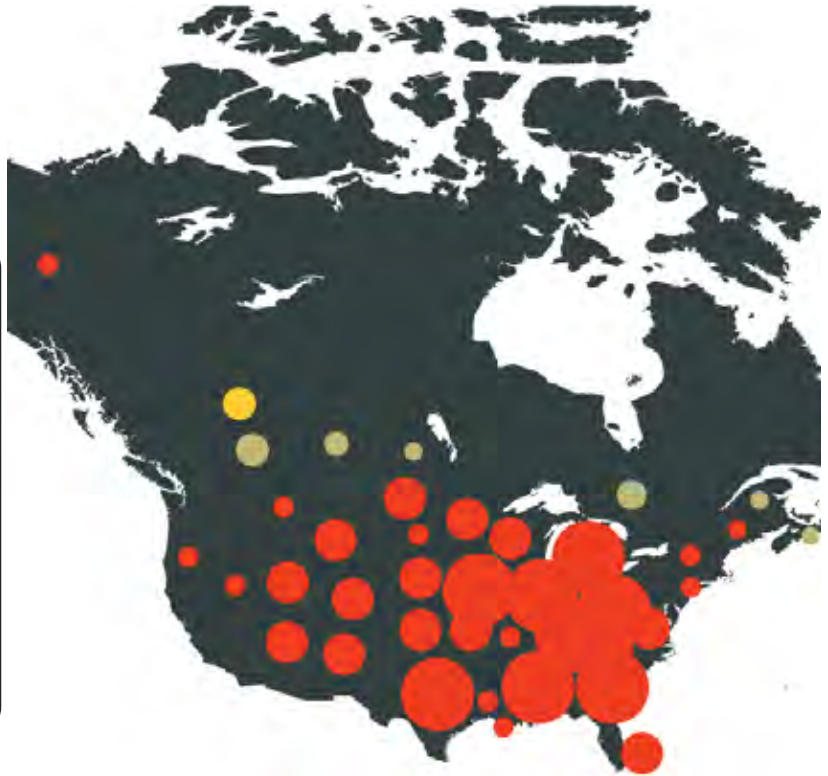
The perception that Canadian energy resources are **uniquely damaging** to the global climate is false.

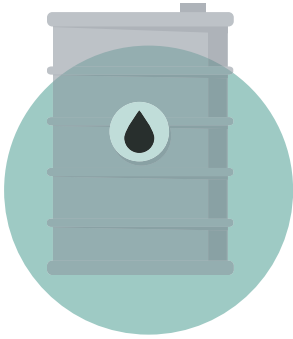
Fact: Oil Sands production represented only 0.16% of global emissions - a **fraction of those produced by U.S. coal plants**

GHG Emissions



- Canadian oil sands
- Canadian coal-fired power plants
- U.S. coal-fired power plants

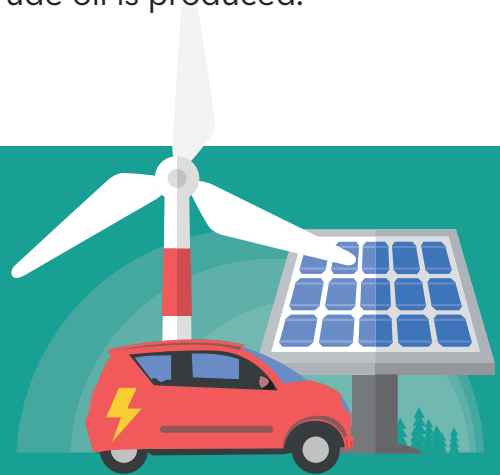


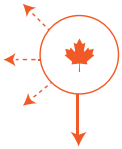


Fact:

About **70-80%** of emissions contained in a barrel of oil are created when gasoline or diesel is burned, not when crude oil is produced.

The transition to a low carbon economy will be led by changing energy consumption, and by advancing environmental innovation in our energy production.





As a country, Canada has the skills and technology to develop its energy resources, yet we have no export capability beyond the U.S.

The solution is obvious:

Canada needs to build the infrastructure to **connect supply with demand** in the international market.



Canadians must come to grips with **three** facts:

- 1** Tomorrow's growth in energy consumption lies largely in Asia; there are plentiful global supplies of oil and gas to satisfy this demand
- 2** The lack of access to global markets cost Canadians millions every day
- 3** With the right technologies and policies, Canada can find a way to produce natural resources while protecting the environment



The speed with which the people of Canada can react to these realities will determine Canada's ability to compete as a nation in the 21st century.

THE CANADIAN CHAMBER OF COMMERCE
LA CHAMBRE DE COMMERCE DU CANADA



Chamber.ca | 1.800.661.2930



VISUAL CAPITALIST



TRANSMOUNTAIN EXPANSION PROJECT

CONNECT WITH LOCAL OPPORTUNITIES - REGISTER ONLINE -

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LOCAL OPPORTUNITIES

*The construction and first 30 years of operation of the proposed Trans Mountain Expansion is expected to create a total of **123,000 person-years of employment**. Workers would spend more than \$420 million on accommodations, meals and other project-led expenditures along the construction route.*

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Trans Mountain: Local Economic Opportunities Edson & District Chamber of Commerce

November 20. 2013



Canadian Chamber Report

Canadian Oil and Gas: US Supply Increasing. Asia Needs More.

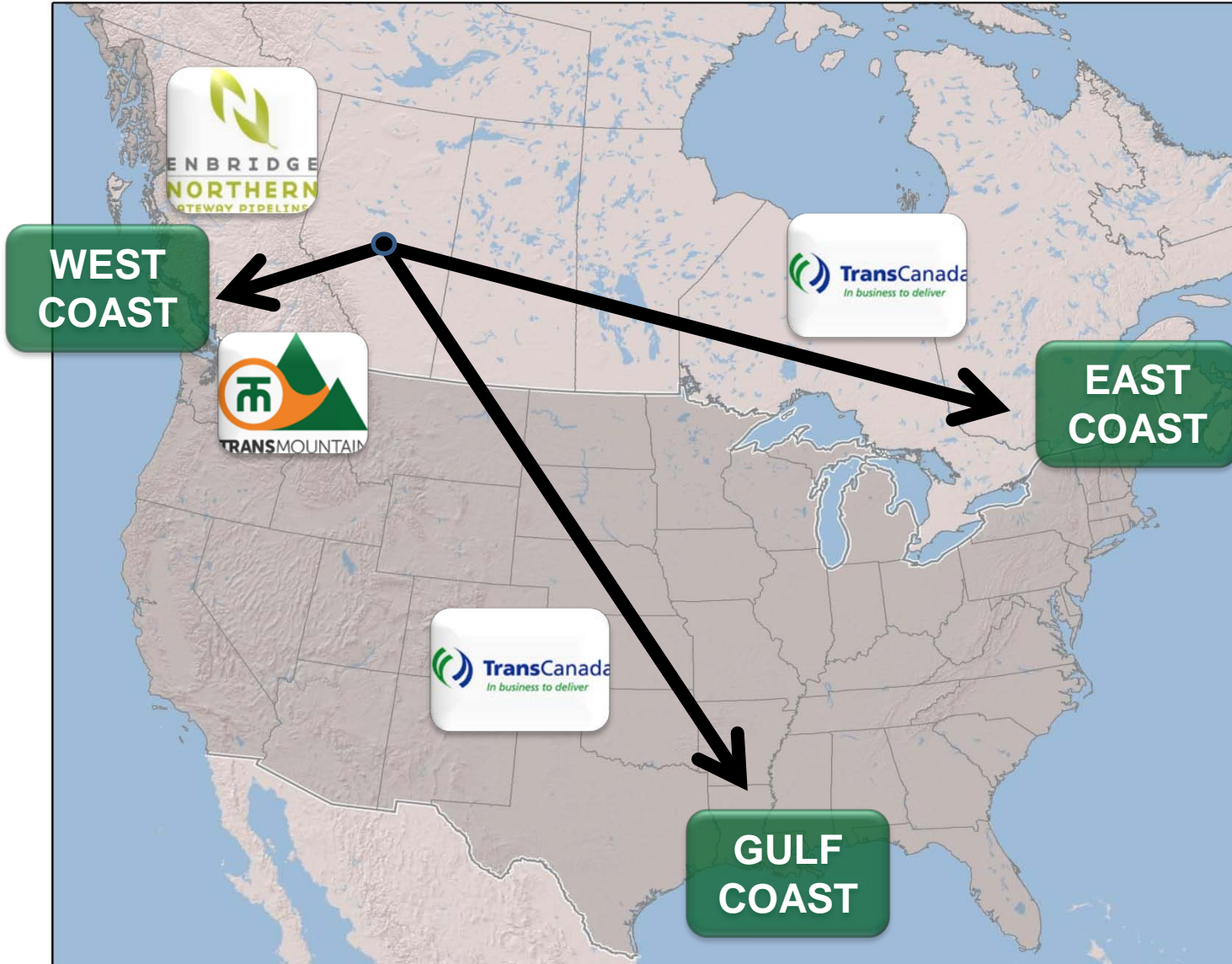
The fastest growing markets for energy exports now lie offshore. However, Canada cannot respond to this opportunity as it lacks the infrastructure to get energy to tidewater and overseas.

This lack of market access cost Canada as much as \$50m per day.



Lack of Market Access Has Cost Canada As Much As \$50 Million A Day

Market Access Pipelines



Trans Mountain Proposed Expansion

- \$5.4 billion investment
- 18 months of engagement and issue identification
- NEB granted commercial approval in May 2013
- Formal Project Description, NEB Issues List and NEB process definition now complete

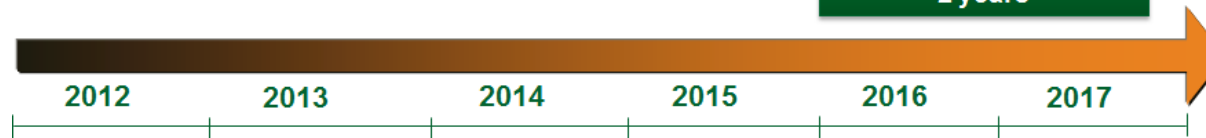


Application Preparation
1.5 years

Commercial

Regulatory Approvals
2 years

Construction
2 years



Economic Benefits



Construction Spending
(to 2018)



Operating Expenditures
(2018 - 2037)



108

66

25

EMPLOYMENT: up to
108,000 person years
during construction &
20 years of operation

66,000 in BC
25,000 in Alberta

~4,500 Construction Jobs at Peak

Expanded Operations: 90 New Permanent Positions with 50 in BC

Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:





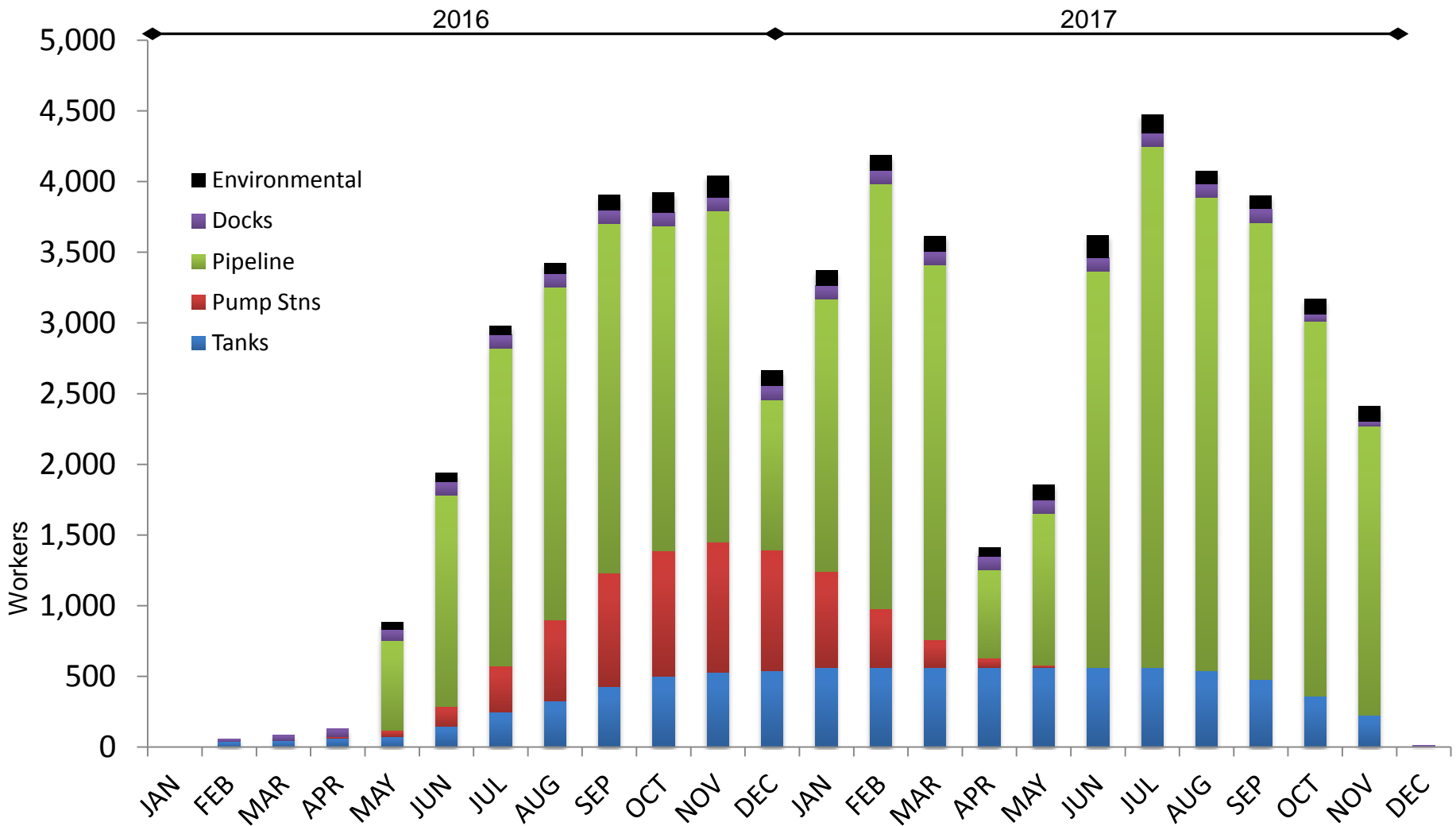
ECONOMIC IMPACT

Benefits to Edson

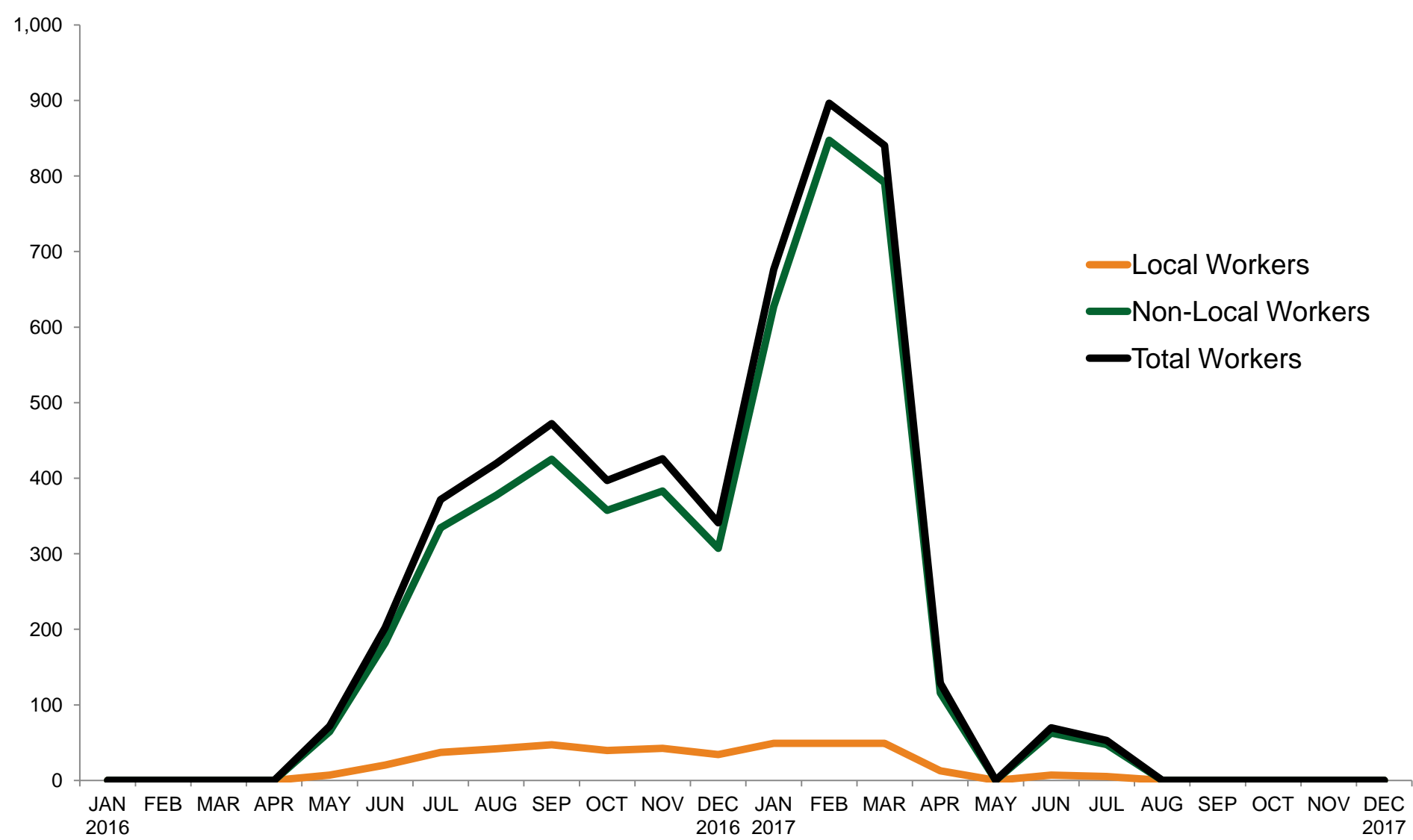
- Municipal taxes
 - 2013: \$ 63,000
 - With expansion: \$ 173,000
- Local suppliers, contractors, and consultants
- Local workforce spending
- Employment
- Procurement
- Community investment



Project Workforce

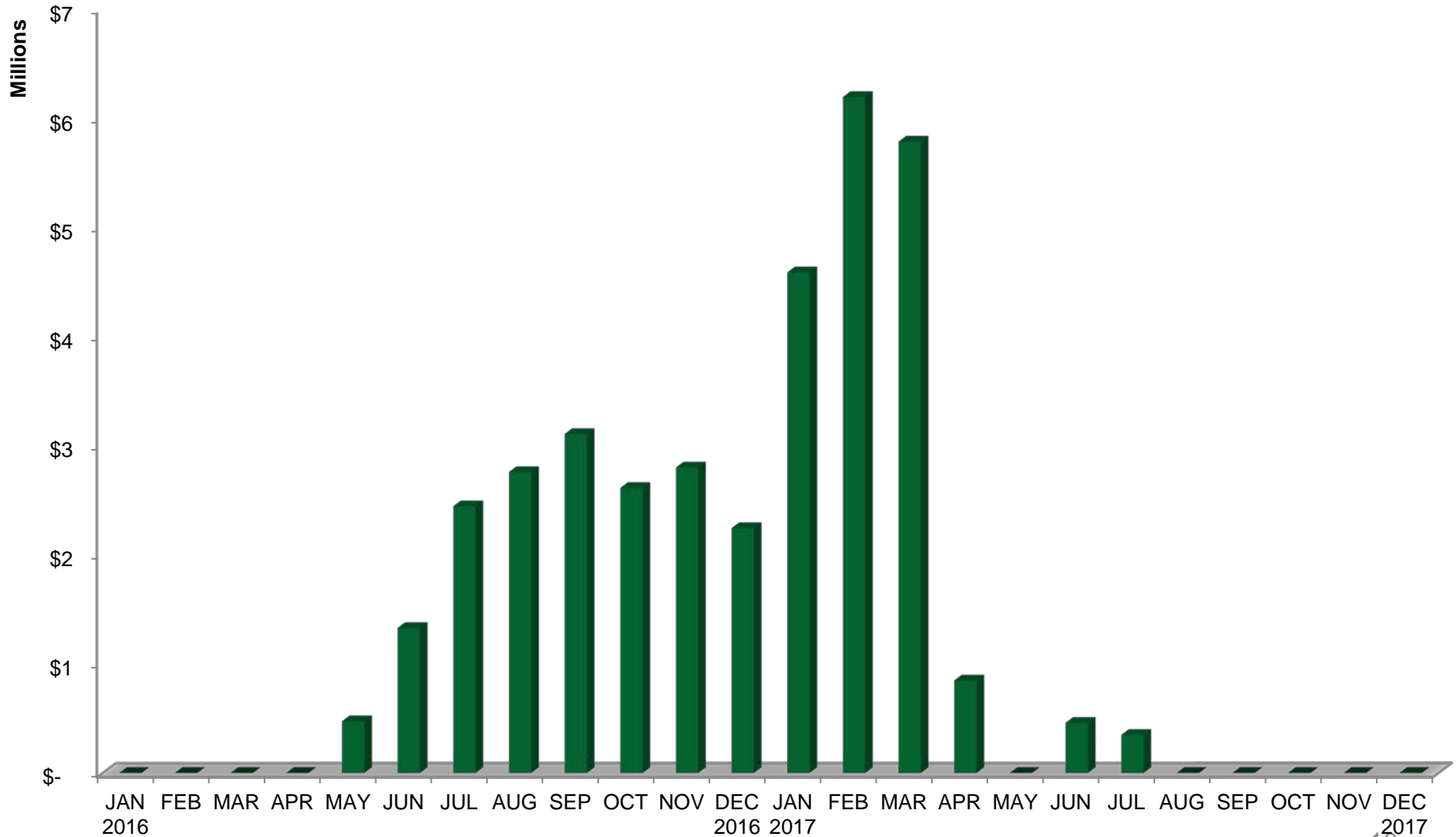


Edson-Based Work Force



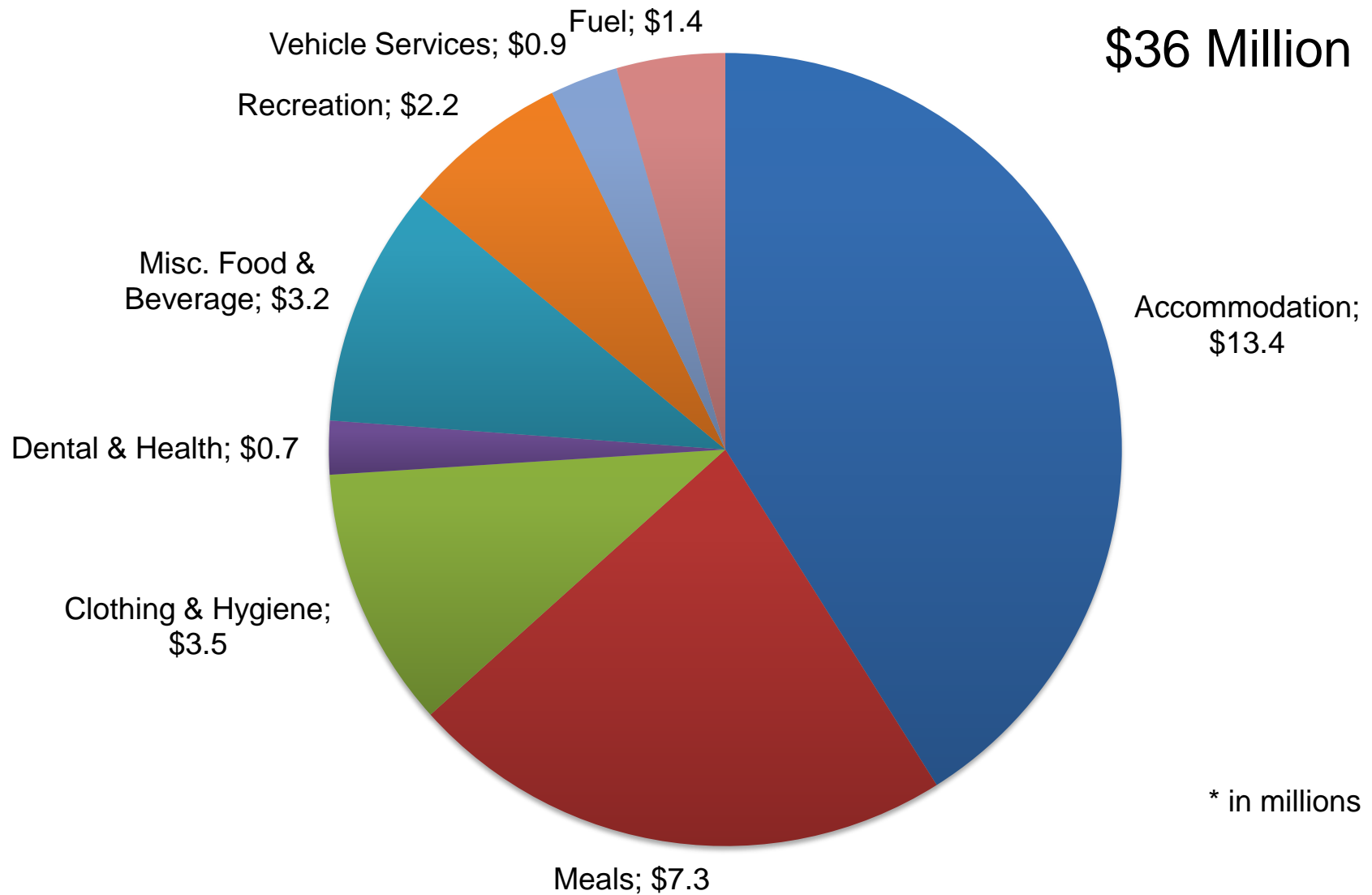
All figures based on project plans as of November 2013

Edson Workforce Spending



All figures based on project plans as of November 2013

Non-Local Worker Spending*





EMPLOYMENT

Pipeline: Employment

Logging & Clearing

Fallers, Equipment Operators, Trucking

Welder Helpers

Administration

Labourers

**Pipeline Coating/
Sandblasting**

Mechanics

Equipment Operators

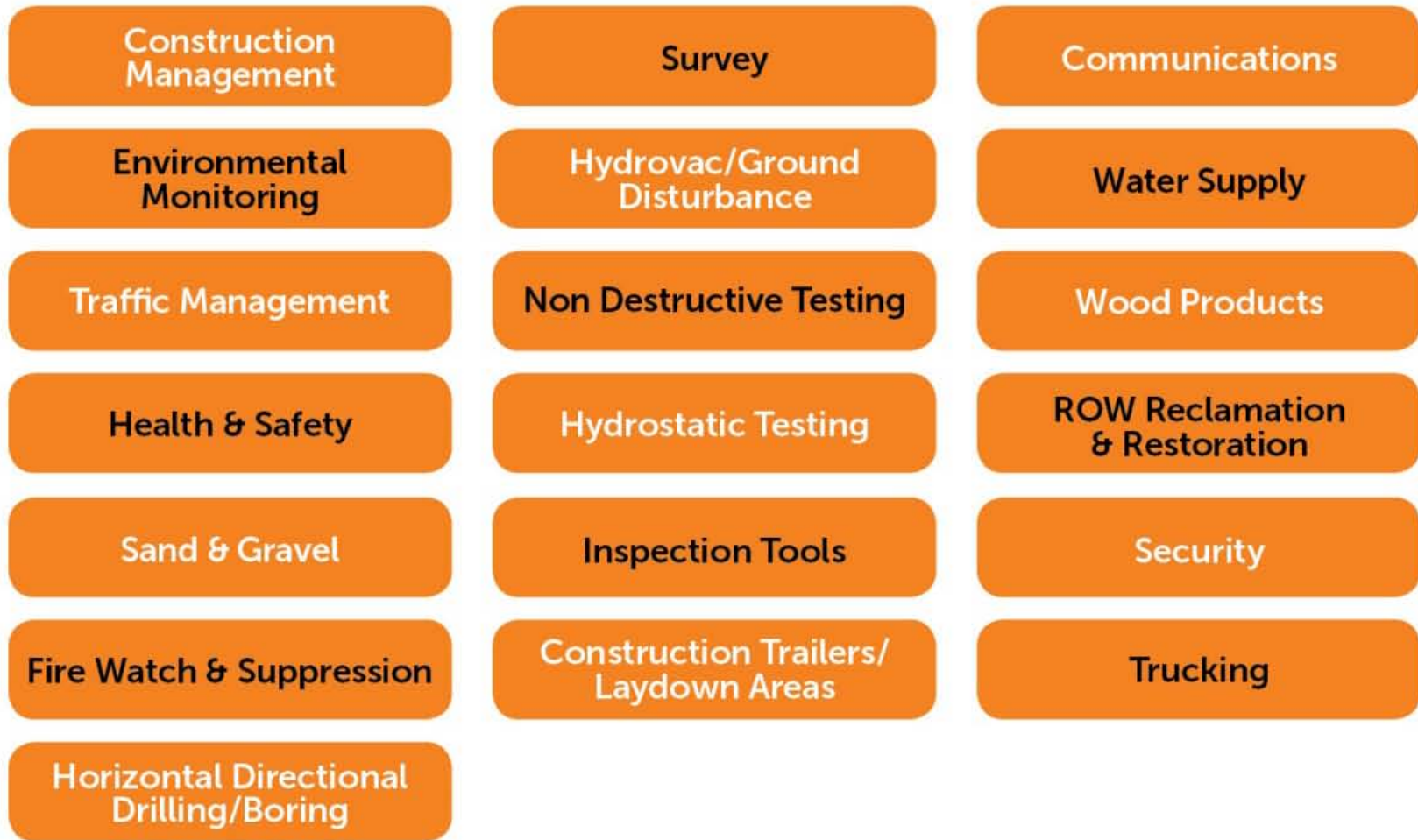
Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



Pump Station: Employment

Welders

Pipe Fitters

Carpenters

Equipment Operators

Labourers

Crane Operators

Electricians

Steelworkers



Pump Station: Contracting Opportunities



Prefabricated Buildings

Power Line Installation

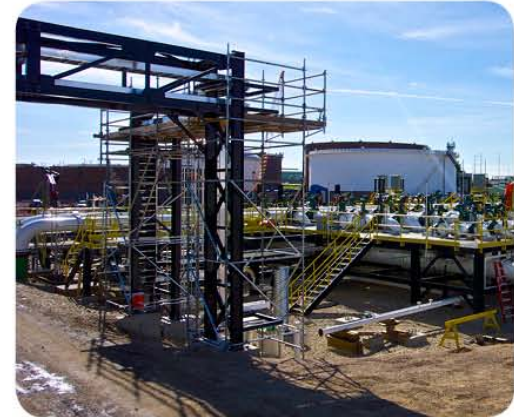
Environmental
Monitoring

On Site Medical & Safety

Surveying

Non-Destructive Testing

Security



Next Steps

- What we will do next:
 - Continue to refine our project requirements and estimates
 - Identify trades and available workforce
 - Work to maximize local opportunities and benefits
 - Work with communities to continue to learn about project interests, restoration possibilities and community benefits
- Stay in touch:
 - Sign-up for ongoing procurement and / or jobs information
 - Keep up-to-date through our website and e-newsletter
 - Register for NEB updates

CONTACT US:

Trans Mountain Expansion Project



Email: info@transmountain.com



Phone: 1.866.514.6700



Website: www.transmountain.com



@TransMtn



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Burnaby, BC V5A 4T9

Jobs and Procurement:

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transmountain.com/procurement



Trans Mountain: Local Economic Opportunities Resource Industry Suppliers Association

Greg Toth, Senior Project Director

Edmonton, AB

November 25, 2013



Canadian Chamber Report

Canadian Oil and Gas: US Supply Increasing. Asia Needs More.

The fastest growing markets for energy exports now lie offshore. However, Canada cannot respond to this opportunity as it lacks the infrastructure to get energy to tidewater and overseas.

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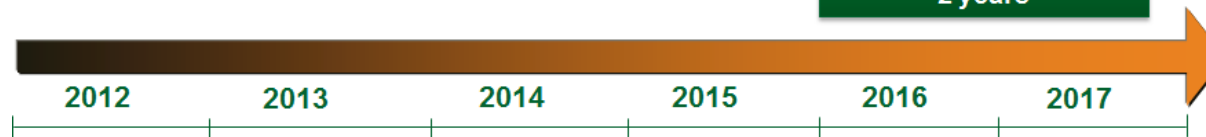


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Economic Benefits



Construction Spending
(to 2018)



Operating Expenditures
(2018 - 2037)



108

66

25

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108,000 person years
during construction &
20 years of operation

66,000 in BC
25,000 in Alberta

~4,500 Construction Jobs at Peak

Expanded Operations: 90 New Permanent Positions with 50 in BC

Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:





EDMONTON & AREA ECONOMIC IMPACT

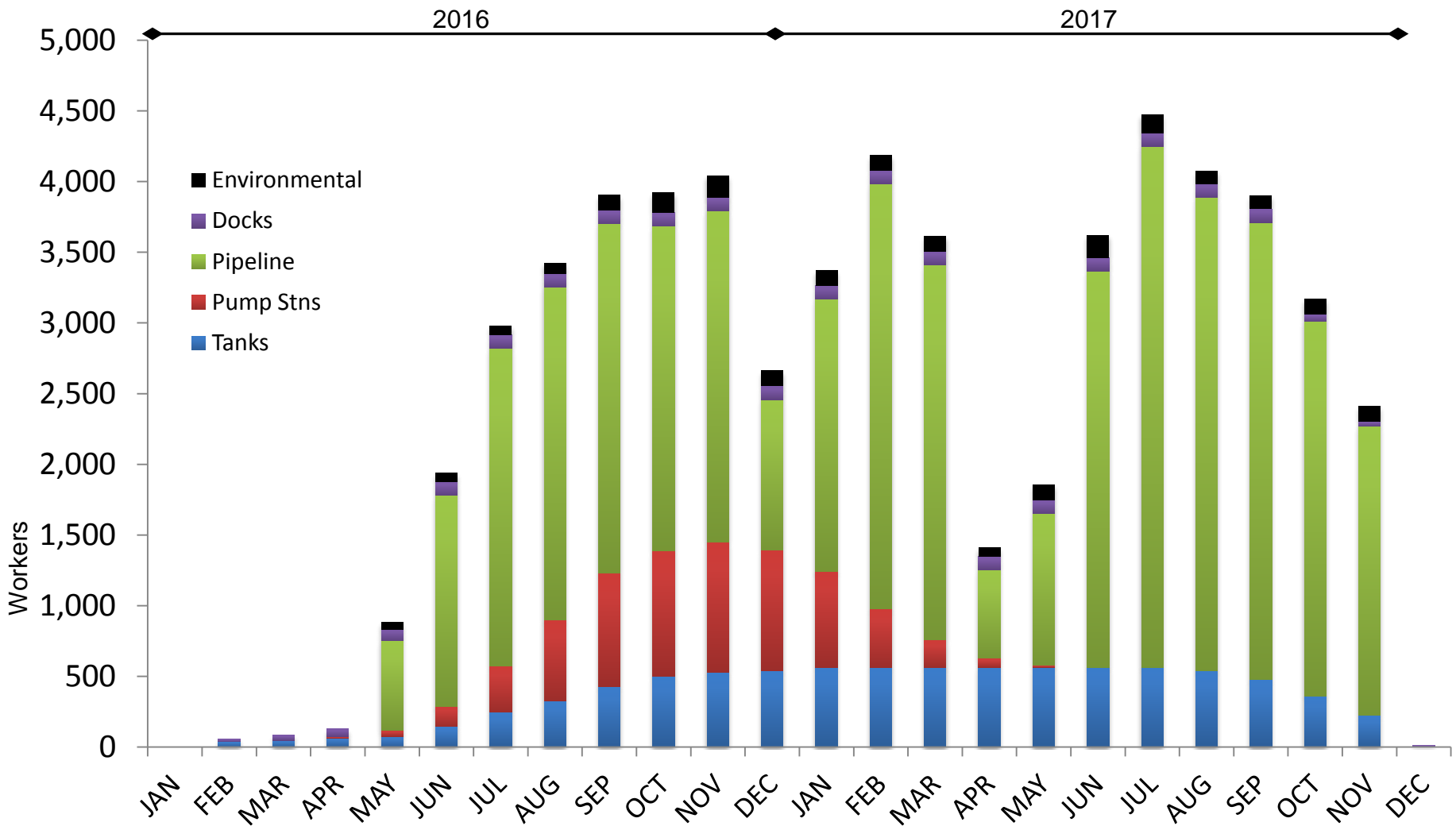
Benefits to Edmonton & Area

- Local suppliers, contractors, and consultants
- Local workforce spending
- Employment
- Procurement
- Community investment
- Municipal taxes:

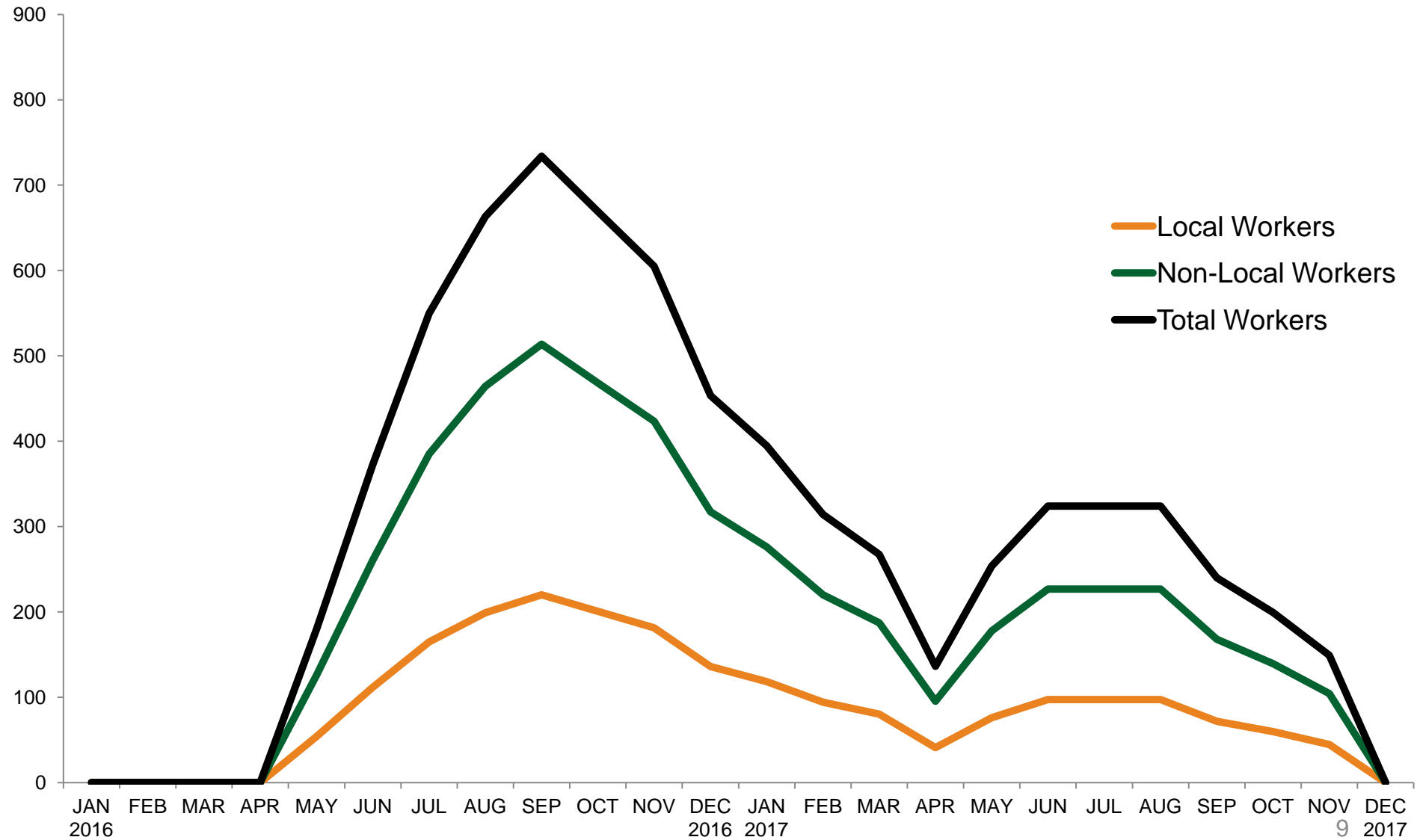


Municipality	2013	With Expansion
Strathcona County	\$717,000	\$1,481,000
Edmonton	\$159,000	\$514,000
Spruce Grove	\$19,000	\$52,000
Stony Plain	\$18,000	\$49,000

Project Workforce

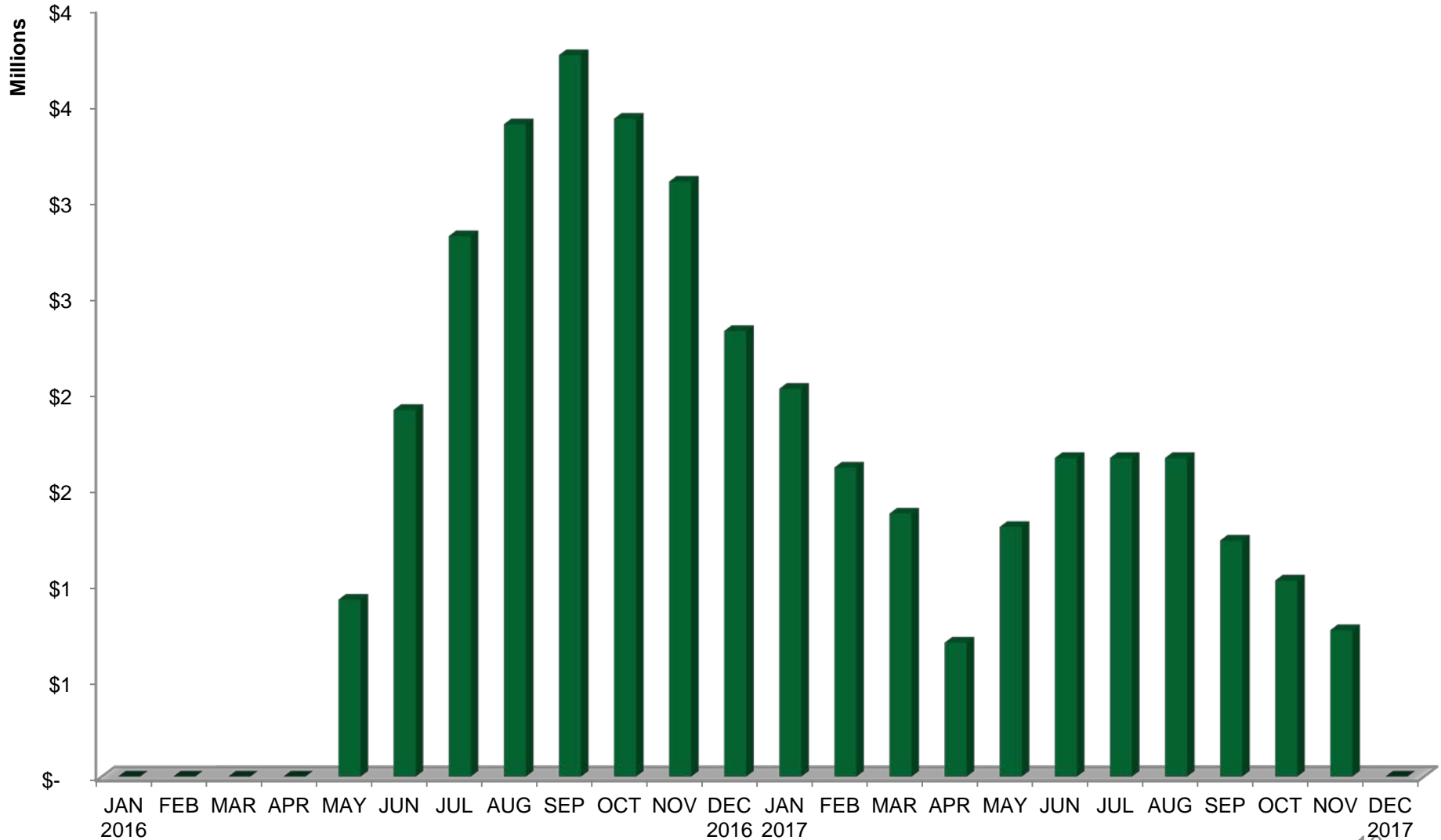


Work Force Based in Edmonton & Area



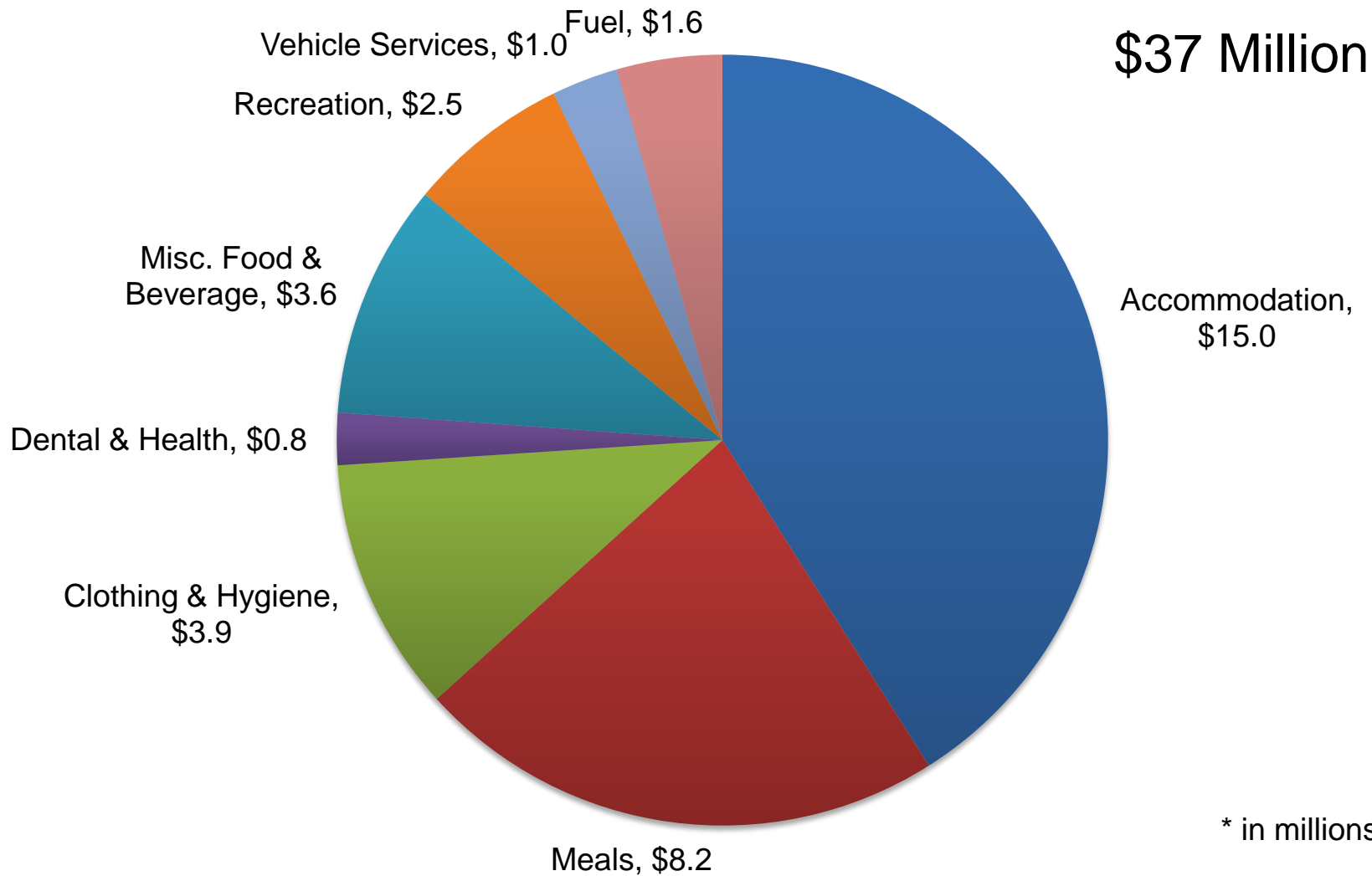
All figures based on project plans as of November 2013

Edmonton & Area – Workforce Spending



All figures based on project plans as of November 2013

Non-Local Worker Spending*





EMPLOYMENT

Pipeline: Employment

Logging & Clearing

Fallers, Equipment Operators, Trucking

Welder Helpers

Administration

Labourers

**Pipeline Coating/
Sandblasting**

Mechanics

Equipment Operators

Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



Construction Management

Survey

Communications

Environmental Monitoring

Hydrovac/Ground Disturbance

Water Supply

Traffic Management

Non Destructive Testing

Wood Products

Health & Safety

Hydrostatic Testing

ROW Reclamation & Restoration

Sand & Gravel

Inspection Tools

Security

Fire Watch & Suppression

Construction Trailers/
Laydown Areas

Trucking

Horizontal Directional Drilling/Boring

Facilities: Employment

Welders

Pipe Fitters

Carpenters

Equipment Operators

Labourers

Crane Operators

Electricians

Steelworkers



Facilities: Contracting Opportunities



Prefabricated Buildings

Power Line Installation

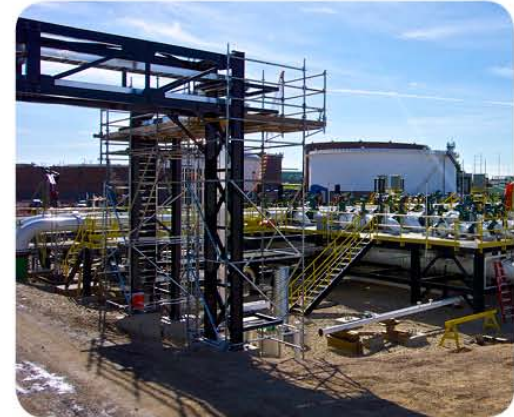
**Environmental
Monitoring**

On Site Medical & Safety

Surveying

Non-Destructive Testing

Security



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 - Continue to refine our project requirements and estimates
 - Identify trades and available workforce
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- Stay in touch:
 - Sign-up for ongoing procurement and / or jobs information
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CONTACT US:


Trans Mountain Expansion Project

 **Email:** info@transmountain.com

 **Phone:** 1.866.514.6700

 **Website:** www.transmountain.com

 **@TransMtn**

 2844 Bainbridge Avenue
PO Box 84028 Bainbridge
Burnaby, BC V5A 4T9

Jobs and Procurement:

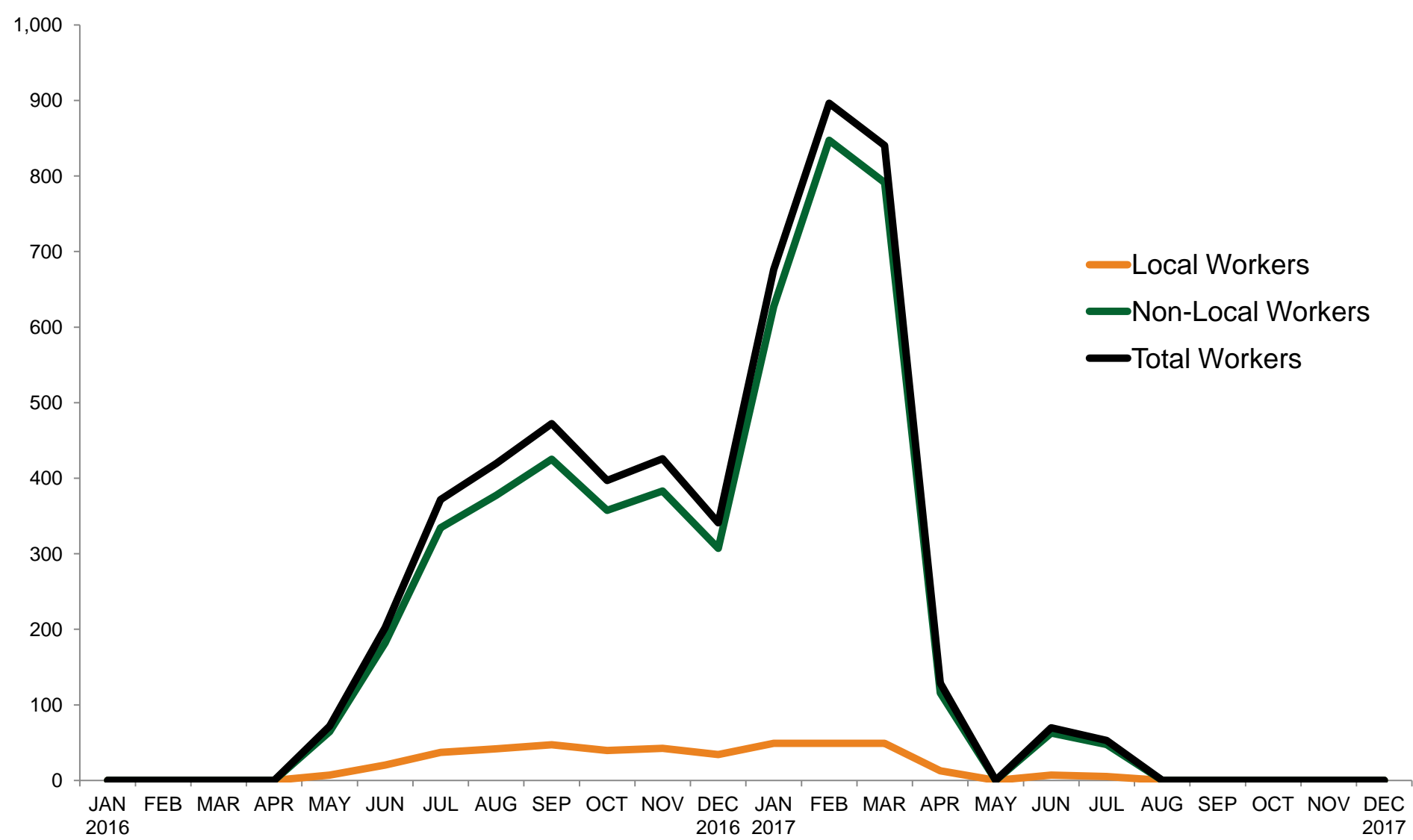
transmountain.com/jobs

transmountain.com/procurement



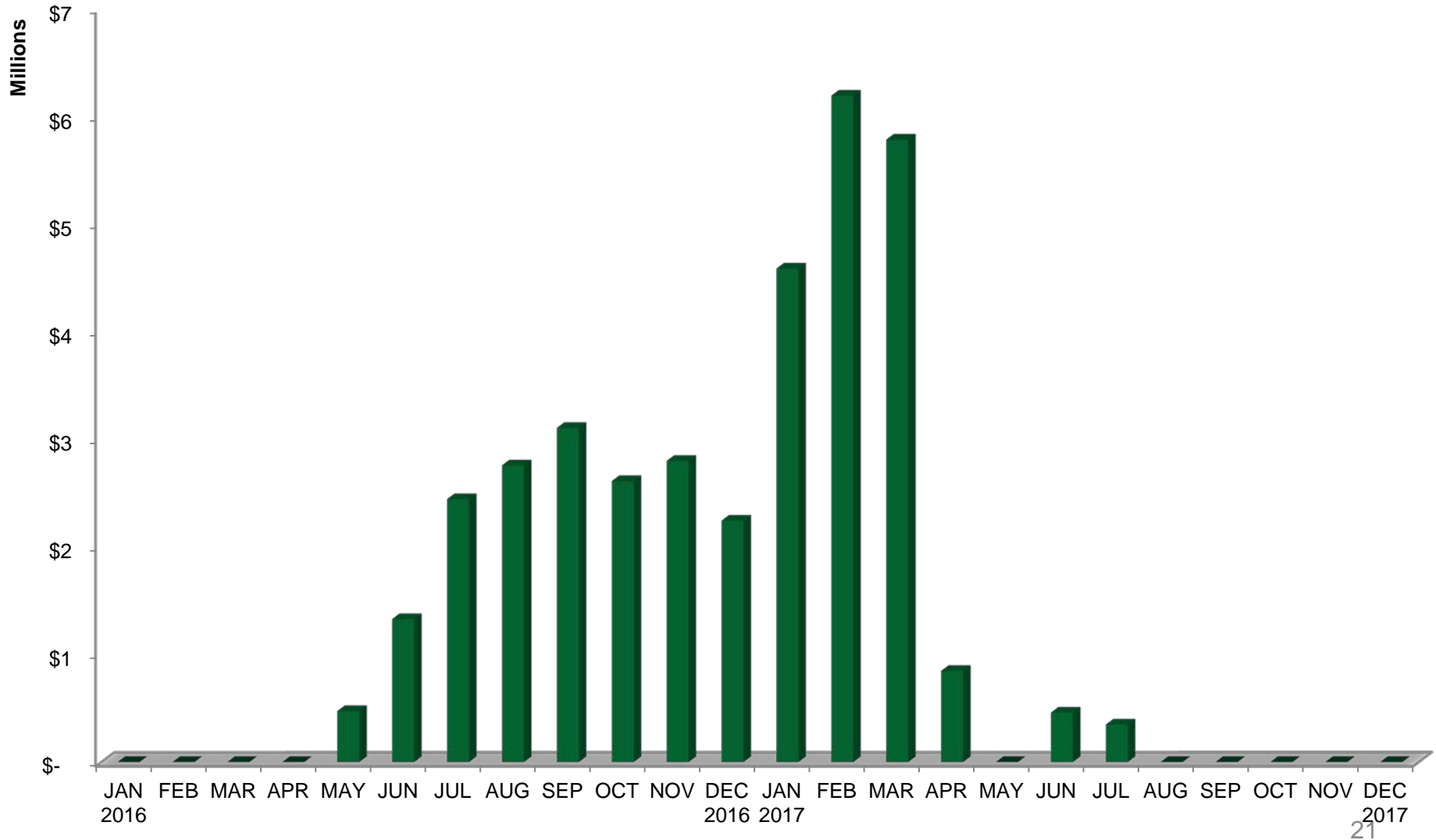
WORKFORCE PROJECTIONS FOR OTHER ALBERTA CONSTRUCTION HUBS

Edson-Based Work Force



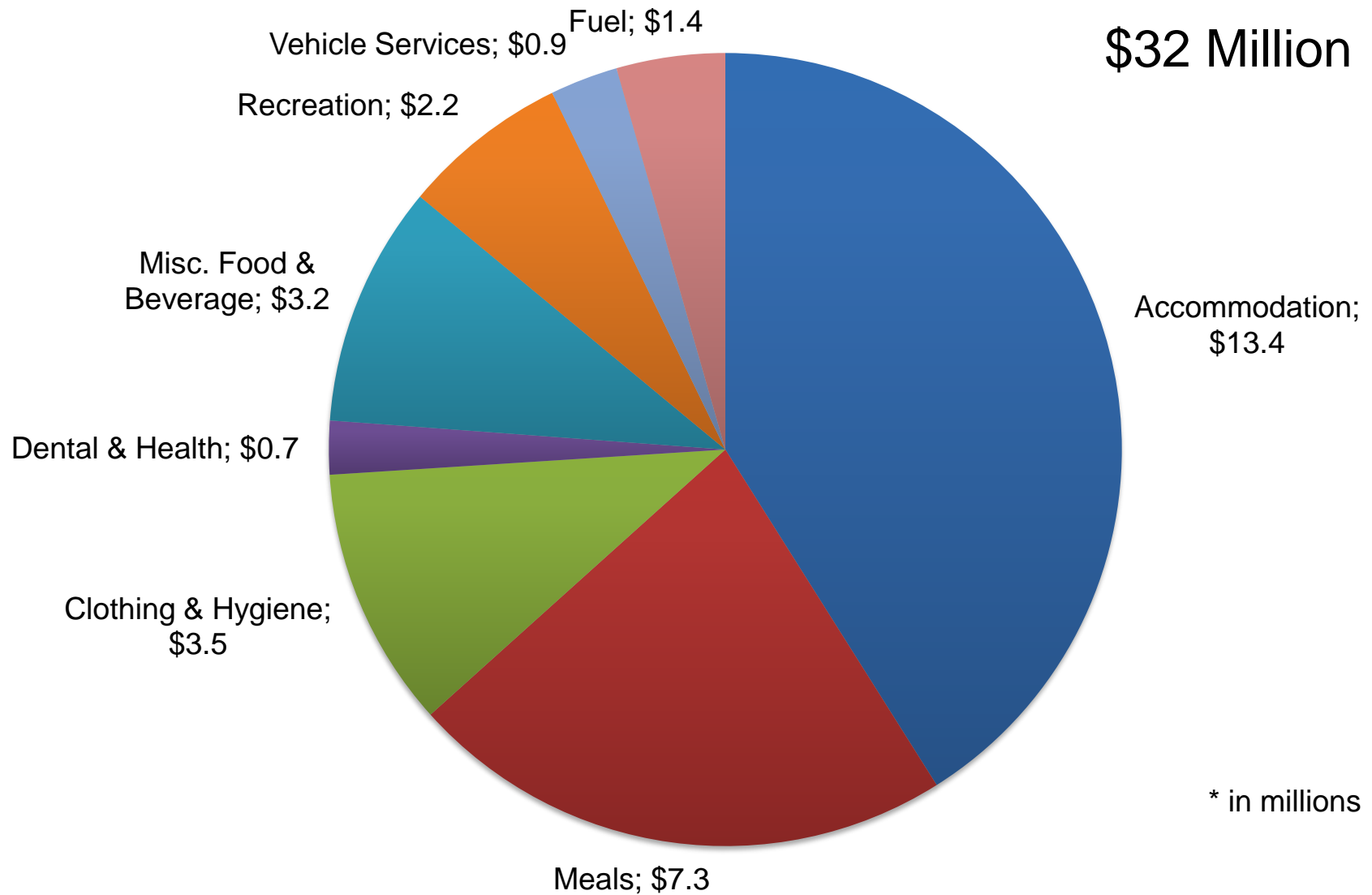
All figures based on project plans as of November 2013

Edson Workforce Spending

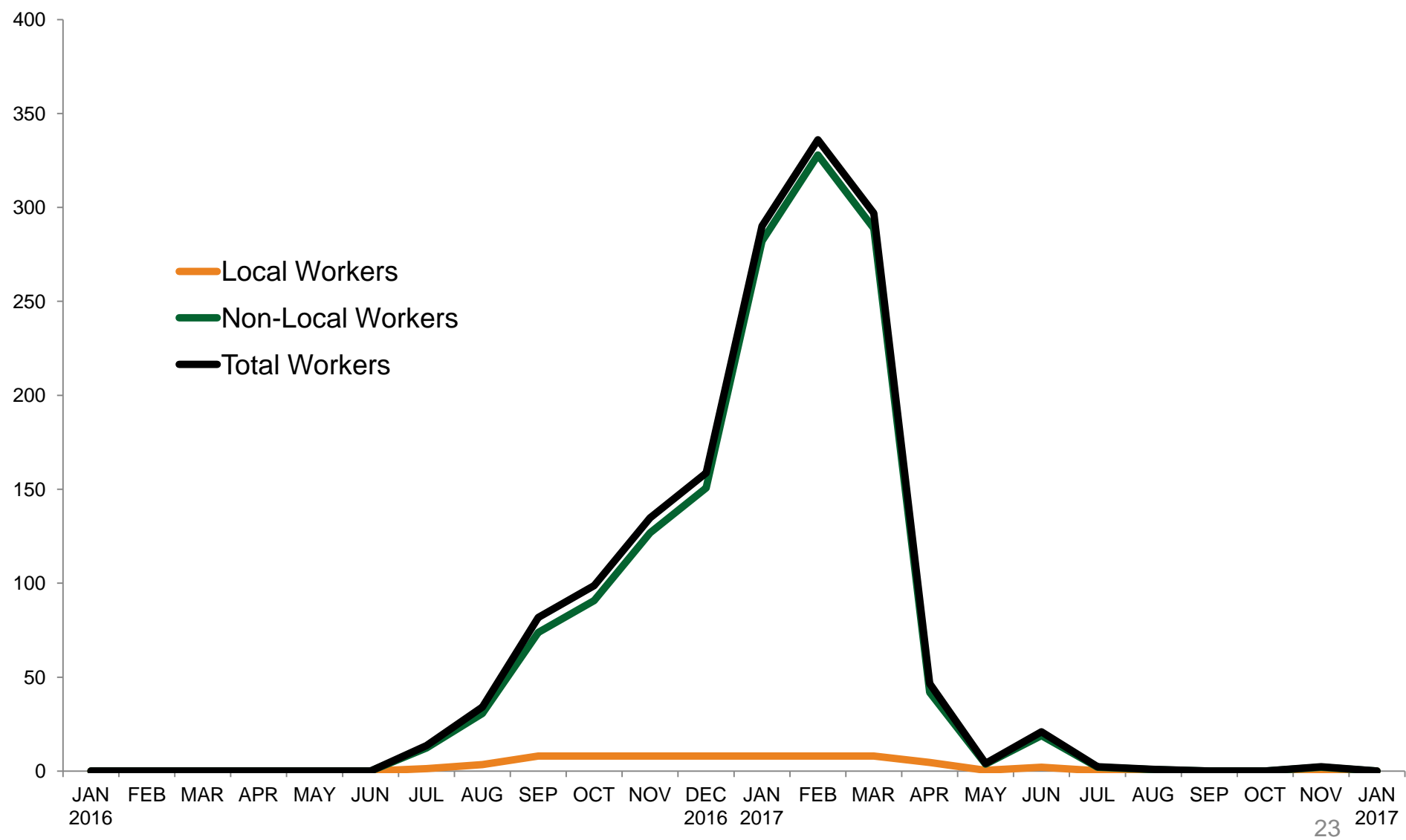


All figures based on project plans as of November 2013

Non-Local Worker Spending*

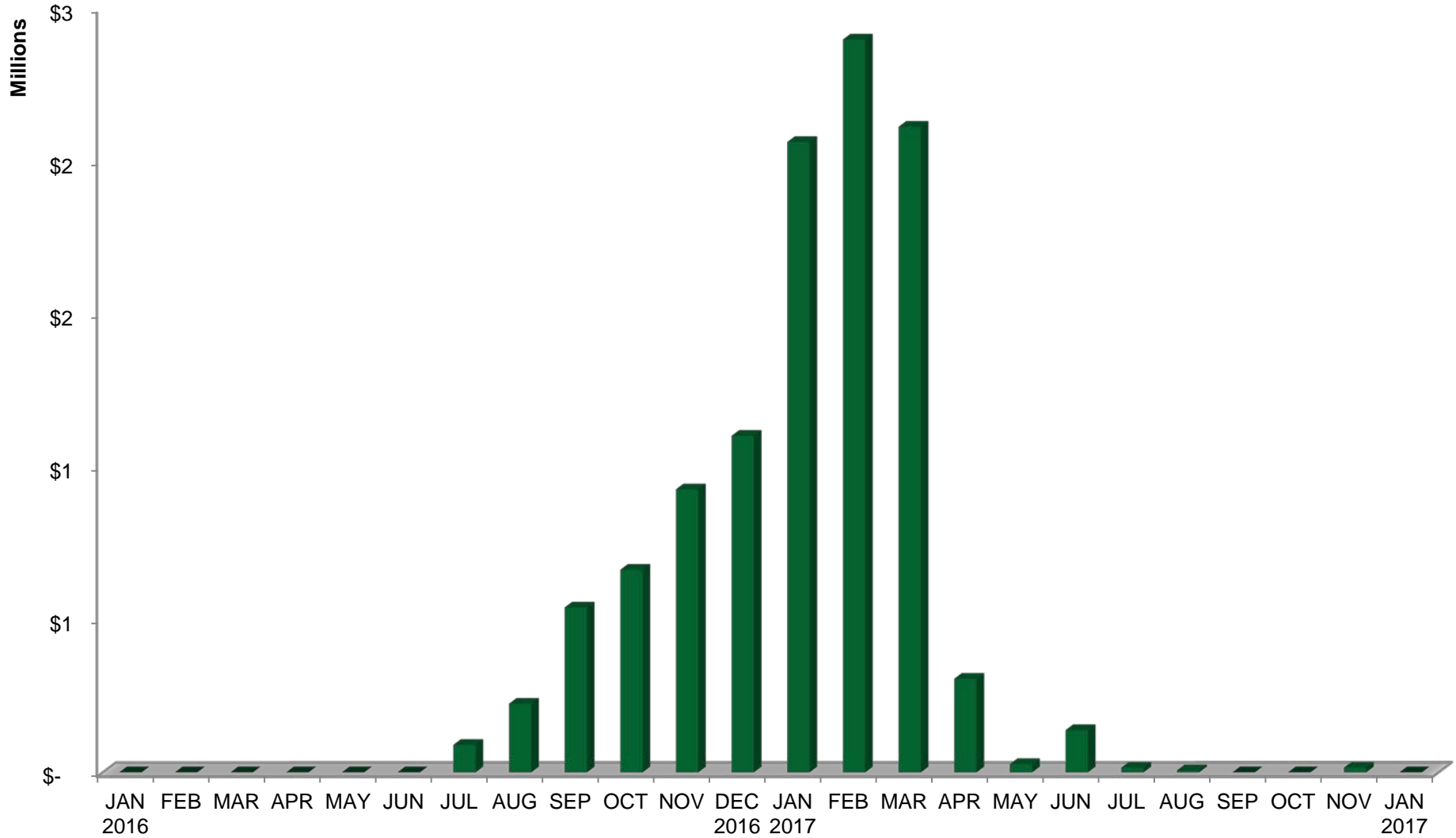


Hinton-Based Work Force



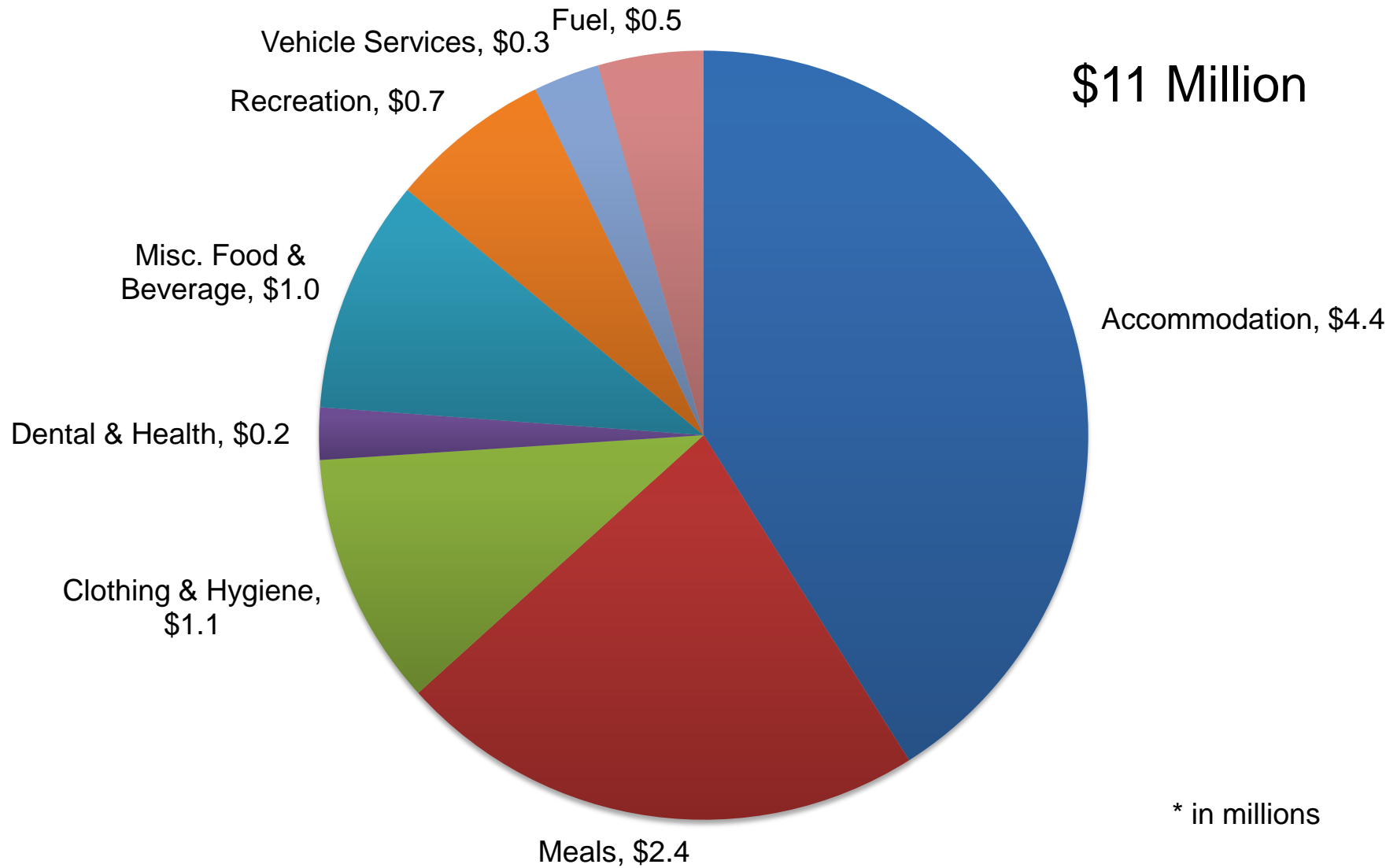
All figures based on project plans as of November 2013

Hinton Workforce Spending



All figures based on project plans as of November 2013

Non-Local Worker Spending*





Trans Mountain: Local Economic Opportunities Hinton Chamber of Commerce

Garrath Douglas & Margery Knorr
Trans Mountain Expansion Project
November 25, 2013



Canadian Chamber Report

Canadian Oil and Gas: US Supply Increasing. Asia Needs More.

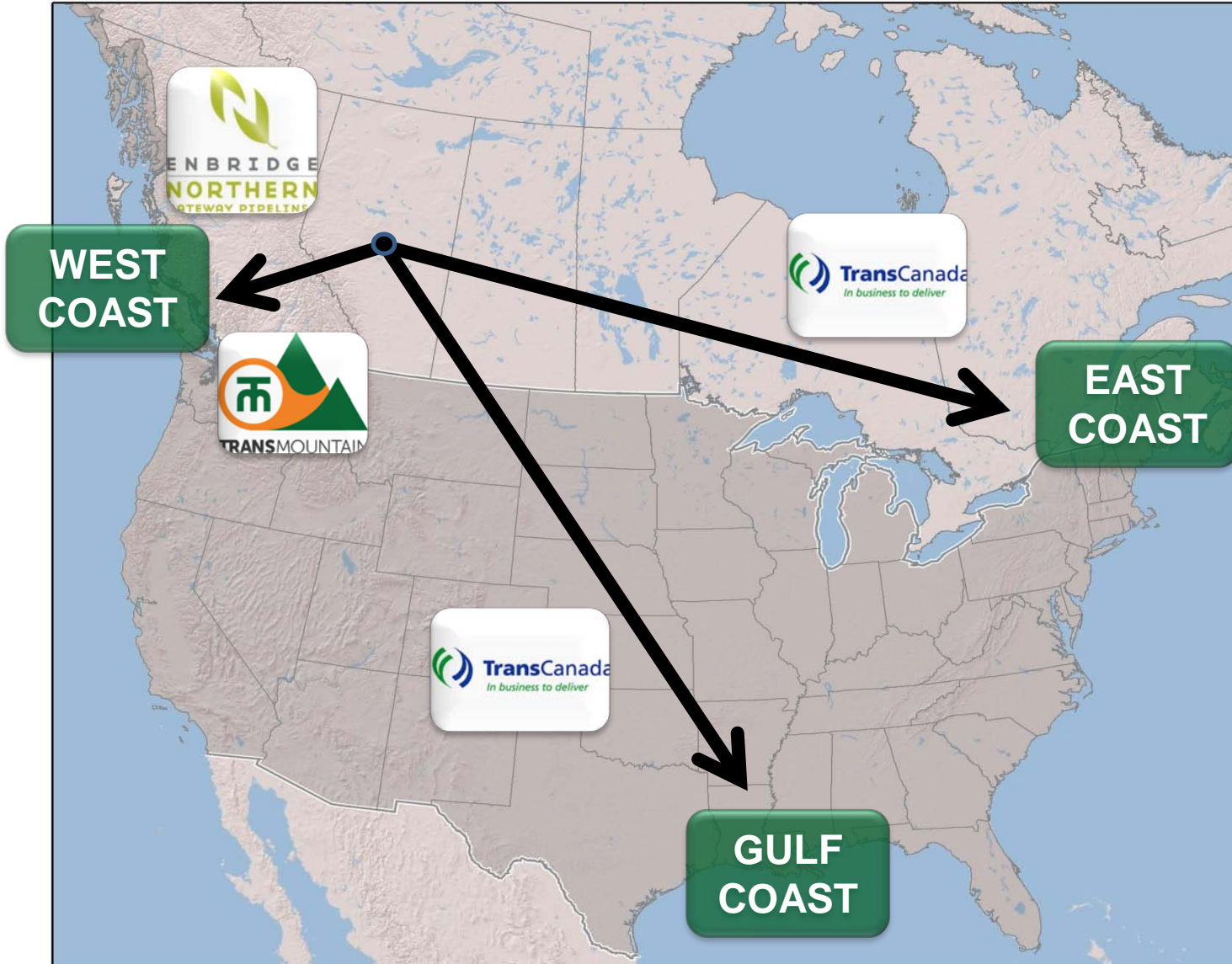
The fastest growing markets for energy exports now lie offshore. However, Canada cannot respond to this opportunity as it lacks the infrastructure to get energy to tidewater and overseas.

This lack of market access cost Canada as much as \$50m per day.



Lack of Market Access Has Cost Canada As Much As \$50 Million A Day

Market Access Pipelines



Trans Mountain Proposed Expansion

- \$5.4 billion investment
- 18 months of engagement and issue identification
- NEB granted commercial approval in May 2013
- Formal Project Description, NEB Issues List and NEB process definition now complete

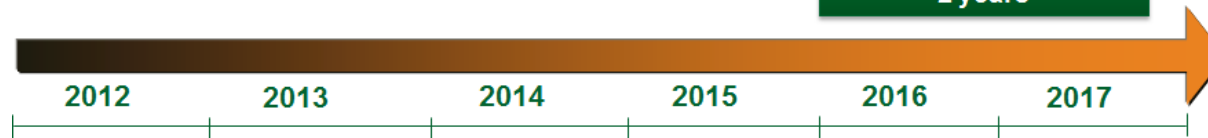


Application Preparation
1.5 years

Commercial

Regulatory Approvals
2 years

Construction
2 years



Economic Benefits



Construction Spending
(to 2018)



Operating Expenditures
(2018 - 2037)



108

66

25

EMPLOYMENT: up to
108,000 person years
during construction &
20 years of operation

66,000 in BC
25,000 in Alberta

~4,500 Construction Jobs at Peak

Expanded Operations: 90 New Permanent Positions with 50 in BC

Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:





HINTON ECONOMIC IMPACT

Benefits to Hinton

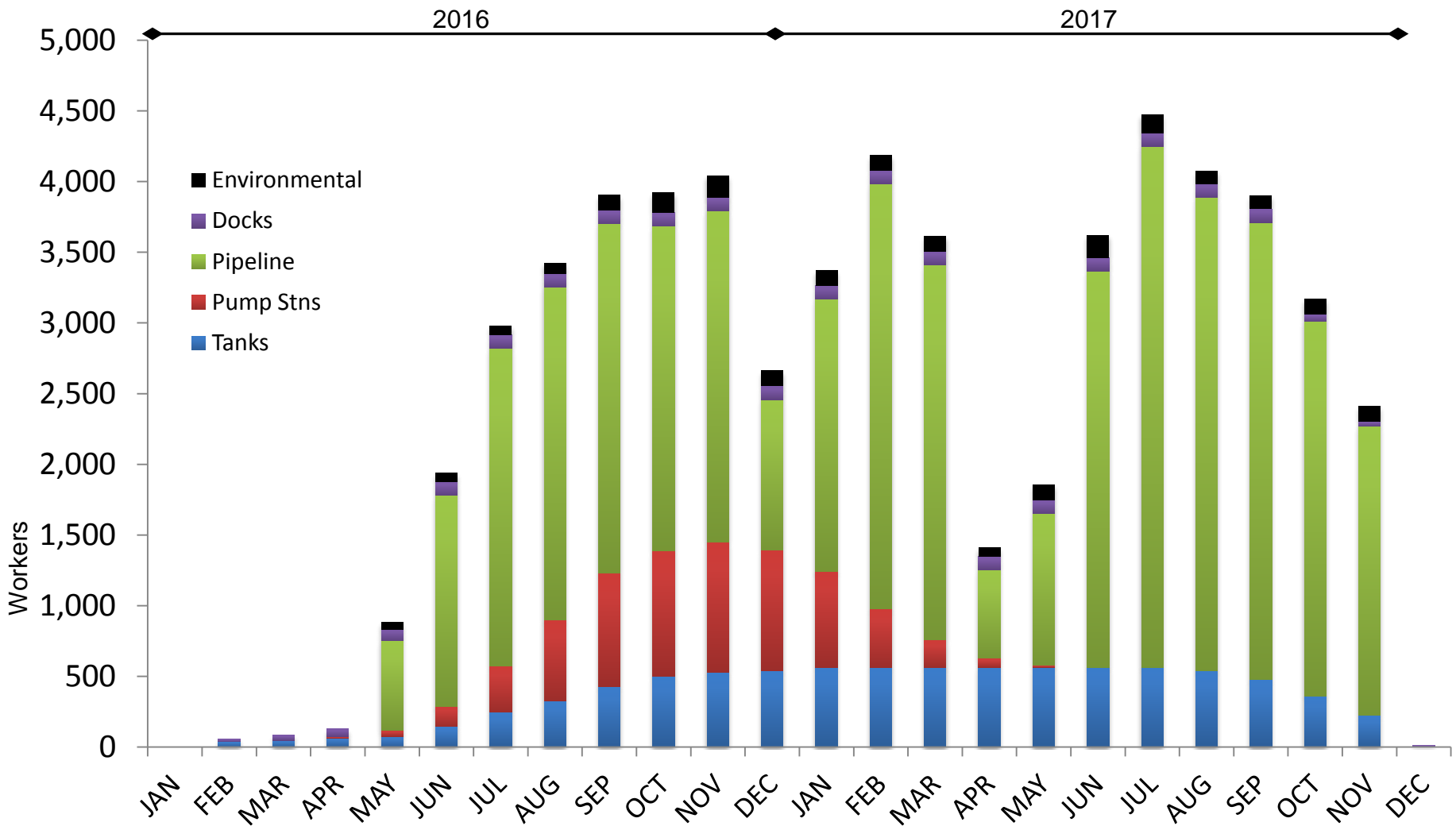
- Municipal taxes

Municipality	2013	With Expansion
Town of Hinton	\$69,000	\$103,000
Yellowhead County	\$1,004,000	\$2,284,000

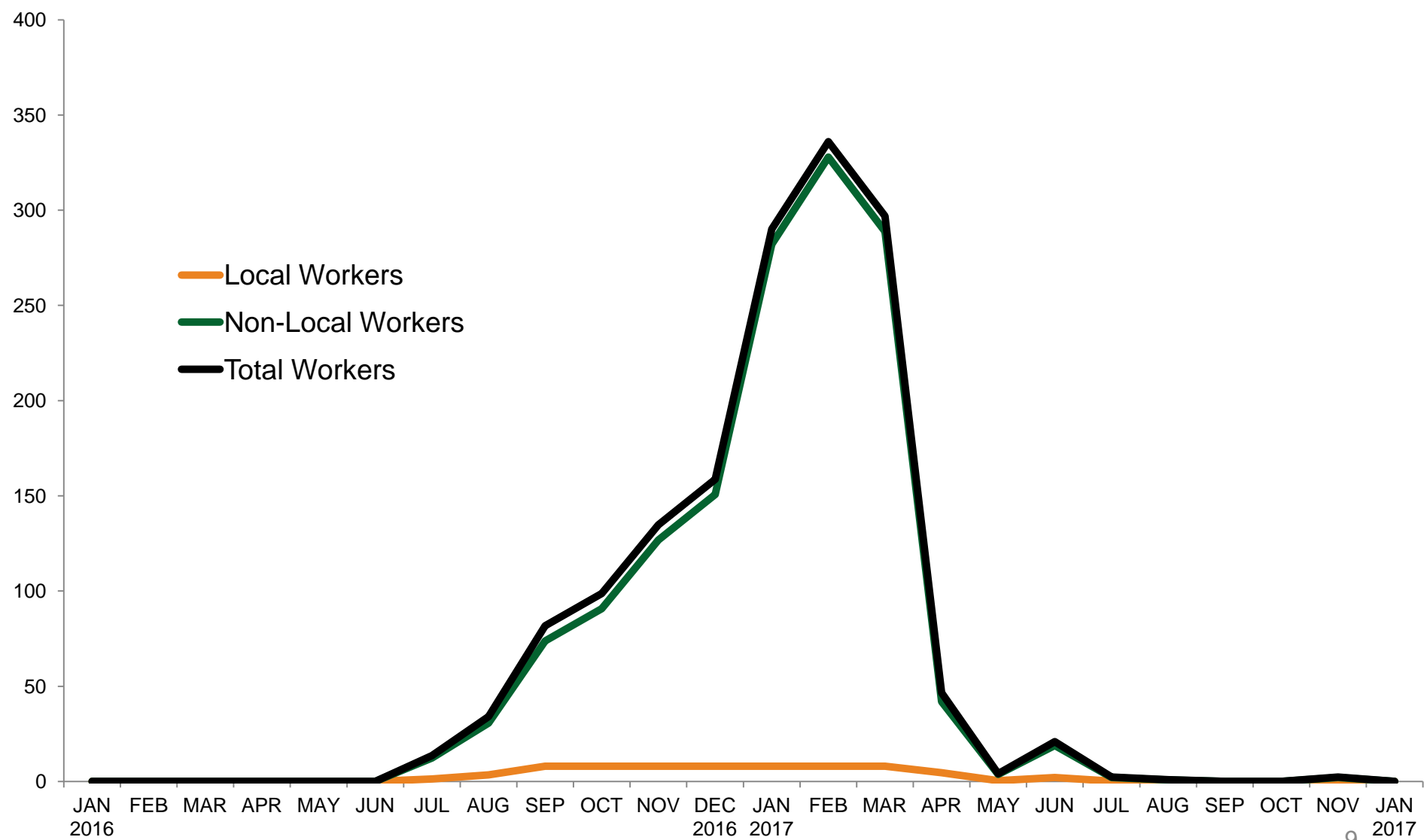
- Local suppliers, contractors, and consultants
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- Procurement
- Community investment



Project Workforce

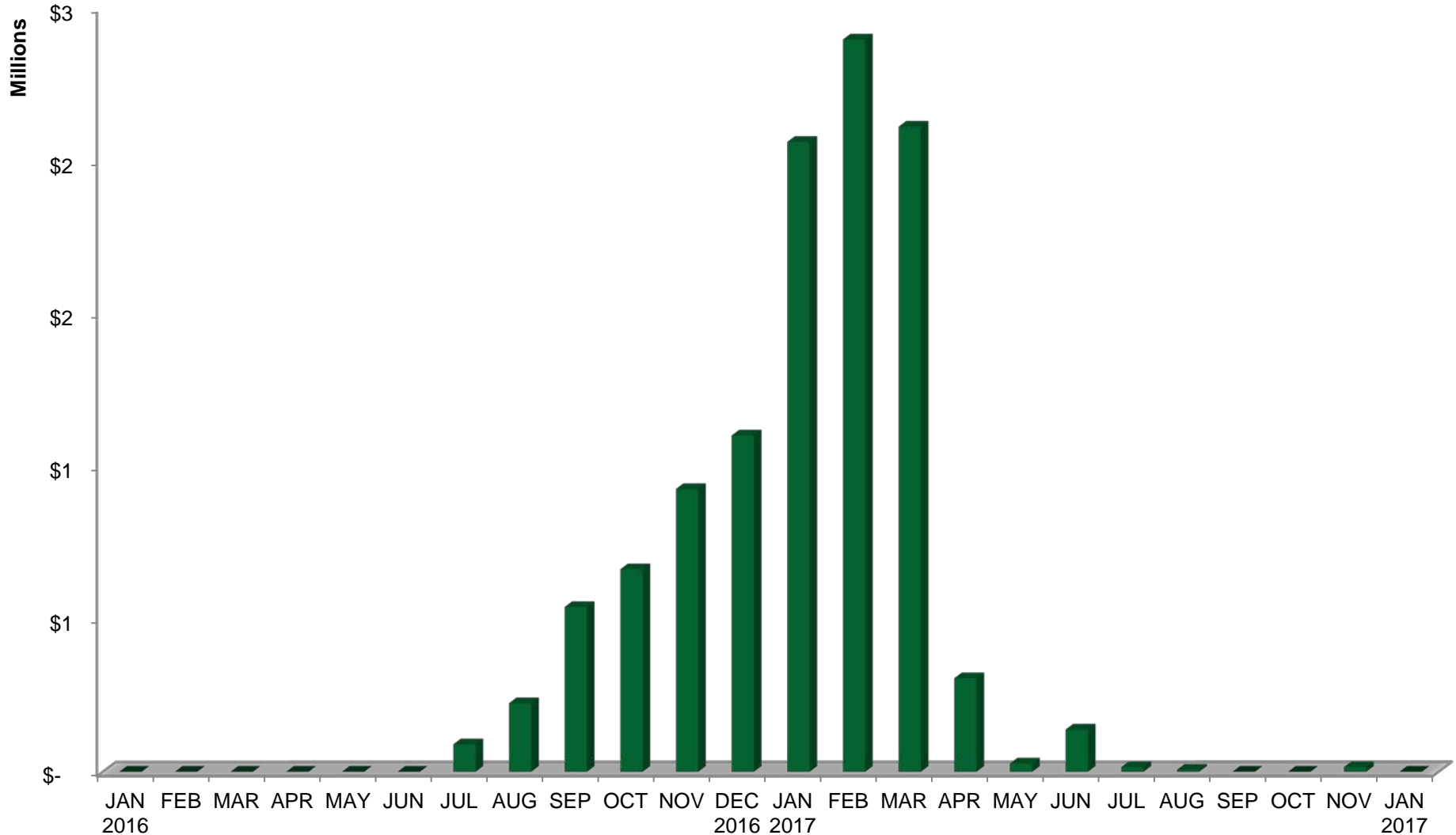


Hinton-Based Work Force



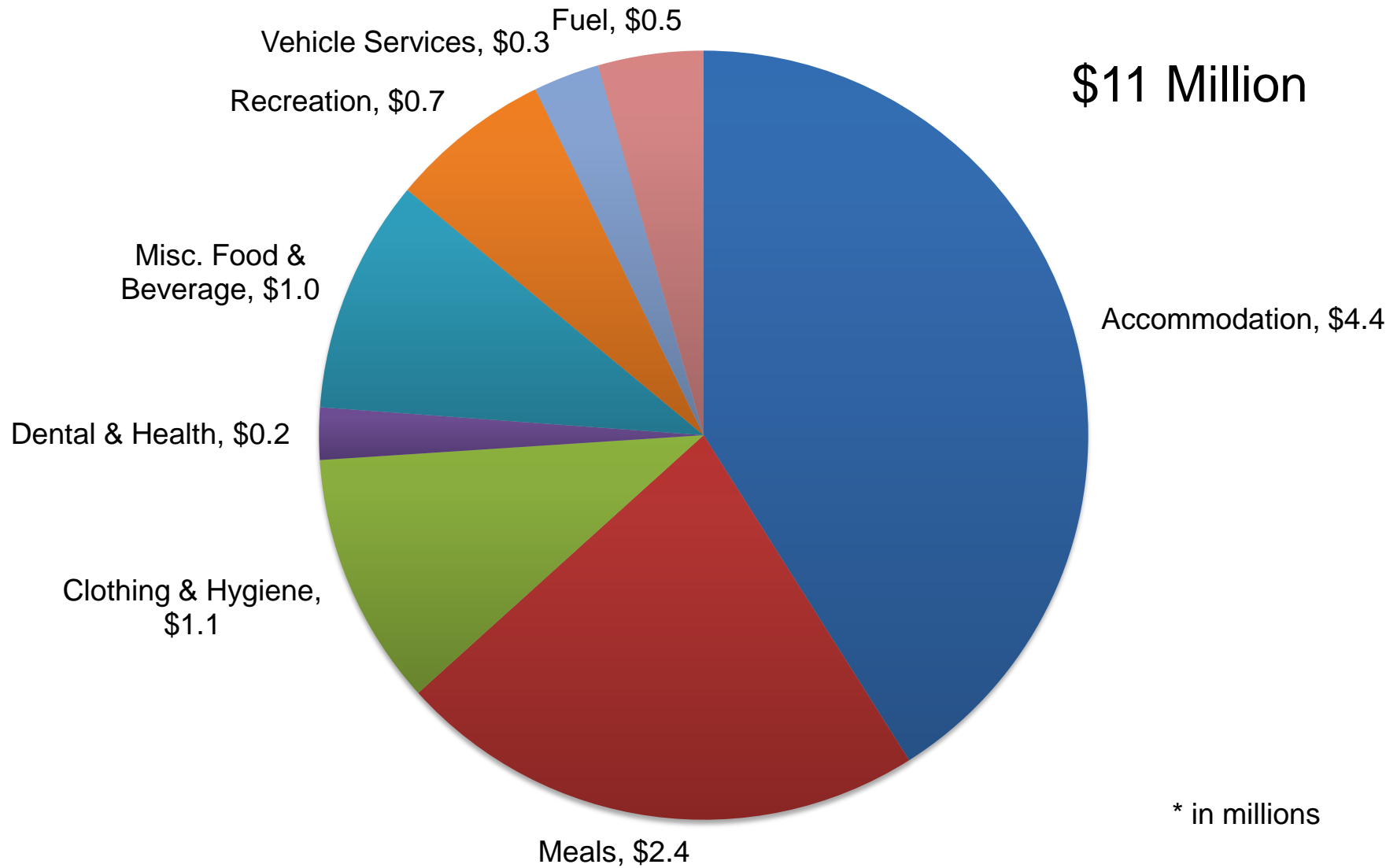
All figures based on project plans as of November 2013

Hinton Workforce Spending



All figures based on project plans as of November 2013

Non-Local Worker Spending*





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Pipeline: Employment

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Administration

Labourers

**Pipeline Coating/
Sandblasting**

Mechanics

Equipment Operators

Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



Construction Management	Survey	Communications
Environmental Monitoring	Hydrovac/Ground Disturbance	Water Supply
Traffic Management	Non Destructive Testing	Wood Products
Health & Safety	Hydrostatic Testing	ROW Reclamation & Restoration
Sand & Gravel	Inspection Tools	Security
Fire Watch & Suppression	Construction Trailers/ Laydown Areas	Trucking
Horizontal Directional Drilling/Boring		

Pump Station: Employment

Welders

Pipe Fitters

Carpenters

Equipment Operators

Labourers

Crane Operators

Electricians

Steelworkers



Pump Station: Contracting Opportunities



Prefabricated Buildings

Power Line Installation

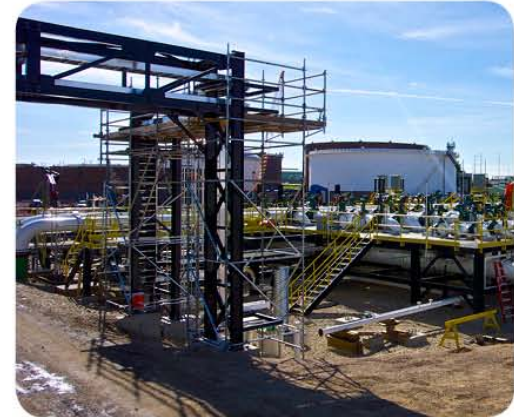
Environmental
Monitoring

On Site Medical & Safety

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Non-Destructive Testing

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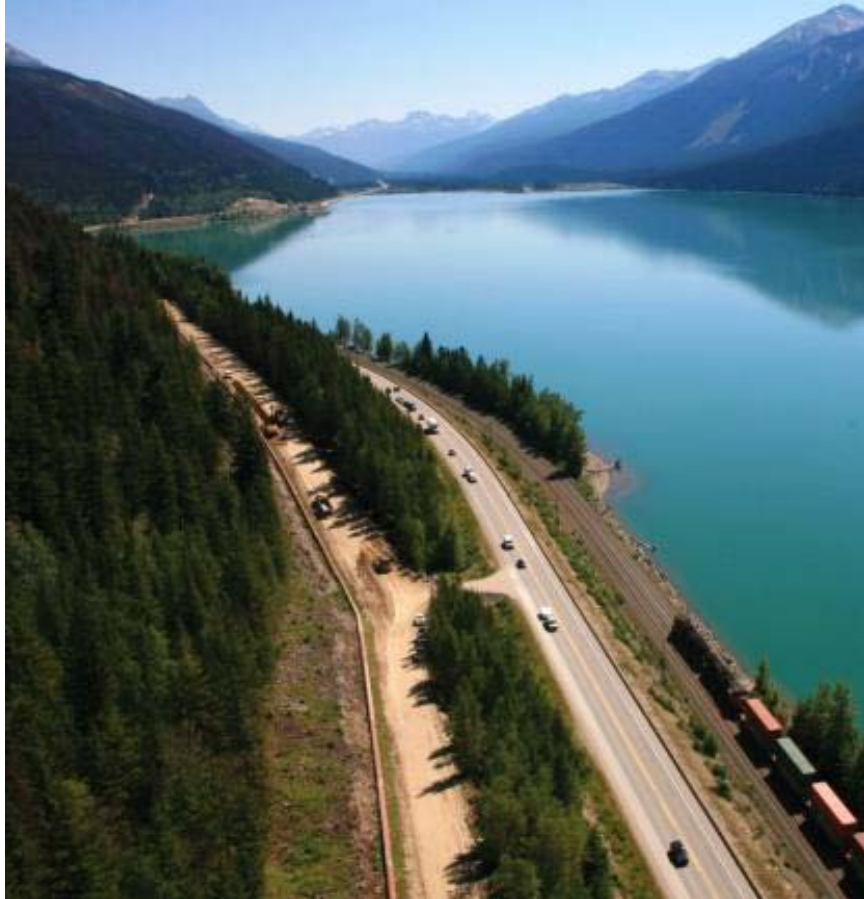
Trans Mountain: Local Economic Opportunities Hope Chamber of Commerce

Greg Toth, Senior Project Director

October 21. 2013



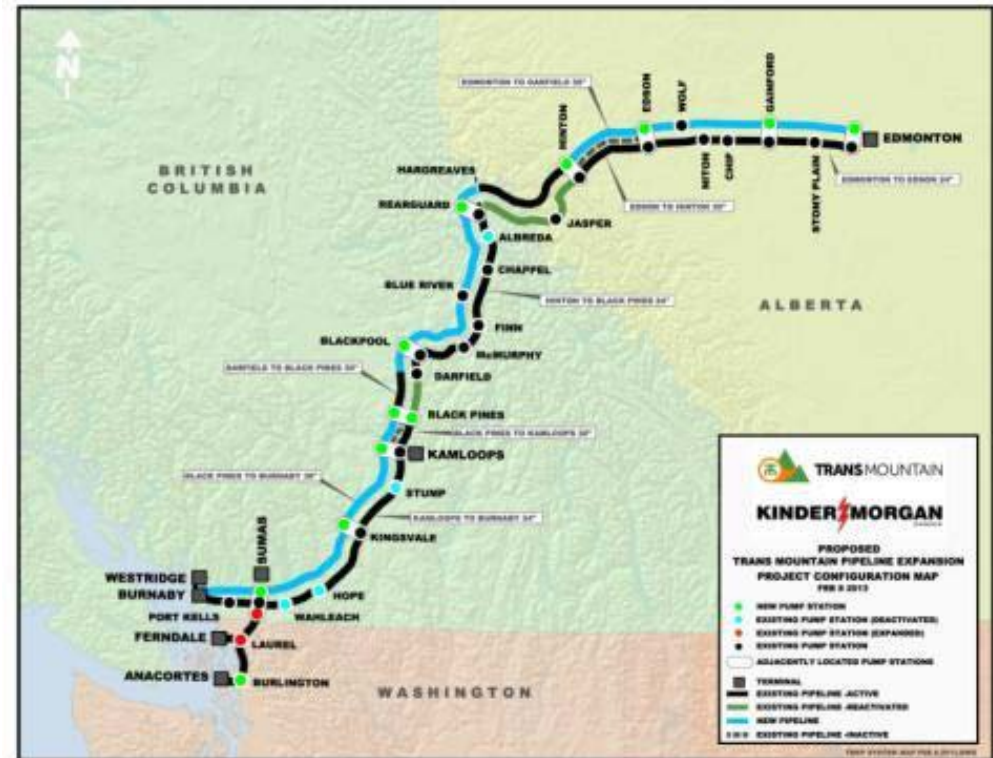
Trans Mountain Pipeline Today



- In operation since 1953
- 1,150 km from Strathcona County (near Edmonton) to Burnaby
- Transports refined products, synthetic crude oils, light crude oils, heavy crude oils
- Supplies 90% of petroleum products to BC market
- Regulated by National Energy Board
- Last expansion completed in 2008 - \$780M
- Current capacity: 300,000 barrels per day

Trans Mountain Proposed Expansion

- \$5.4 Billion Investment
- 18 months of engagement and issue identification
- Commercial approval received from NEB in May 2013
- Formal Project Description, NEB Issues List and NEB process definition complete to date

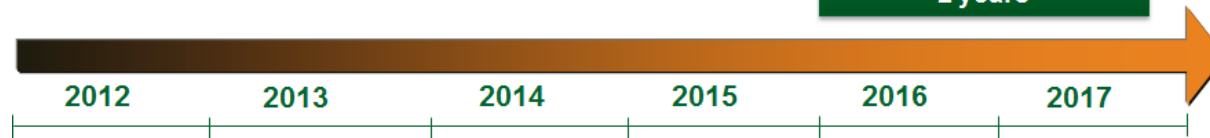


Application Preparation
1.5 years

Commercial

Regulatory Approvals
2 years

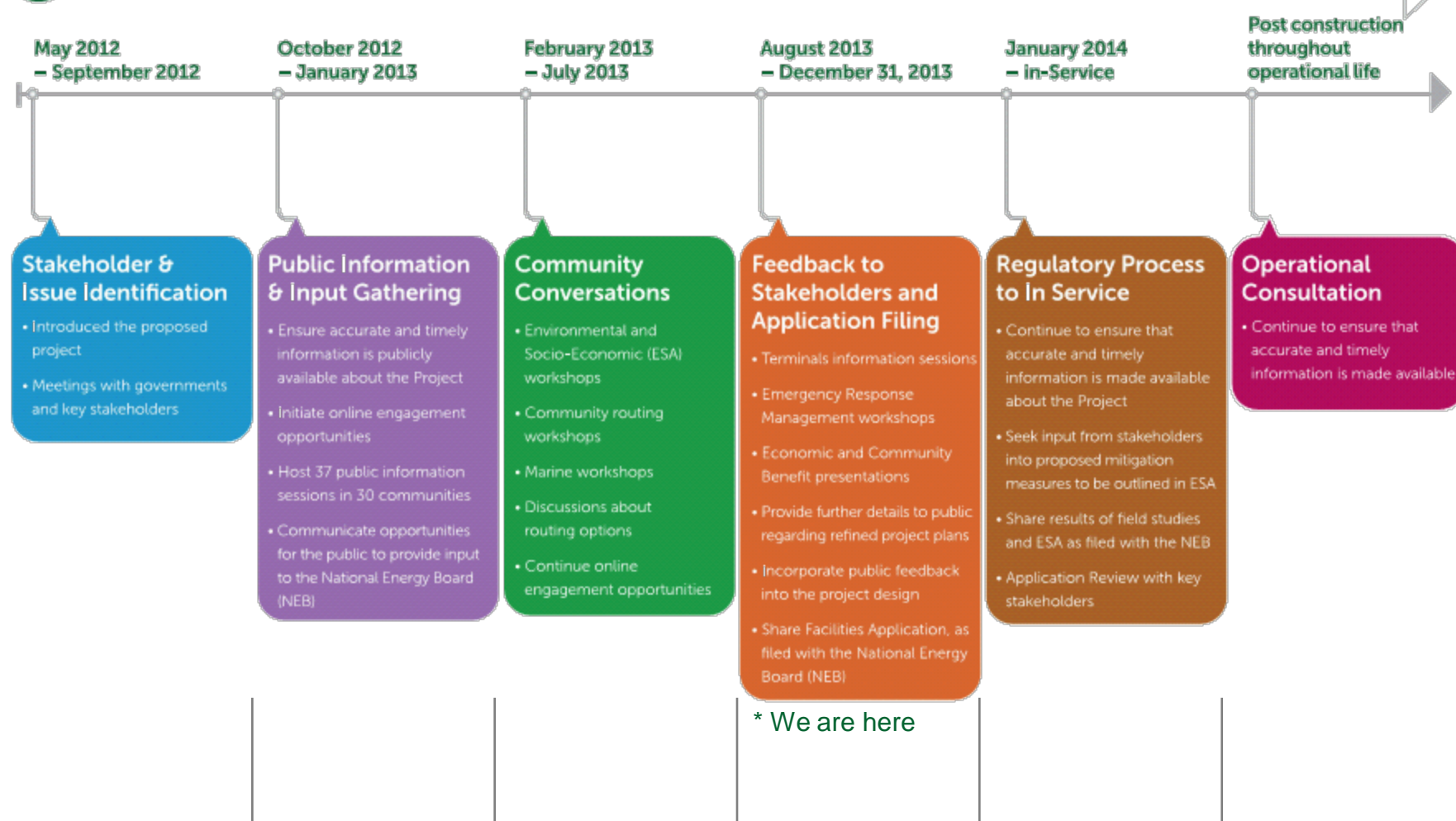
Construction
2 years



Local Engagement



PROPOSED TRANS MOUNTAIN EXPANSION PROJECT ENGAGEMENT TIMELINE



Aboriginal Engagement Principles

- Recognized Aboriginal Rights and Title
- Ensure Meaningful Consultation
- Provide Capacity Funding
- Gather Aboriginal Perspectives
- Assess Project Impacts
- Reach Understandings
- Benefits for Aboriginal Groups –
 - Provide training and employment opportunities to Aboriginal peoples affected by the project, and
 - consider mutual benefit agreements (MBAs) where appropriate



MACROECONOMIC BENEFITS

Overall Benefits

- TMEP will provide benefits to Canadians and overall economy by creating jobs, government revenues and contributing to Canadian businesses
- Most economic benefits will occur in BC and Alberta with focused opportunities for communities along the route
- Will provide an important boost to BC and Alberta construction industries
- Will allow Canada to promote its resources on the world market - access to Tidewater markets is anticipated to boost the oil price for Canadian producers



Canadian Chamber Report

Canadian Oil and Gas: The US Needs Less. Asia Needs More.

The fastest growing markets for energy exports now lie in non-OECD nations. However, Canada cannot respond to this opportunity as it lacks the infrastructure to get energy to tidewater and overseas. This lack of market access costs Canada as much as \$50m per day.



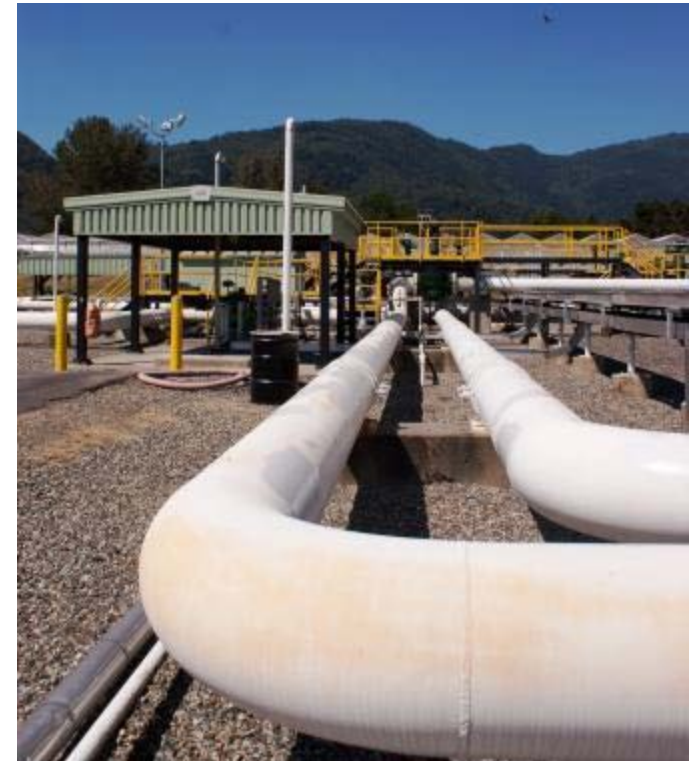
Economic Benefits



- Construction Spending
 - \$5.4 billion (to 2018)
- Operating Expenditures
 - \$5.9 billion (2019 – 2048)
- Employment
 - Up to 123,000 person years of employment (full-time equivalents during construction and operations 2013-2048)
 - 75,000 person years in BC
 - 28,000 person years in Alberta
 - Plus direct/indirect/induced employment in other provinces and territories
 - 4,500 workers peak employment (during construction)
 - Expanded operations: 125 new permanent full-time jobs

Benefits to Governments

- Estimated tax revenues construction & operation:
 - Up to \$2.5 billion to Government of Canada
 - Up to \$2 billion to provincial governments
 - BC: \$1.25 billion
 - Alberta: \$527 million
 - Rest of Canada: \$219 million
 - \$800 million in increased property taxes to municipal governments during operations
 - BC: \$700 million, \$23 million annually
 - Alberta: \$100 million, \$3.35 million annually



Municipal Benefits

In addition to increased property taxes, municipalities along the pipeline will see benefits such as:

- Increased spending on local goods and services during construction
- Kinder Morgan legacy projects
- Community partnerships with Kinder Morgan
- Training and education of local workforce



ECONOMIC OPPORTUNITIES

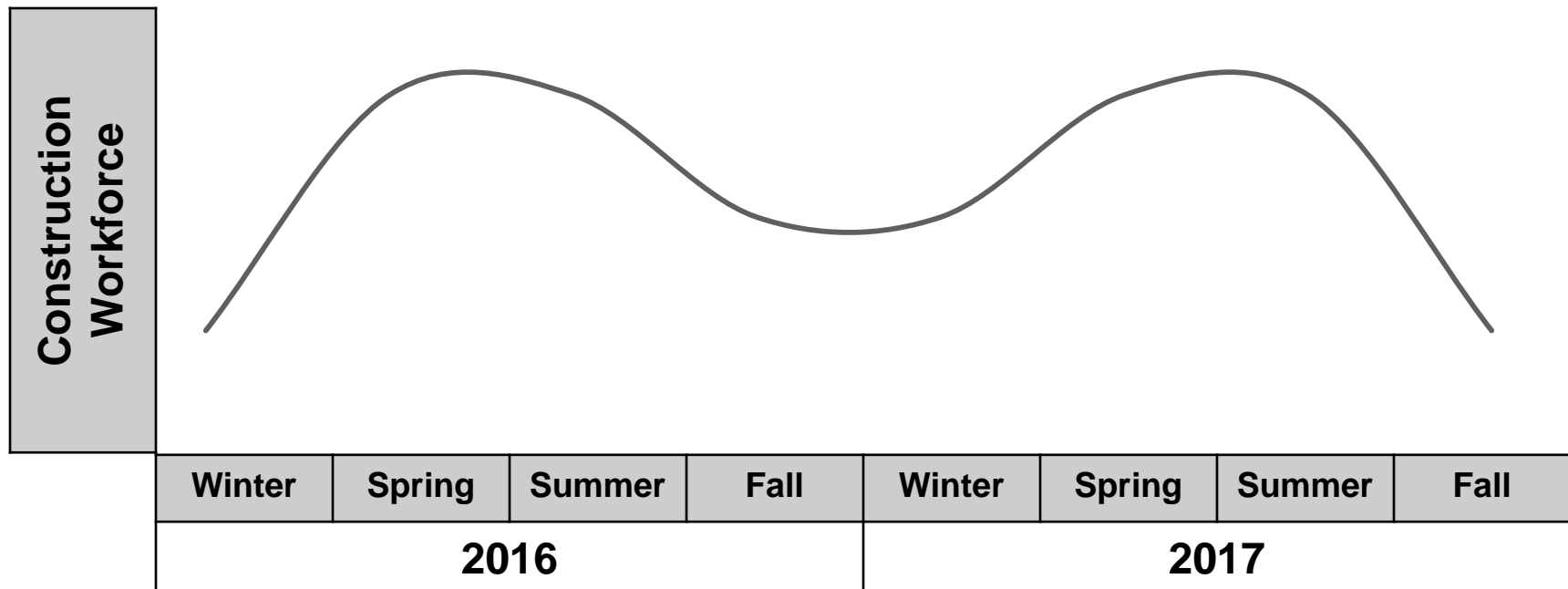
Procurement - \$5.4B Capital Budget



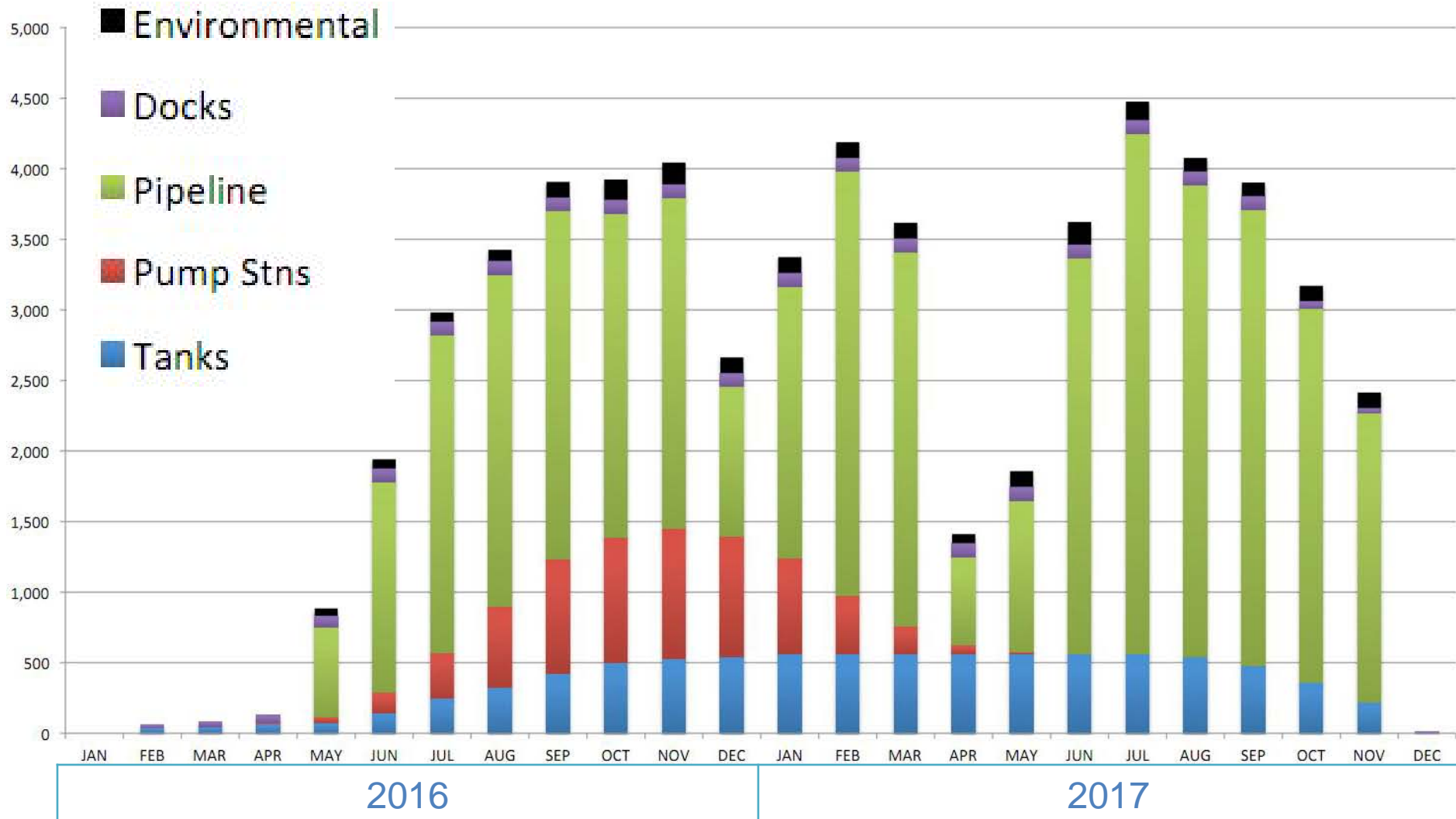
- Our objective is to maximize local benefits and economic opportunities
- Key priority targets for all procurement activities:
 - Aboriginal
 - Local Communities
 - Local/BC/Canadian Companies
- TMEP is very early in establishing the procurement process. We are exploring ways to increase access to local and Aboriginal suppliers.
- For updates on opportunities and community readiness workshops, sign up at www.transmountain.com

Construction Schedule

- If approved construction will take place in phases between 2016 and 2018
- Most construction will happen spring through fall of 2016 and 2017 with some construction taking place in the winter months during both years – **peak estimate 4500 workers**



Construction Worker Months by Component



Pipeline Construction



- **Construction Support Services**

- Construction Management/Inspection
- Environmental Monitoring/Inspection
- Traffic Management
- Health and Safety
- Medical Services (EMS)
- Fire watch and suppression
- Survey
- Hydrovac/Ground Disturbance
- Non Destructive Testing
- Hydrostatic Testing
- In-line Inspection Tools
- Construction Trailers/Laydown Areas
- Communications
- Water Supply
- Wood Pallets
- Power Line Installation
- Security



Pipeline Construction Employment



- Logging and Clearing
 - Fallers, equipment operators, trucking
- Labourers
- Heavy Equipment Operators
- Welders
- Welders Helpers
- Pipeline Coating/sandblasting
- Trucks and Drivers
- Blasting
- Horizontal Direction Drilling/Boring
- ROW Reclamation and Restoration



Typical Pipeline Spread



Project Manager	1	Welders	40
Superintendent	2	Welders Helper	40
Project Engineer	1	Drivers	28
Engineer & Jr. Engineer	4	Mechanic	4
Foreman labour	20	Security	2
Office Manager	1	Quality Control	1
Purchasing Agent	2	Environmental Coordinator	1
Bucker	1	Foreman Equipment	21
Equipment Operator	105	Accounting	3
Labourer	130	Administration/Payroll	8
Materials Coordinator & Buyer & Receiver	5	Sandblaster	5
Planner	1	Corporate Safety	1

Facilities Construction

Support Services

- Prefabricated Buildings
- On Site Medical
- Safety
- Surveying
- Environmental monitoring
- Non-Destructive Testing
- Security



Facility Construction Employment



- Civil – Earthworks, Piling and Foundations
- Mechanical & Piping Fabrication, Pipe Coating and Instrumentation
- Tank Fabrication and Construction
- Electrical – Transmission Line, Electrical Equipment and Instrumentation installation
- Control systems and Communication
- Heavy Equipment Operators
- Welders
- Carpenters
- Labourers

Operations Positions

- ~125 new permanent positions
- ~465 total KMC staff
- Operators (includes Westridge)
 - Pipeline Maintenance Technicians
 - Electrical Technicians
 - Mechanical Technician
 - Instrumentation Technician
 - Pipeline Protection Technicians
- Contract support of operations



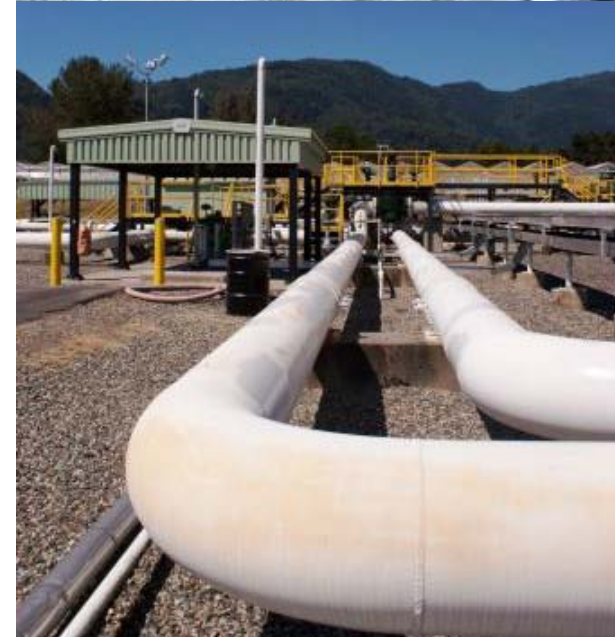


HOPE CONSTRUCTION HUB

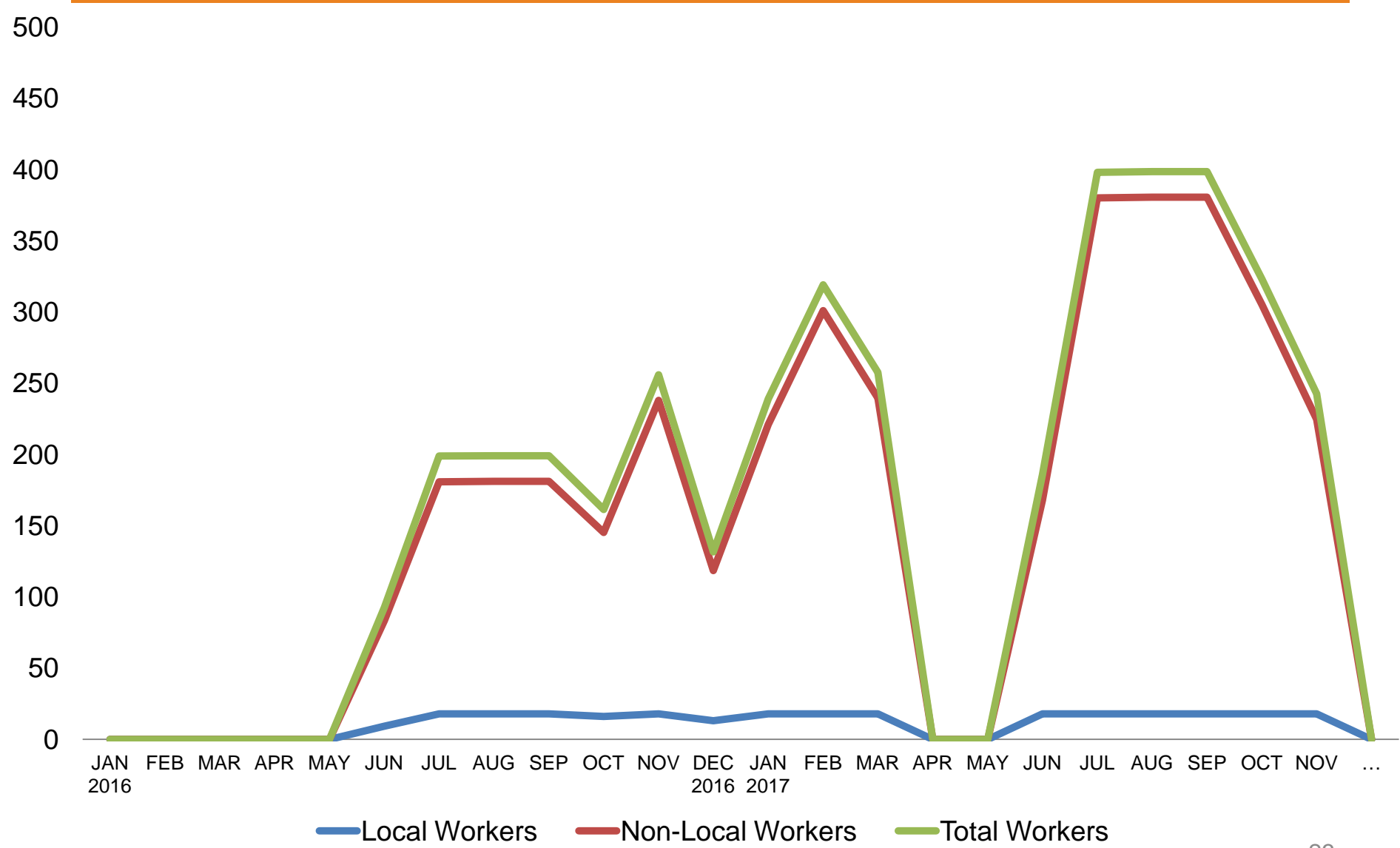
Hope Hub: Construction Elements



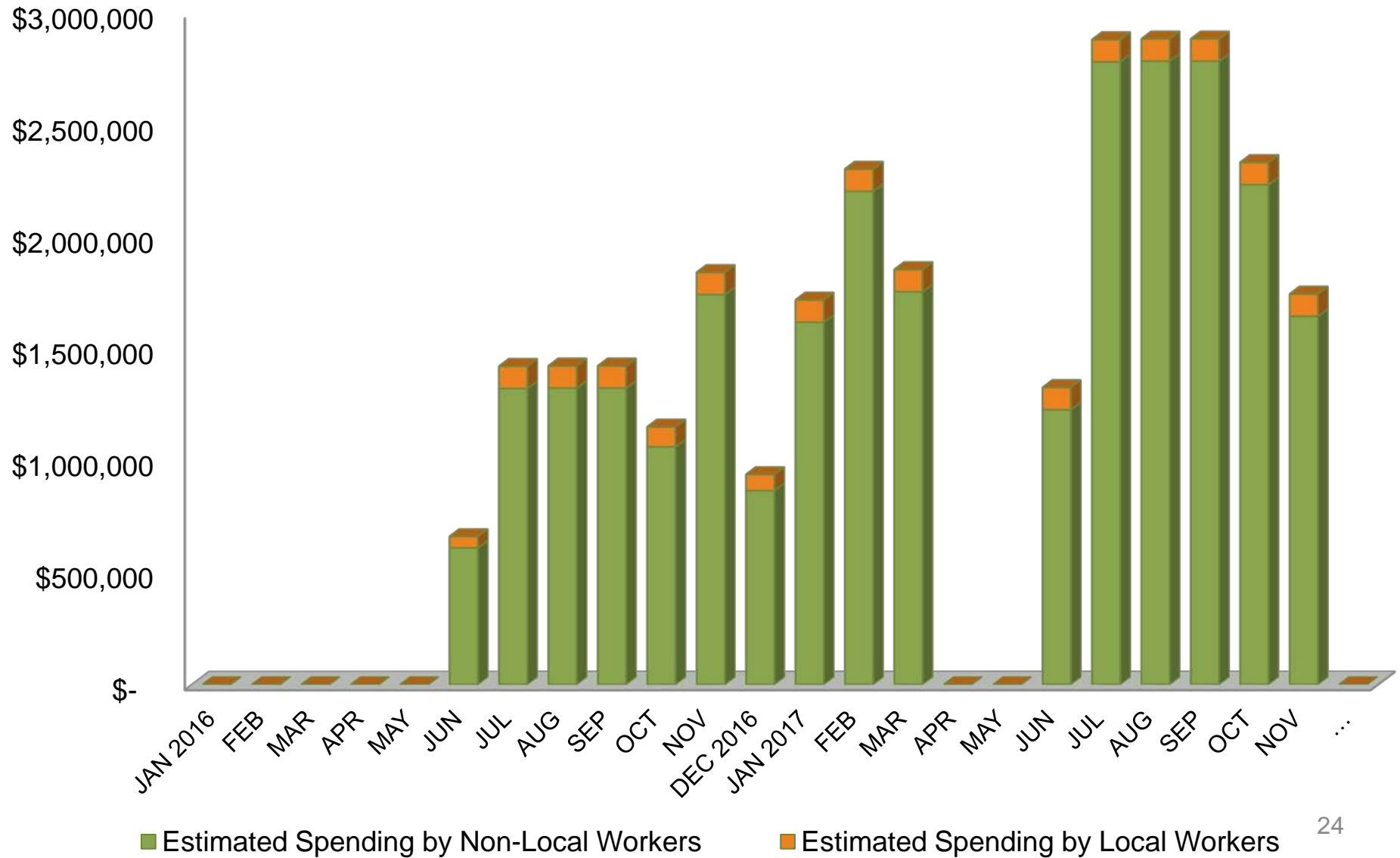
- Pipeline Construction:
 - Coquihalla Lakes to South end Coquihalla (24.9KM)
 - South end Coquihalla to Hope Pump Station (26.8KM)
 - Hope Pump Station to Walhleach Pump Station (34.1KM)
- Construction Facilities & Pipe Laydown Yards
- Construction Management
 - Construction management and craft inspectors
 - Environmental Protection and Monitoring
 - Administrative Support Services
- Restoration and Remediation



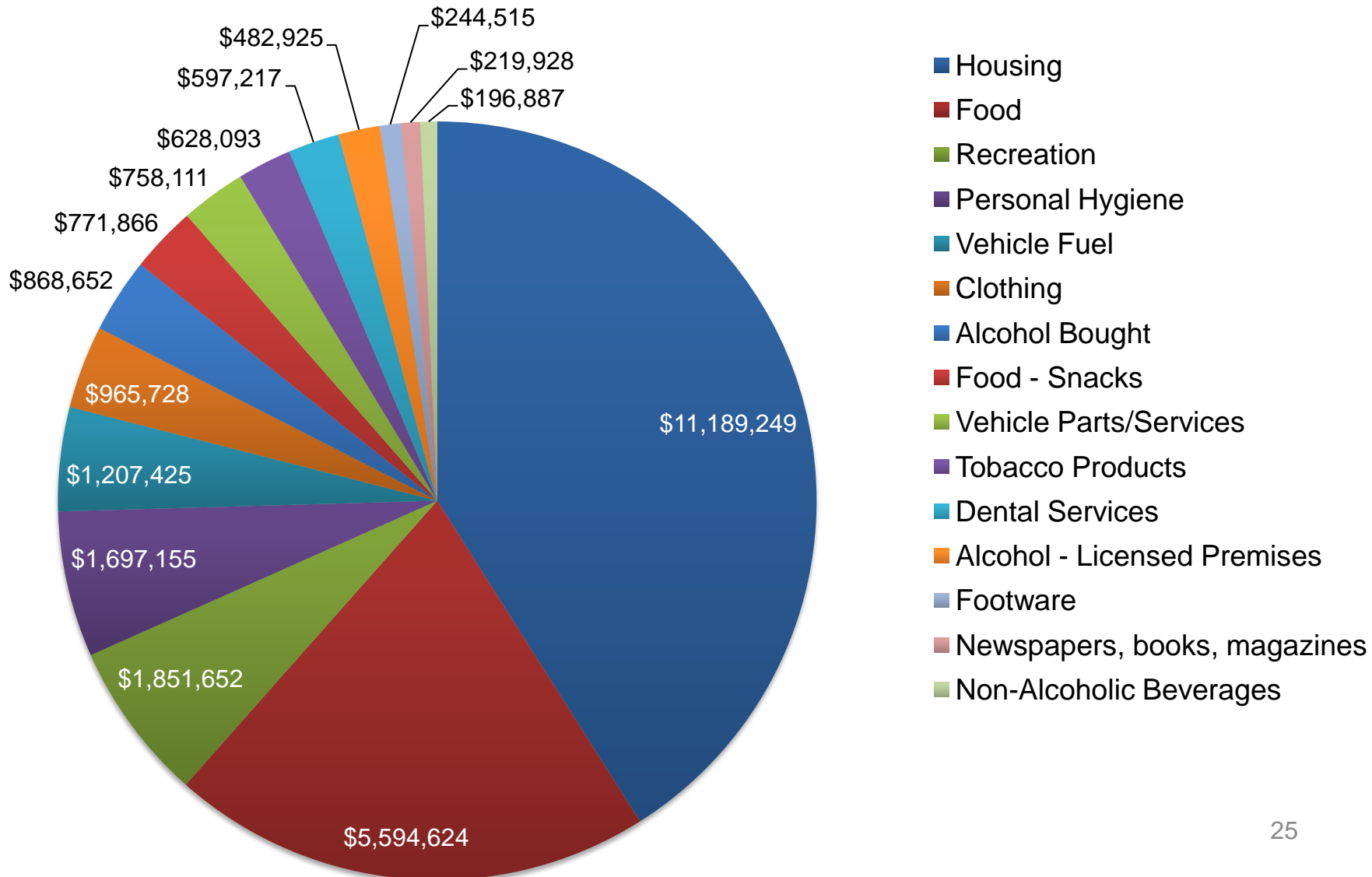
Hope Hub: Estimated Work Force



Hope Hub: Workforce Spending



Non-Local Worker Expenditures



Jobs Information

- transmountain.com/jobs
- kindermorgan.com/work/careers



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Trans Mountain: Local Economic Opportunities Kamloops Chamber of Commerce

Ian Anderson, President Kinder Morgan Canada
November 8, 2013



Canadian Chamber Report



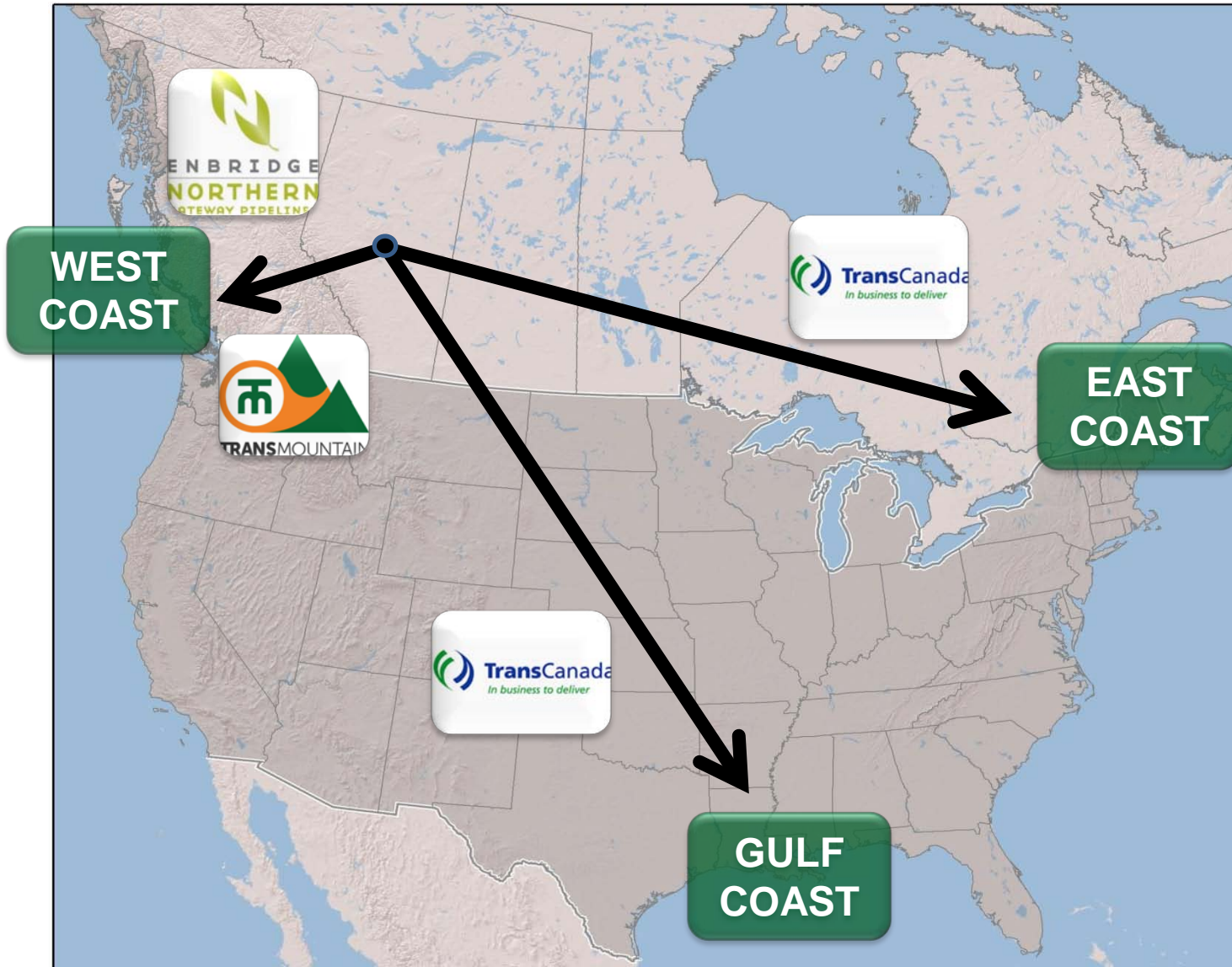
Canadian Oil and Gas: The US Supply Increasing. Asia Needs More.



CANADIAN OIL AND GAS

Lack of Market Access Has Cost Canada As Much As \$50 Million A Day

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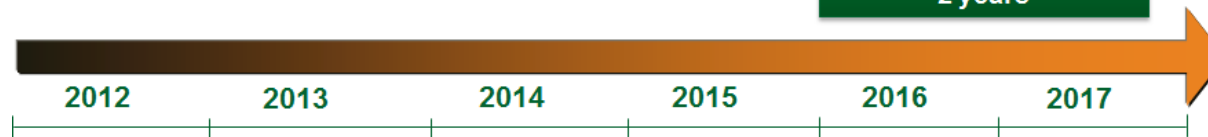


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1.5 years

Commercial

Regulatory Approvals
2 years

Construction
2 years



Economic Benefits



Construction Spending
(to 2018)



Operating Expenditures
(2018 - 2037)



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~4,500 Construction Jobs at Peak

Expanded Operations: 90 New Permanent Positions with 50 in BC

Benefits to Governments



Estimated Tax Revenue from Construction & 20 Years Operation:

\$500 Million
Local
from increased property taxes during operations
BC: \$23 Million Annually (119% increase)
Alberta: \$3.5 Million Annually (103% increase)

The graphic shows a photograph of large white pipes in an industrial setting. The text is overlaid on the image. The top part has a dark orange background with white text for the total amount. Below that is a lighter orange background with black text for the category and source. The bottom part has a white background with black text for the provincial and provincial breakdown.

\$1.7 Billion
Provincial
BC: \$1.0 Billion
Alberta: \$0.4 Billion
Rest of Canada: \$0.3 Billion

The graphic shows a photograph of large white pipes in an industrial setting. The text is overlaid on the image. The top part has a dark orange background with white text for the total amount. Below that is a lighter orange background with black text for the category. The bottom part has a white background with black text for the provincial and provincial breakdown.

\$2.1 Billion
Federal

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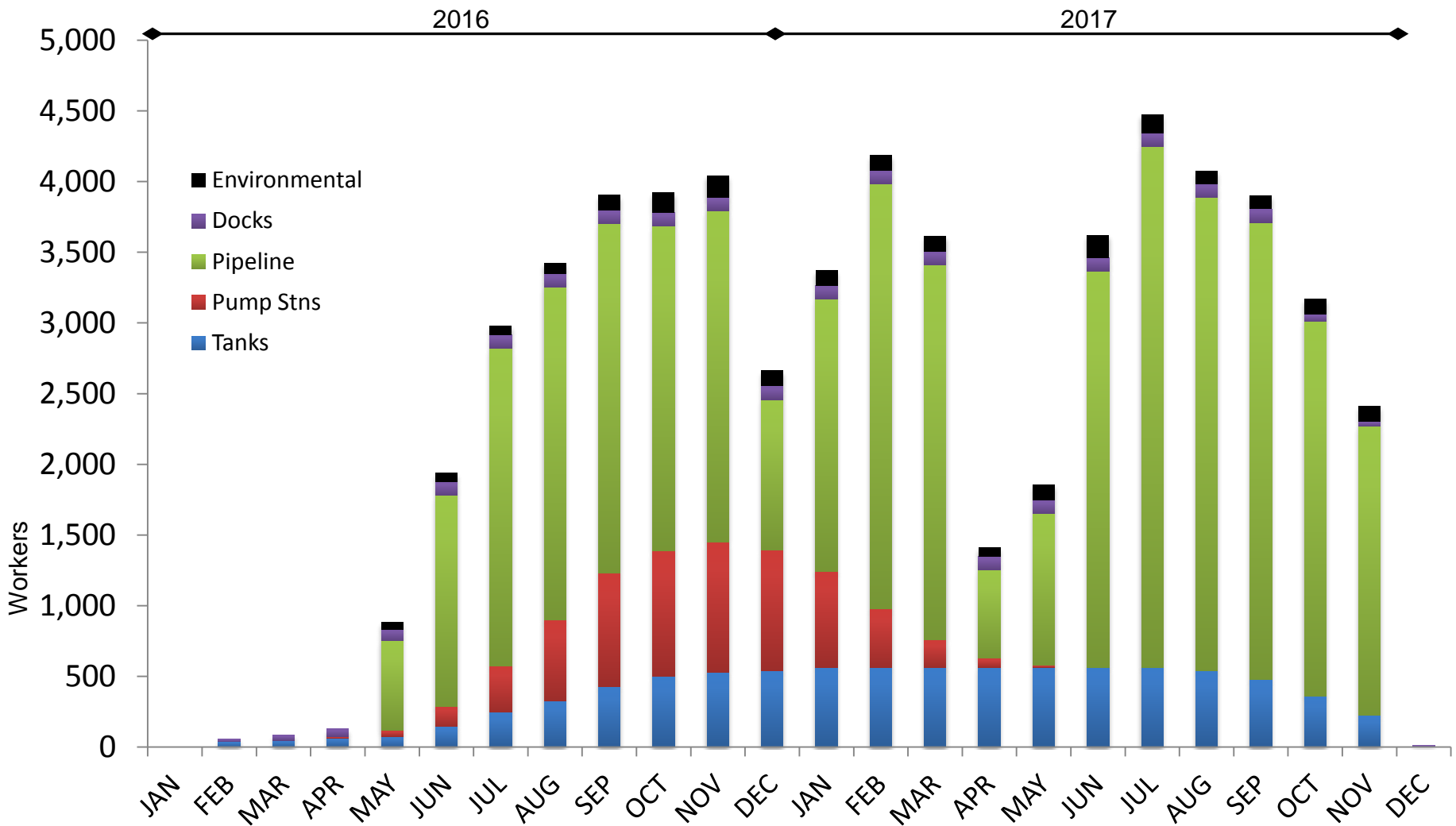
CITY OF KAMLOOPS ECONOMIC IMPACT

Benefits to City of Kamloops

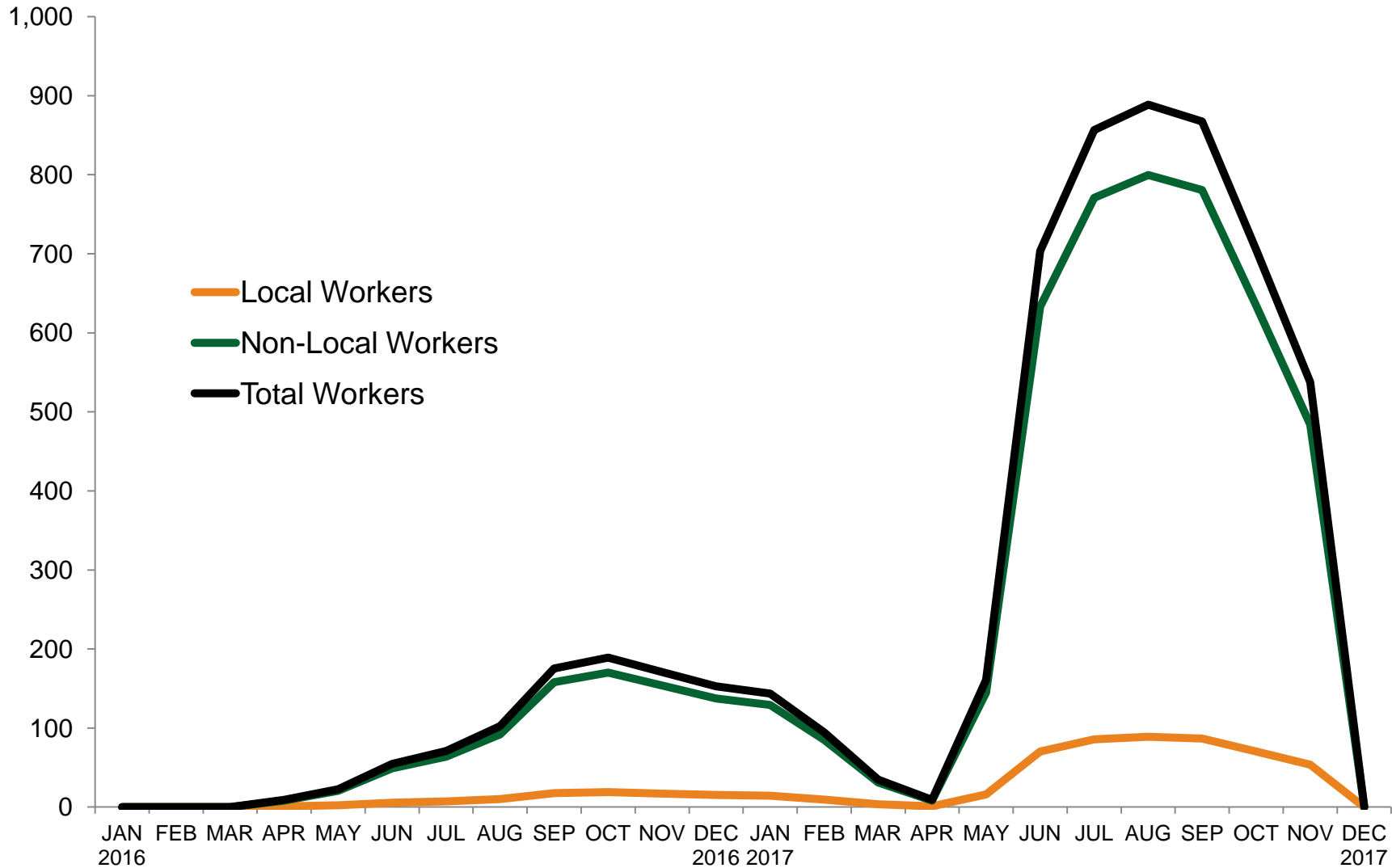
- Municipal taxes
 - 2013: \$ 1,578,000
 - With expansion: \$ 2,856,000
- Local suppliers, contractors, and consultants
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- Employment
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Project Workforce

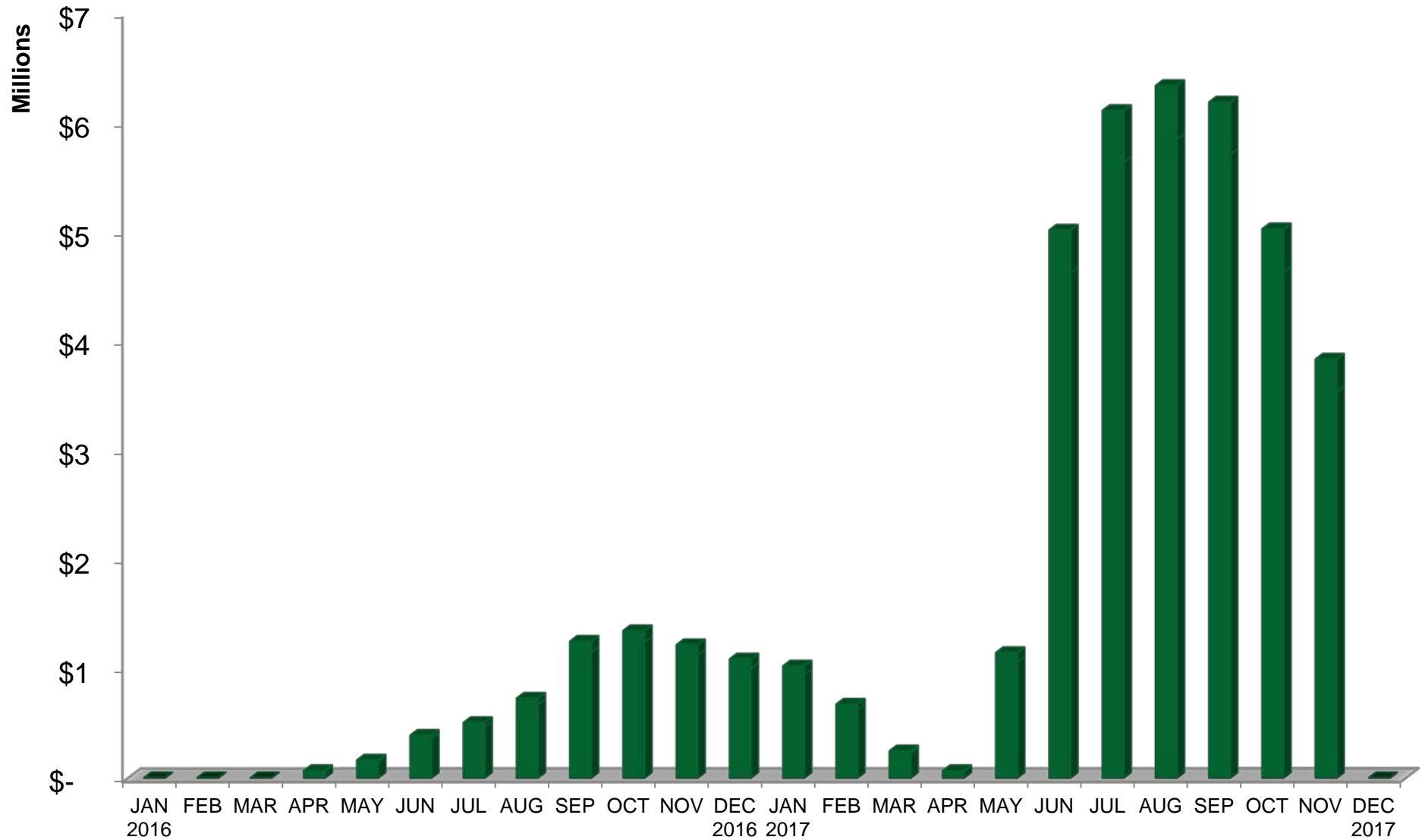


Kamloops-Based Work Force

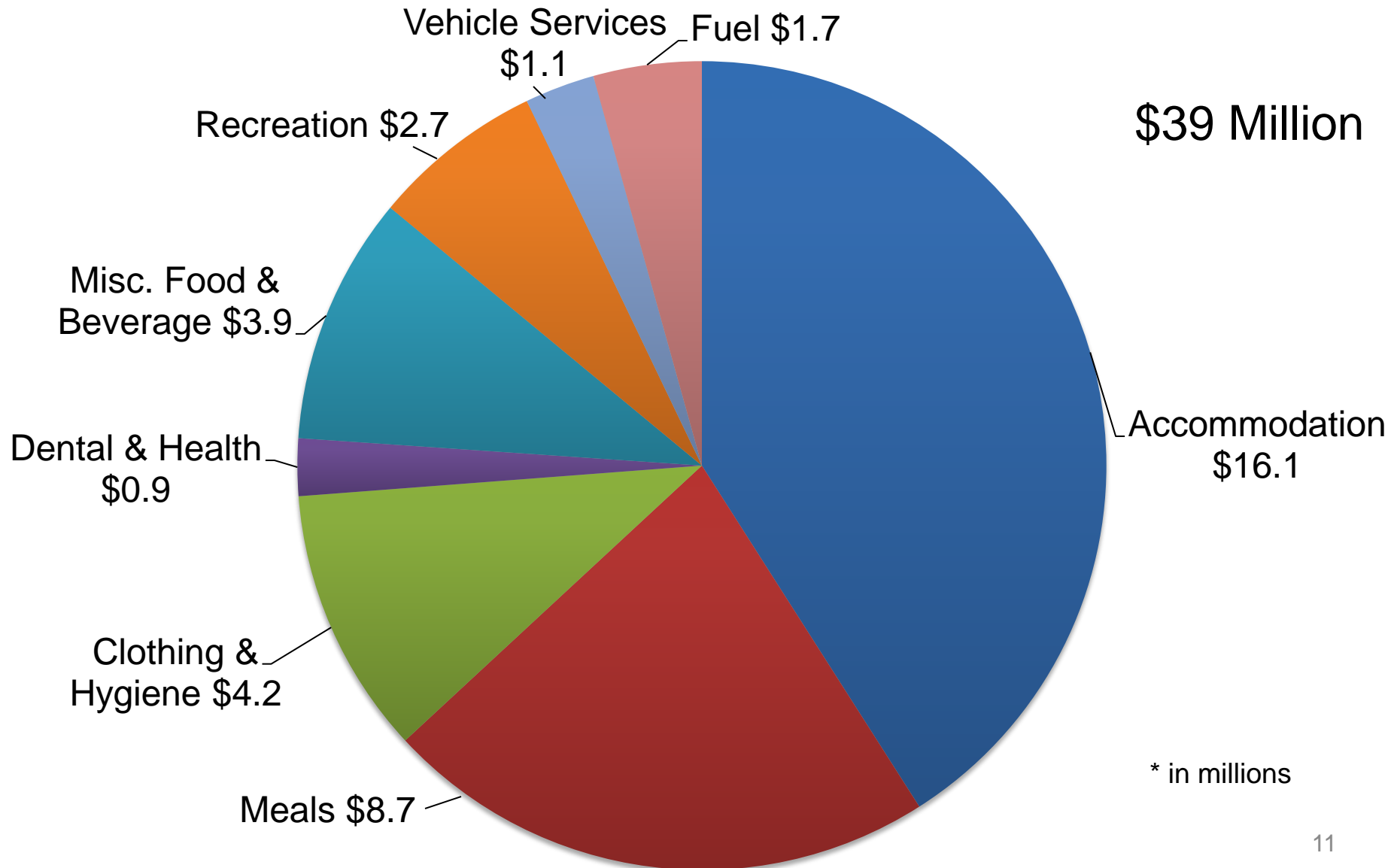


All figures based on project plans as of November 2013

Kamloops Workforce Spending



Non-Local Worker Spending*





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Fallers, Equipment Operators, Trucking

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Mechanics

Equipment Operators

Trucks & Drivers

Welders

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Hydrovac/Ground Disturbance

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Pump Station: Employment

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Crane Operators

Electricians

Steelworkers



Pump Station: Contracting Opportunities



Prefabricated Buildings

Power Line Installation

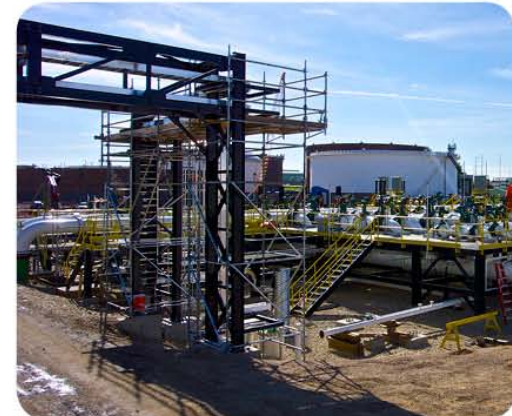
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Jobs and Procurement:

transmountain.com/jobs

transmountain.com/procurement



Trans Mountain: Local Economic Opportunities Clearwater Chamber of Commerce

Kate Stebbings, Stakeholder Engagement

Margery Knorr, Training and Employment

November 18, 2013



Canadian Chamber Report

Canadian Oil and Gas: US Supply Increasing. Asia Needs More.

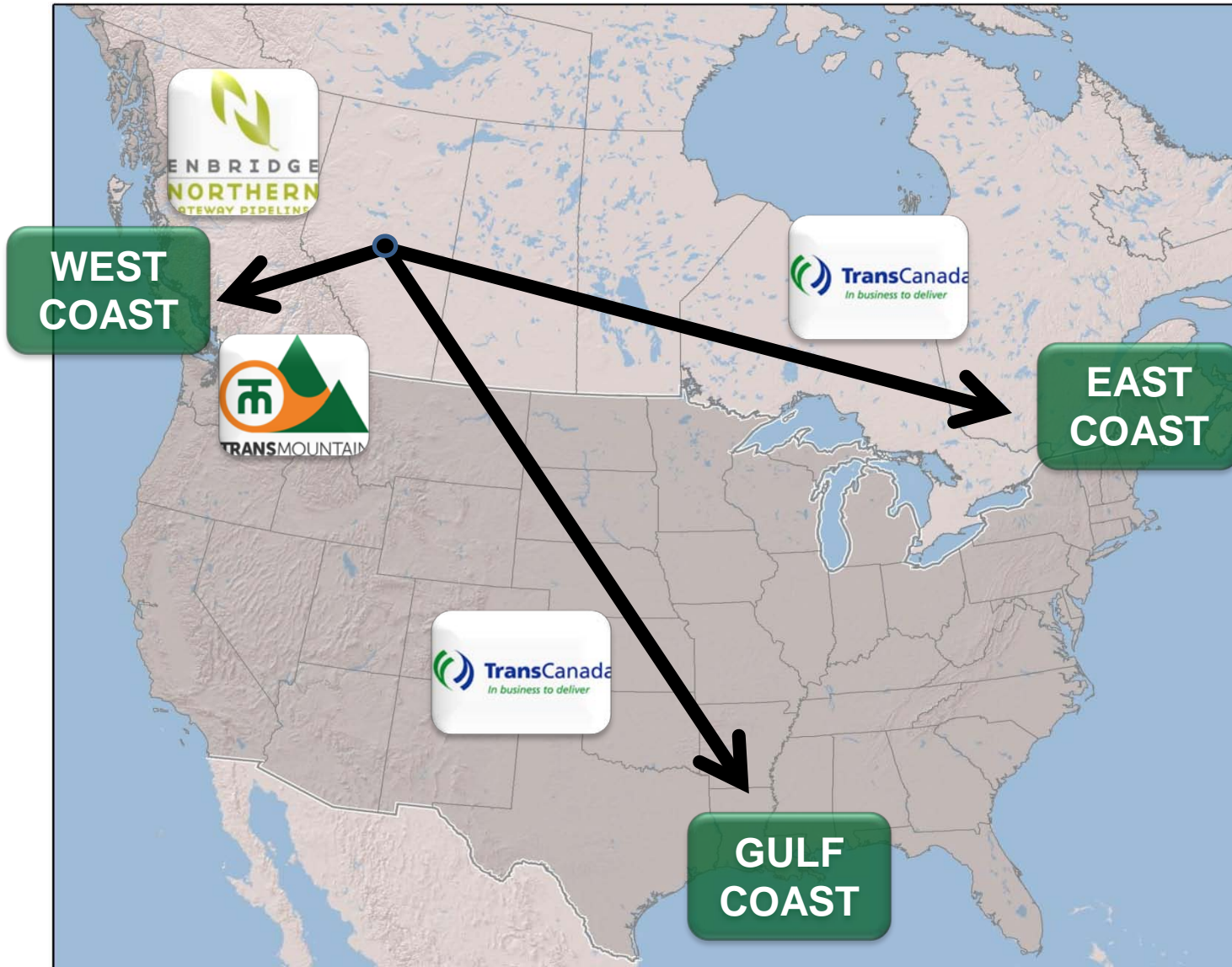
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Lack of Market Access Has Cost Canada As Much As \$50 Million A Day

Market Access Pipelines



Trans Mountain Proposed Expansion

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- 18 months of engagement and issue identification
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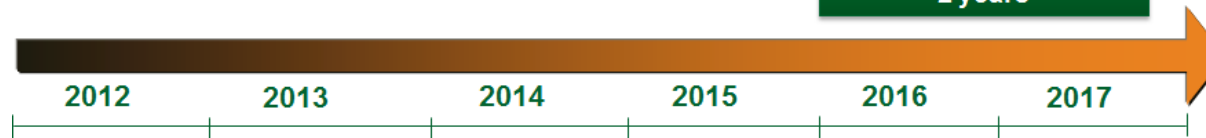


Application Preparation
1.5 years

Commercial

Regulatory Approvals
2 years

Construction
2 years



Economic Benefits



Construction Spending
(to 2018)



Operating Expenditures
(2018 - 2037)



108

66

25

EMPLOYMENT: up to
108,000 person years
during construction &
20 years of operation

66,000 in BC
25,000 in Alberta

~4,500 Construction Jobs at Peak

Expanded Operations: 90 New Permanent Positions with 50 in BC

Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:





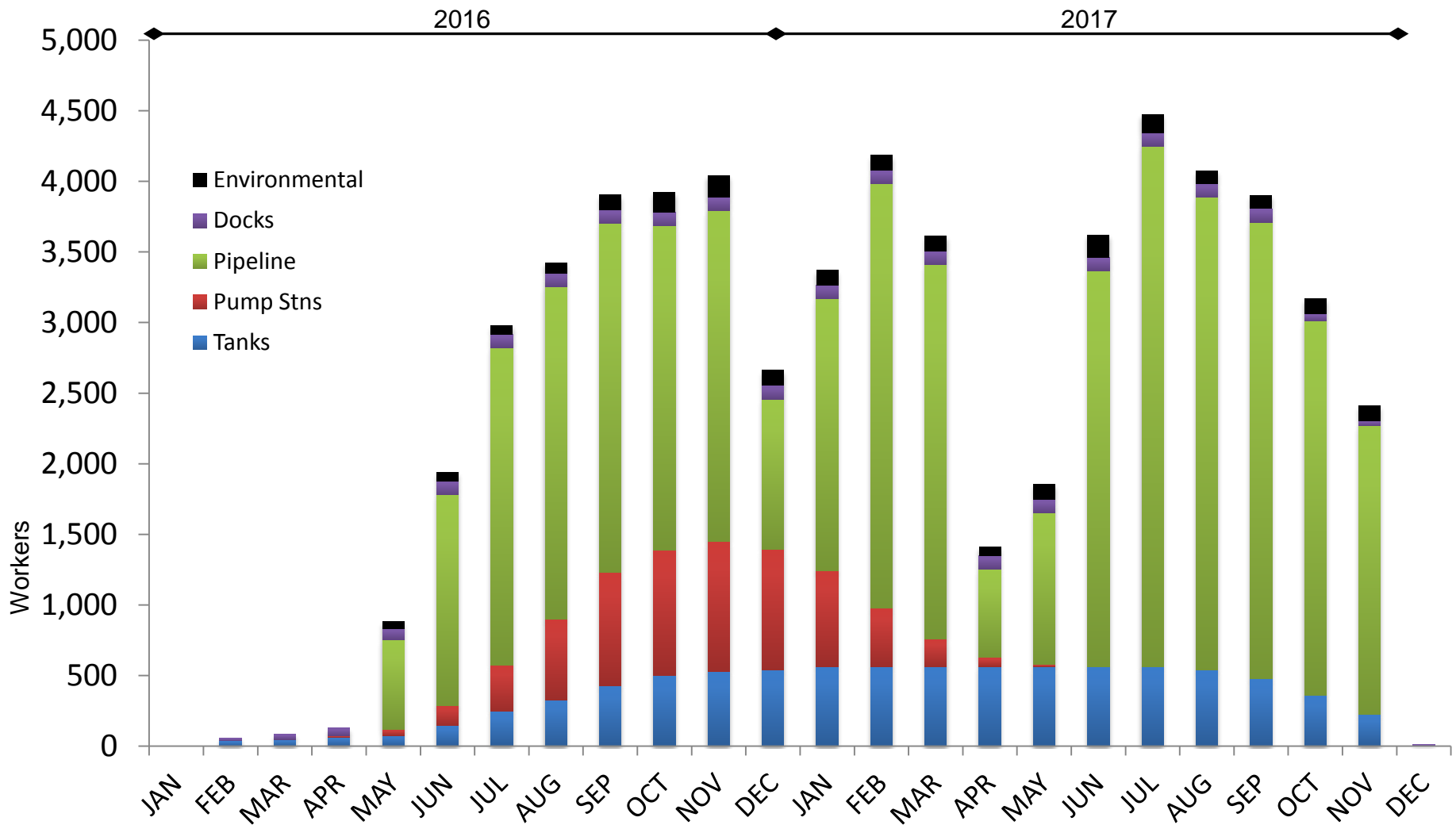
CLEARWATER / VAVENBY ECONOMIC IMPACT

Benefits to Clearwater / Vavenby

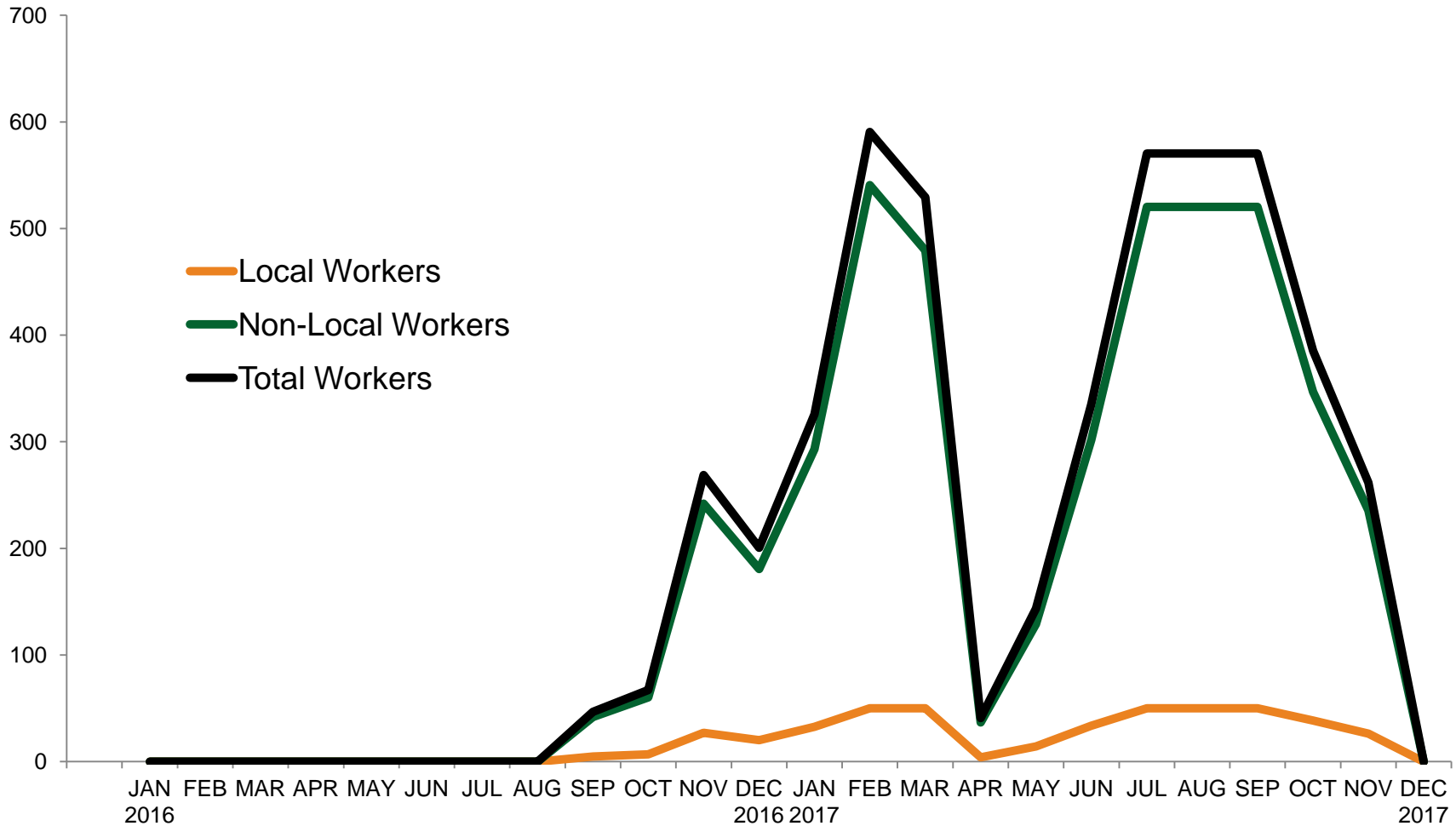
- Clearwater Municipal taxes
 - 2013: \$ 343,000
 - With expansion: \$ 856,000
- Local suppliers, contractors, and consultants
- Local workforce spending
- Employment
- Procurement
- Community investment



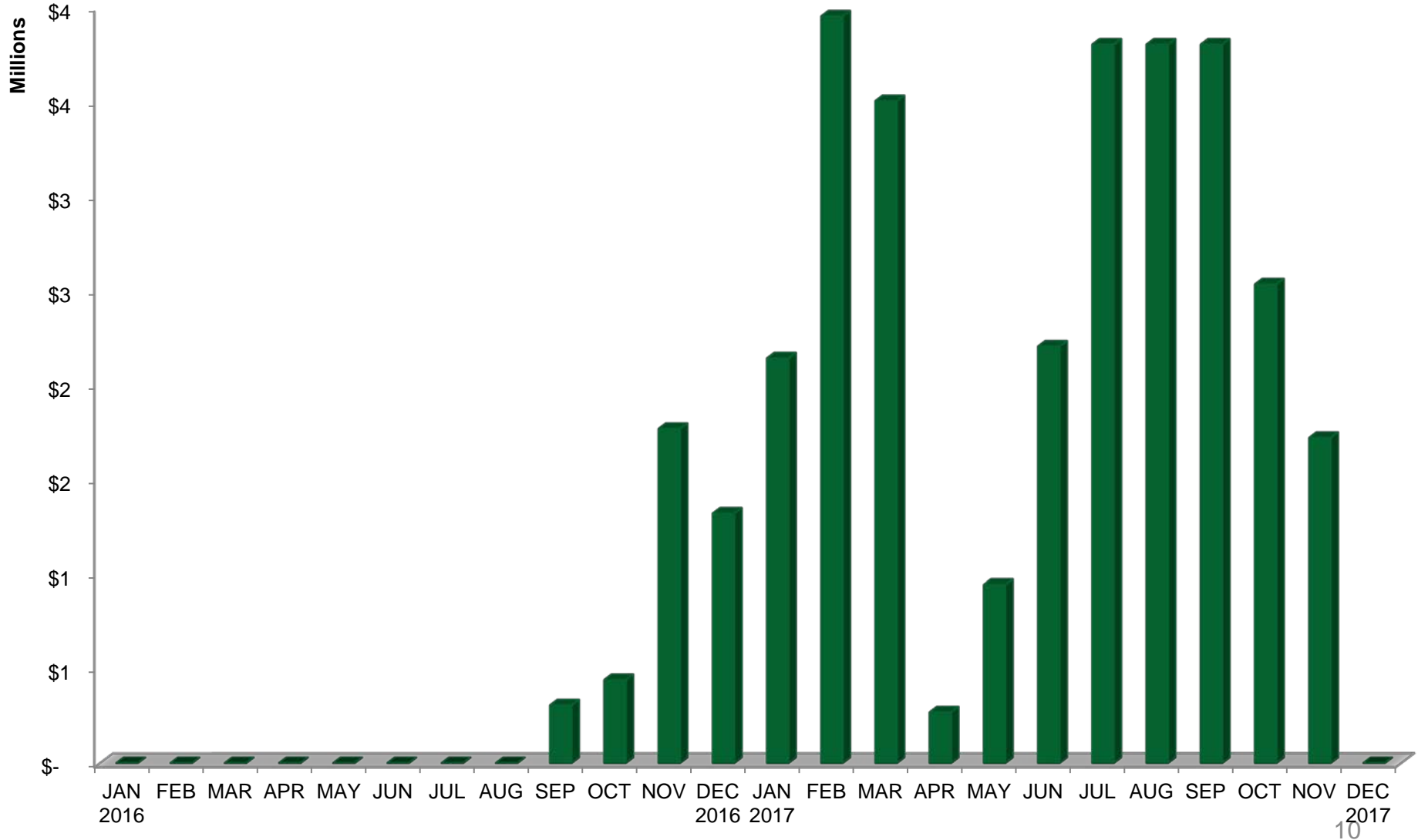
Project Workforce



Clearwater/Vavenby Work Force

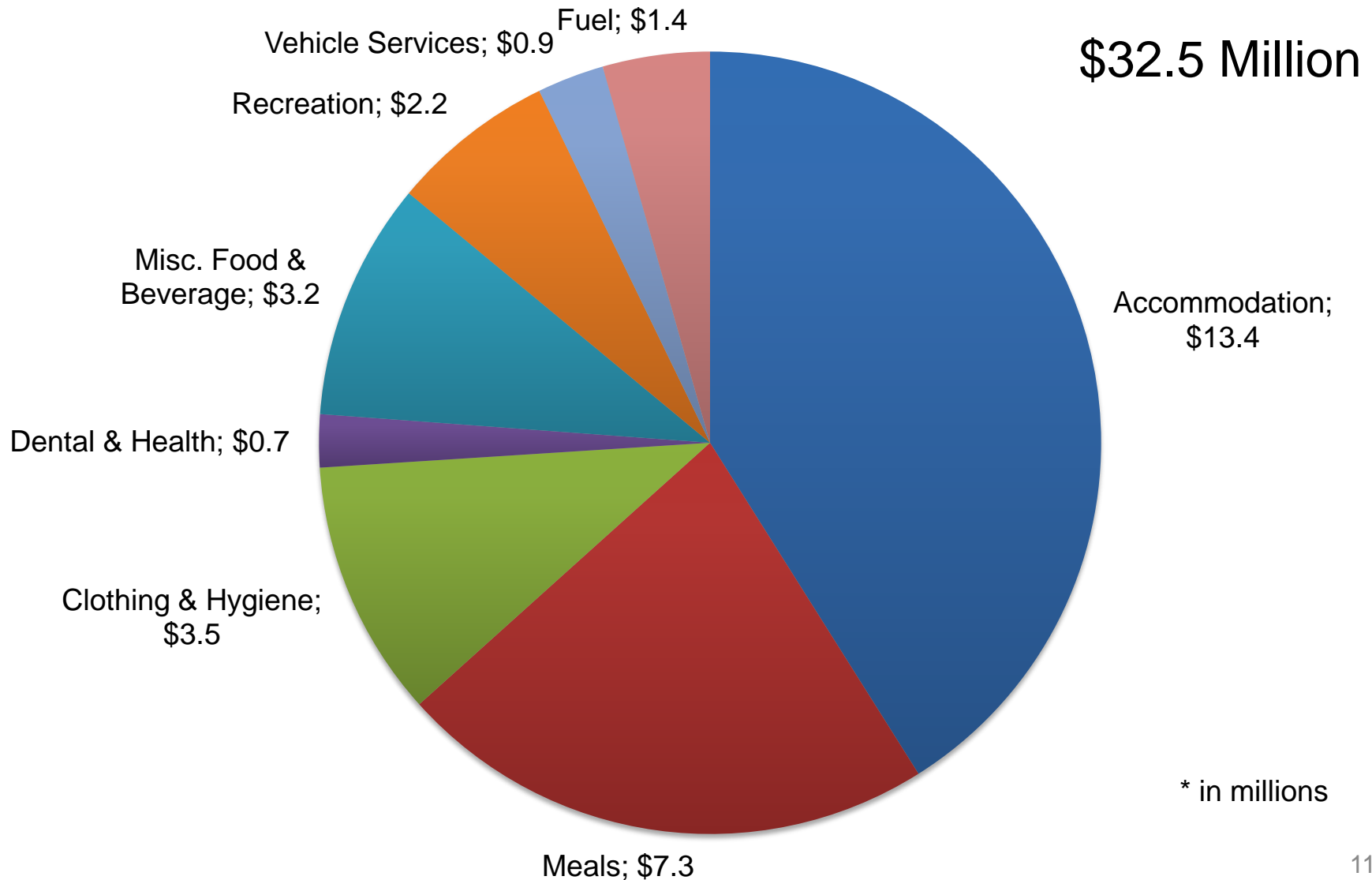


Clearwater/Vavenby Workforce Spend



All figures based on project plans as of November 2013

Non-Local Worker Spending*





EMPLOYMENT

Pipeline: Employment

Logging & Clearing

Fallers, Equipment Operators, Trucking

Welder Helpers

Administration

Labourers

**Pipeline Coating/
Sandblasting**

Mechanics

Equipment Operators

Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



Construction Management

Survey

Communications

Environmental Monitoring

Hydrovac/Ground Disturbance

Water Supply

Traffic Management

Non Destructive Testing

Wood Products

Health & Safety

Hydrostatic Testing

ROW Reclamation & Restoration

Sand & Gravel

Inspection Tools

Security

Fire Watch & Suppression

Construction Trailers/
Laydown Areas

Trucking

Horizontal Directional Drilling/Boring

Pump Station Employment

Welders

Pipe Fitters

Carpenters

Equipment Operators

Labourers

Crane Operators

Electricians

Steelworkers



Pump Station Contracting Opportunities



Prefabricated Buildings

Power Line Installation

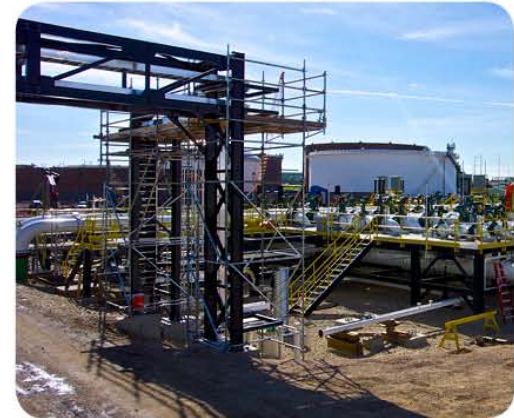
**Environmental
Monitoring**

On Site Medical & Safety

Surveying

Non-Destructive Testing

Security



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Trans Mountain Expansion Project Blue River: Local Economic Opportunities

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November 21, 2013



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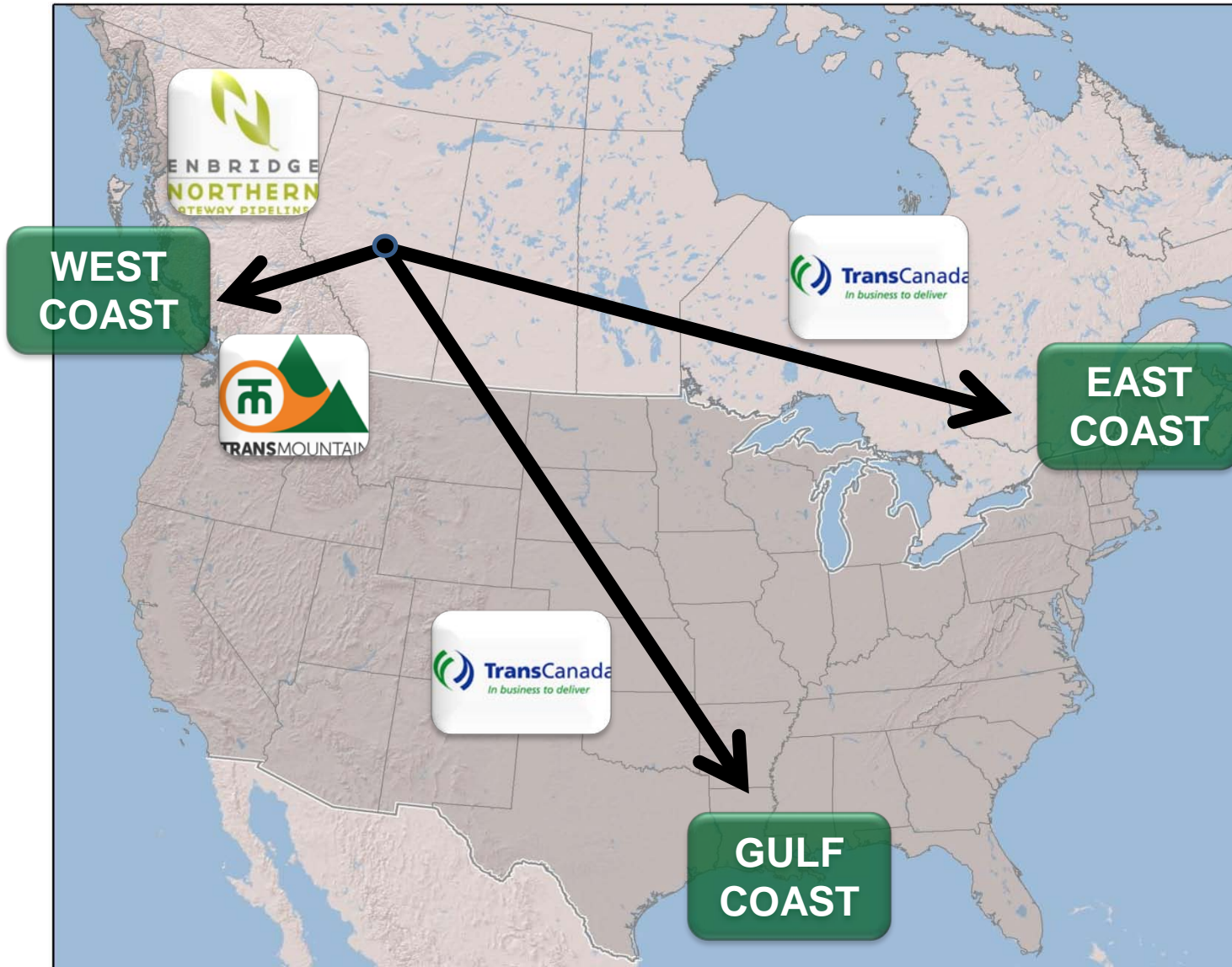
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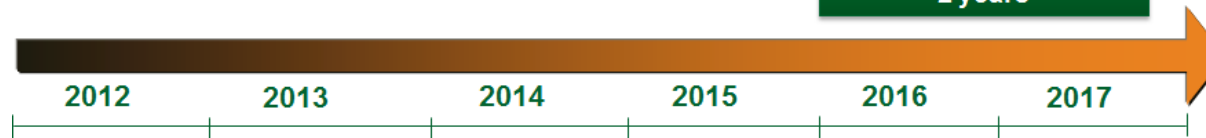


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Regulatory Approvals
2 years

Construction
2 years



Economic Benefits



Construction Spending
(to 2018)



Operating Expenditures
(2018 - 2037)



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66,000 in BC
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Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:





BLUE RIVER ECONOMIC IMPACT

Benefits to Blue River



1. TNRD Taxes

- 2013: \$ \$5,561,000
- With expansion: \$ 13,135,000

1. Local workforce spending – hub community

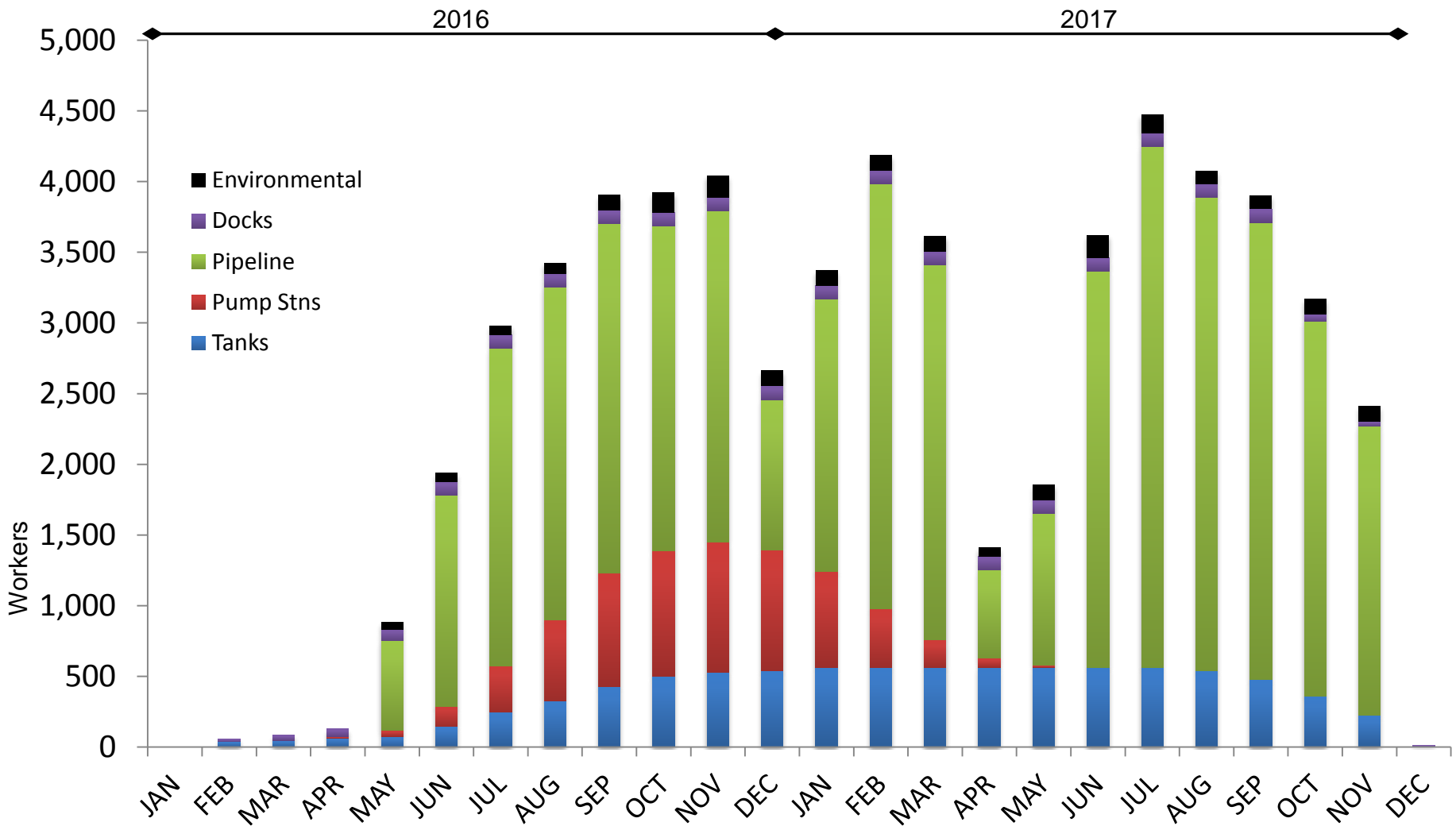
2. Employment

3. Procurement

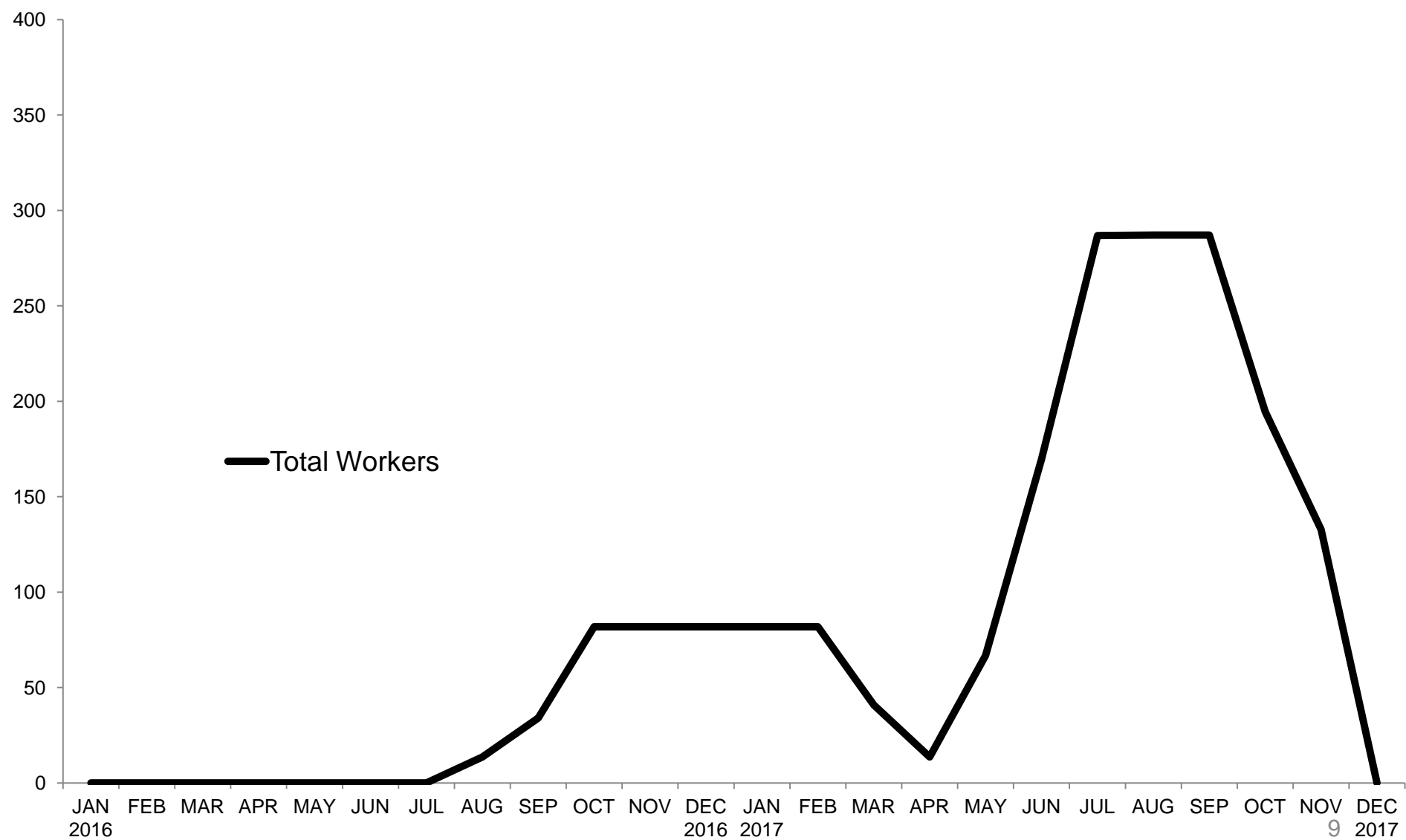
4. Community investment



Project Workforce

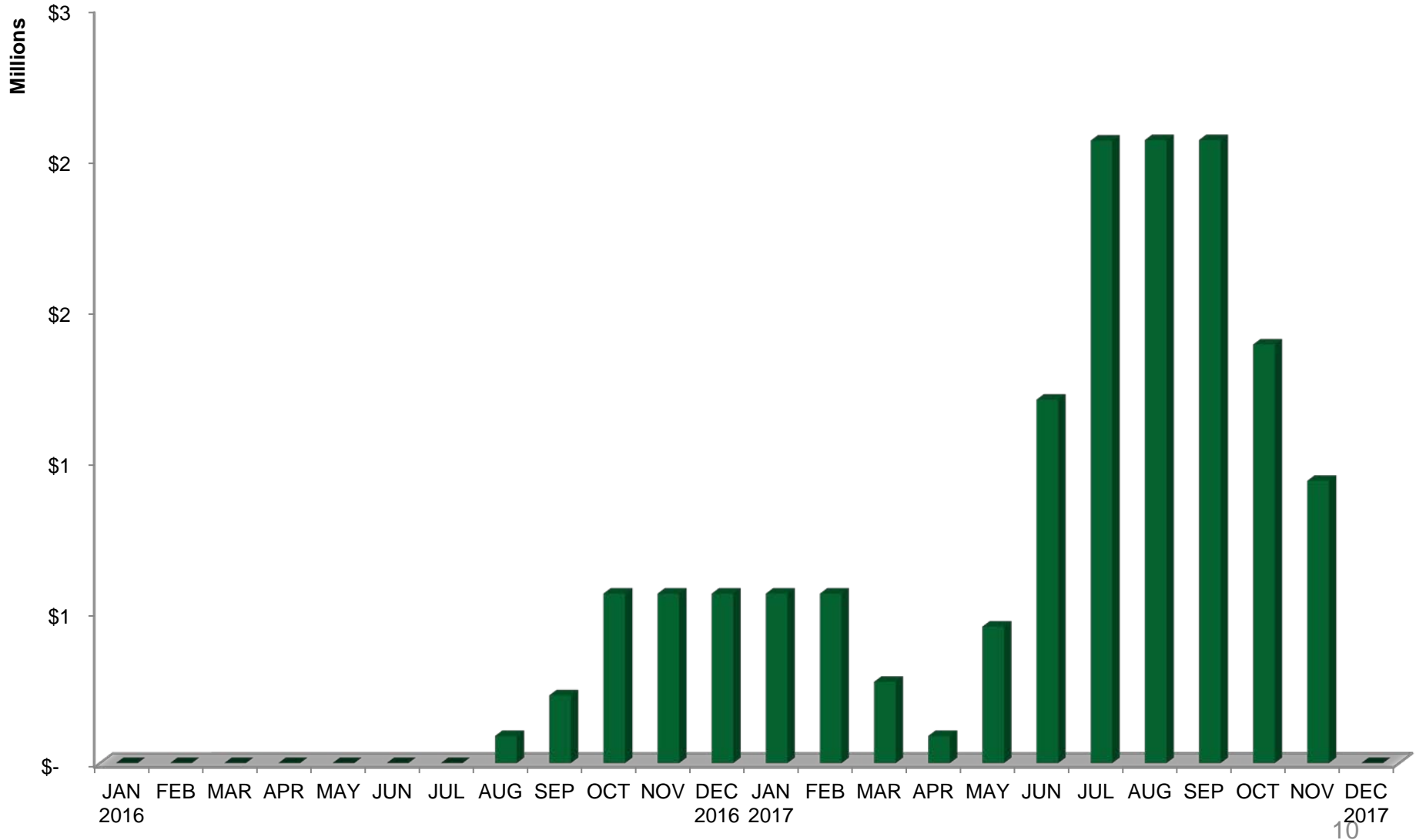


Blue River Based Work Force



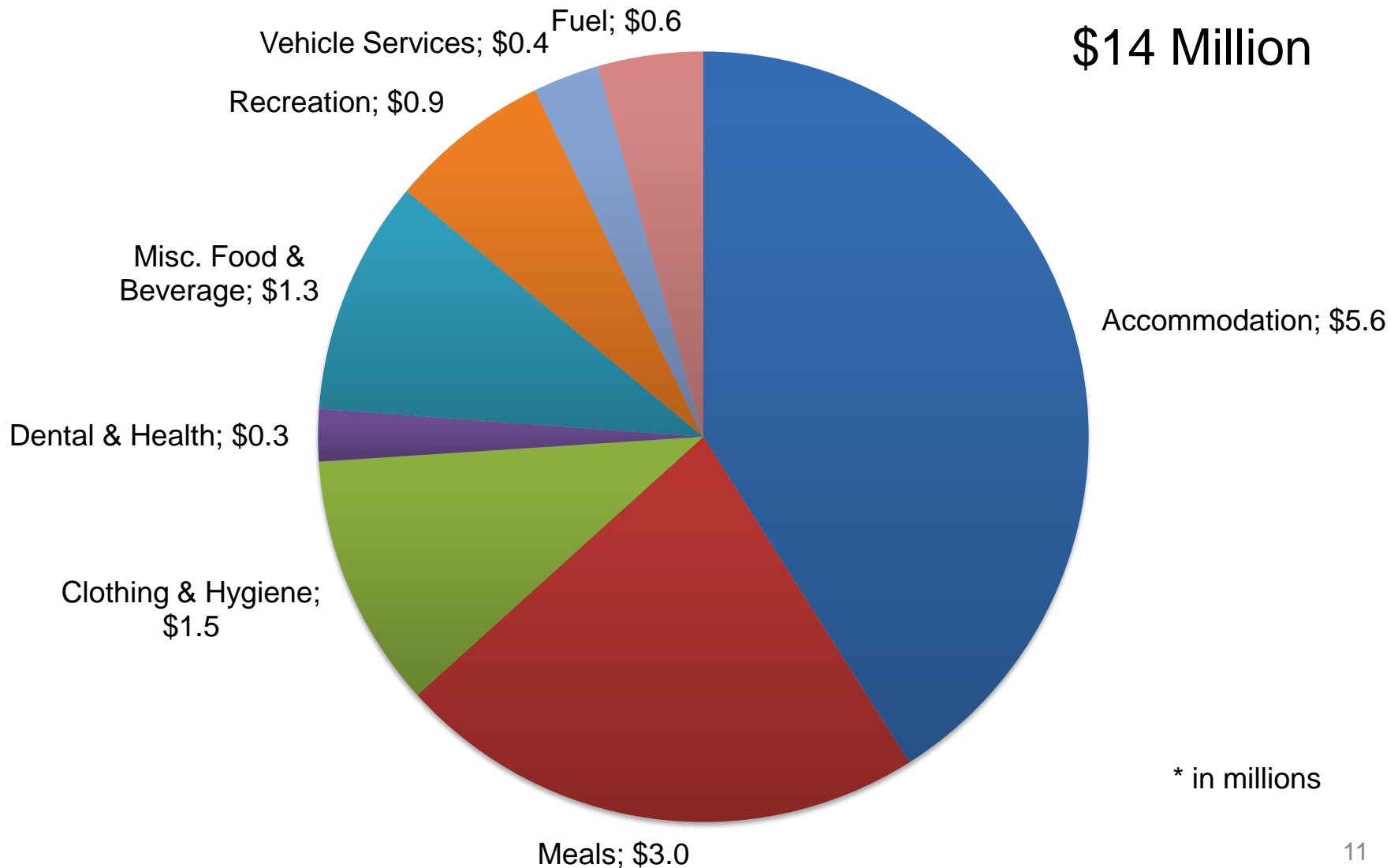
All figures based on project plans as of November 2013

Blue River Workforce Spending



All figures based on project plans as of November 2013

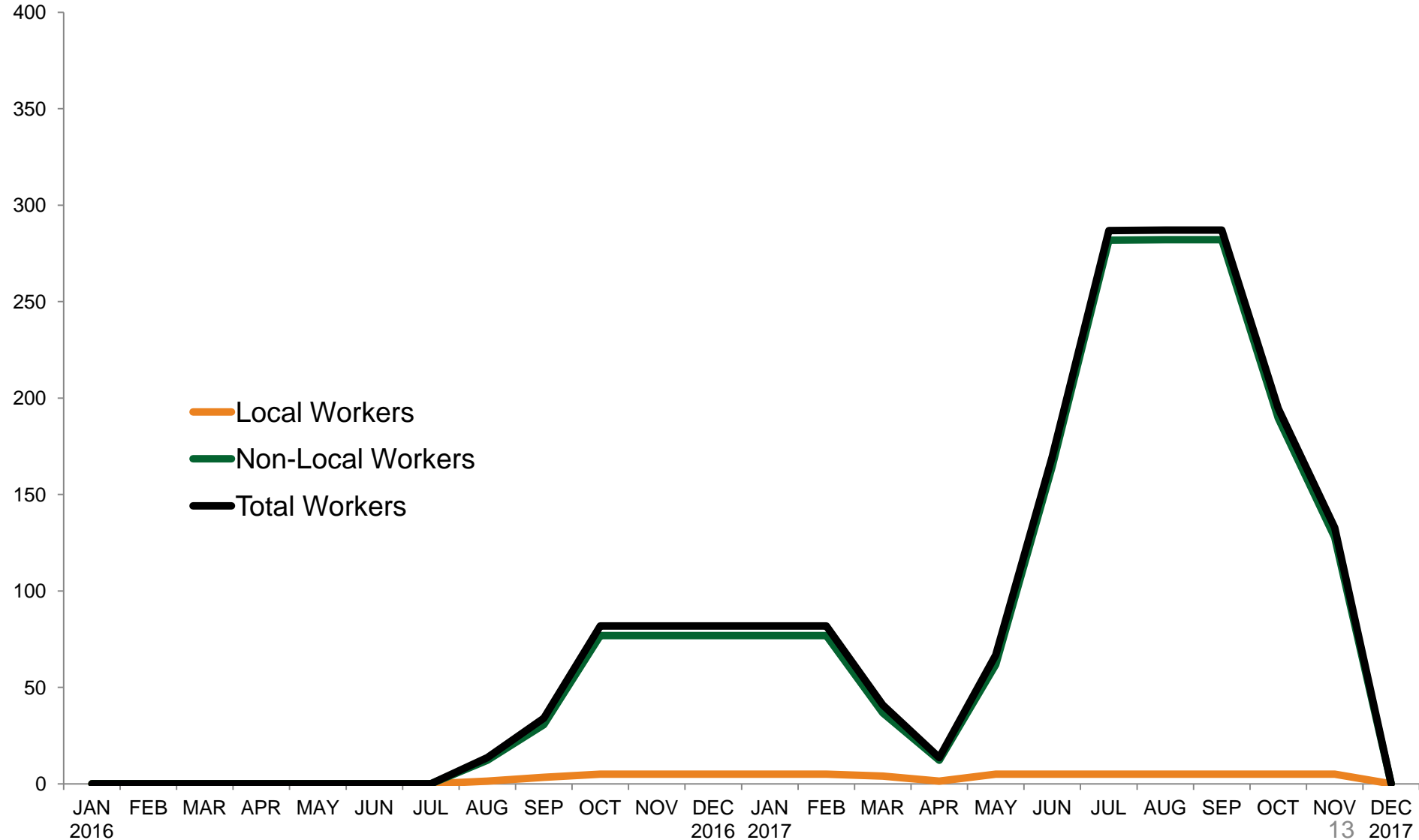
Non-Local Worker Spending*





EMPLOYMENT

Blue River Based Work Force



All figures based on project plans as of November 2013

Pipeline: Employment

Logging & Clearing

Fallers, Equipment Operators, Trucking

Welder Helpers

Administration

Labourers

**Pipeline Coating/
Sandblasting**

Mechanics

Equipment Operators

Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



Construction Management	Survey	Communications
Environmental Monitoring	Hydrovac/Ground Disturbance	Water Supply
Traffic Management	Non Destructive Testing	Wood Products
Health & Safety	Hydrostatic Testing	ROW Reclamation & Restoration
Sand & Gravel	Inspection Tools	Security
Fire Watch & Suppression	Construction Trailers/ Laydown Areas	Trucking
Horizontal Directional Drilling/Boring		

Pump Station Employment

Welders

Pipe Fitters

Carpenters

Equipment Operators

Labourers

Crane Operators

Electricians

Steelworkers



Pump Station Contracting Opportunities



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Power Line Installation

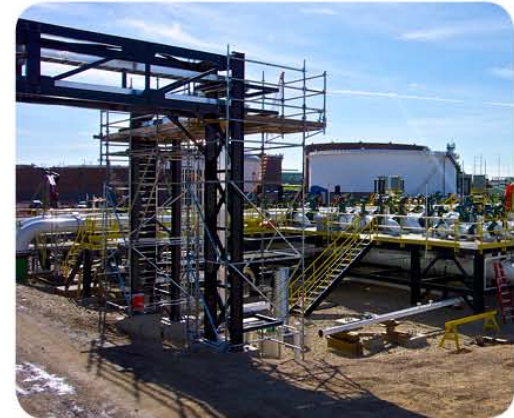
Environmental
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On Site Medical & Safety

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Non-Destructive Testing

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Trans Mountain Expansion Project Valemount: Local Economic Opportunities

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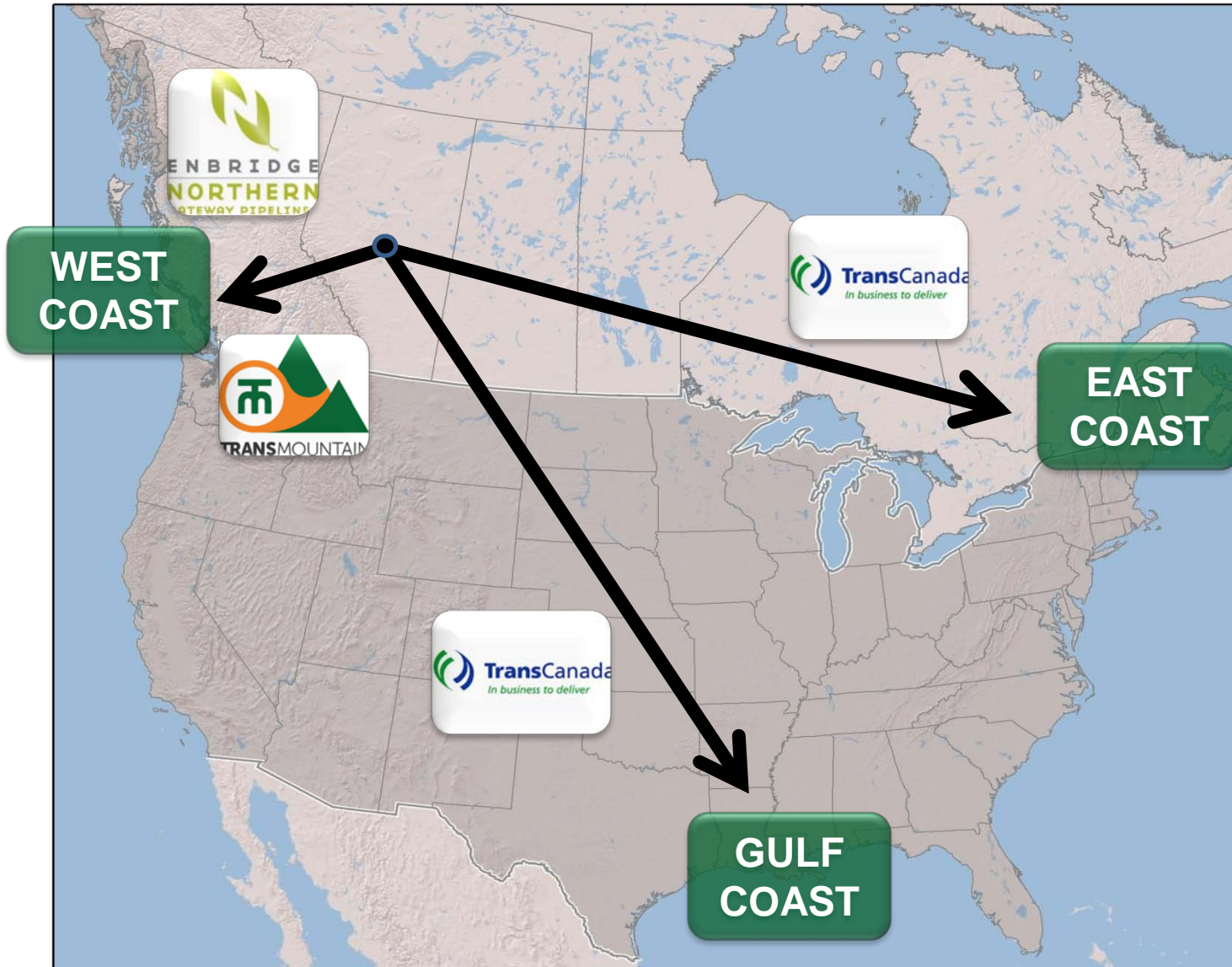
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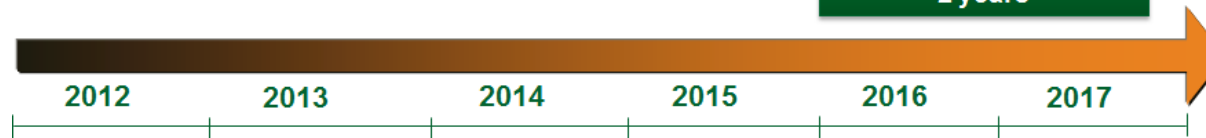


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Regulatory Approvals
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Construction
2 years



Economic Benefits



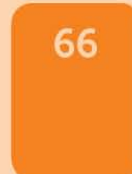
Construction Spending
(to 2018)



Operating Expenditures
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25,000 in Alberta

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Expanded Operations: 90 New Permanent Positions with 50 in BC

Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:





VALEMOUNT ECONOMIC IMPACT

Benefits to Valemount

1. FFGRD Taxes

- 2013: \$ \$2,183,000
- With expansion: \$ 4,041,000

1. Local workforce spending – hub community

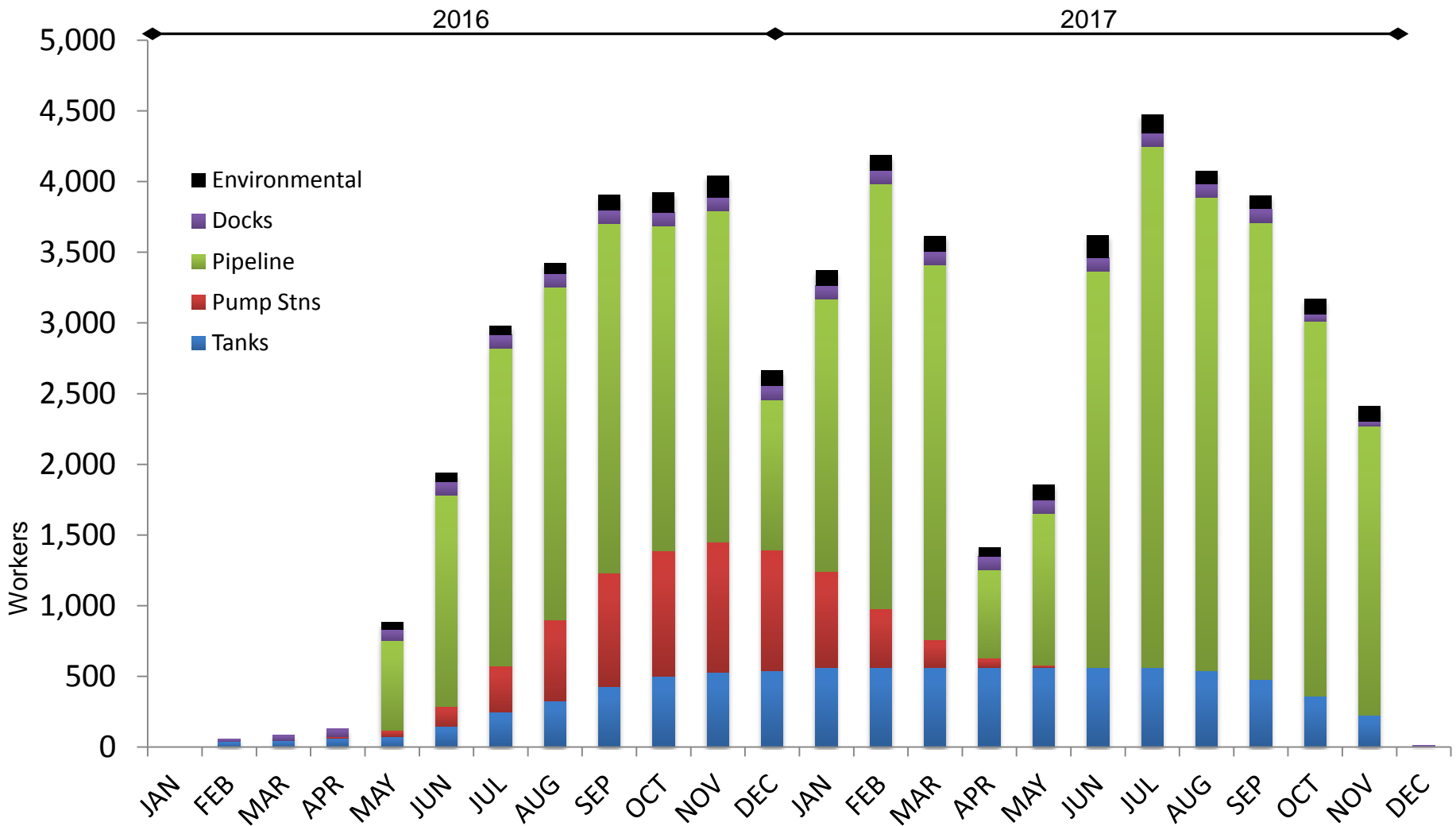
2. Employment

3. Procurement

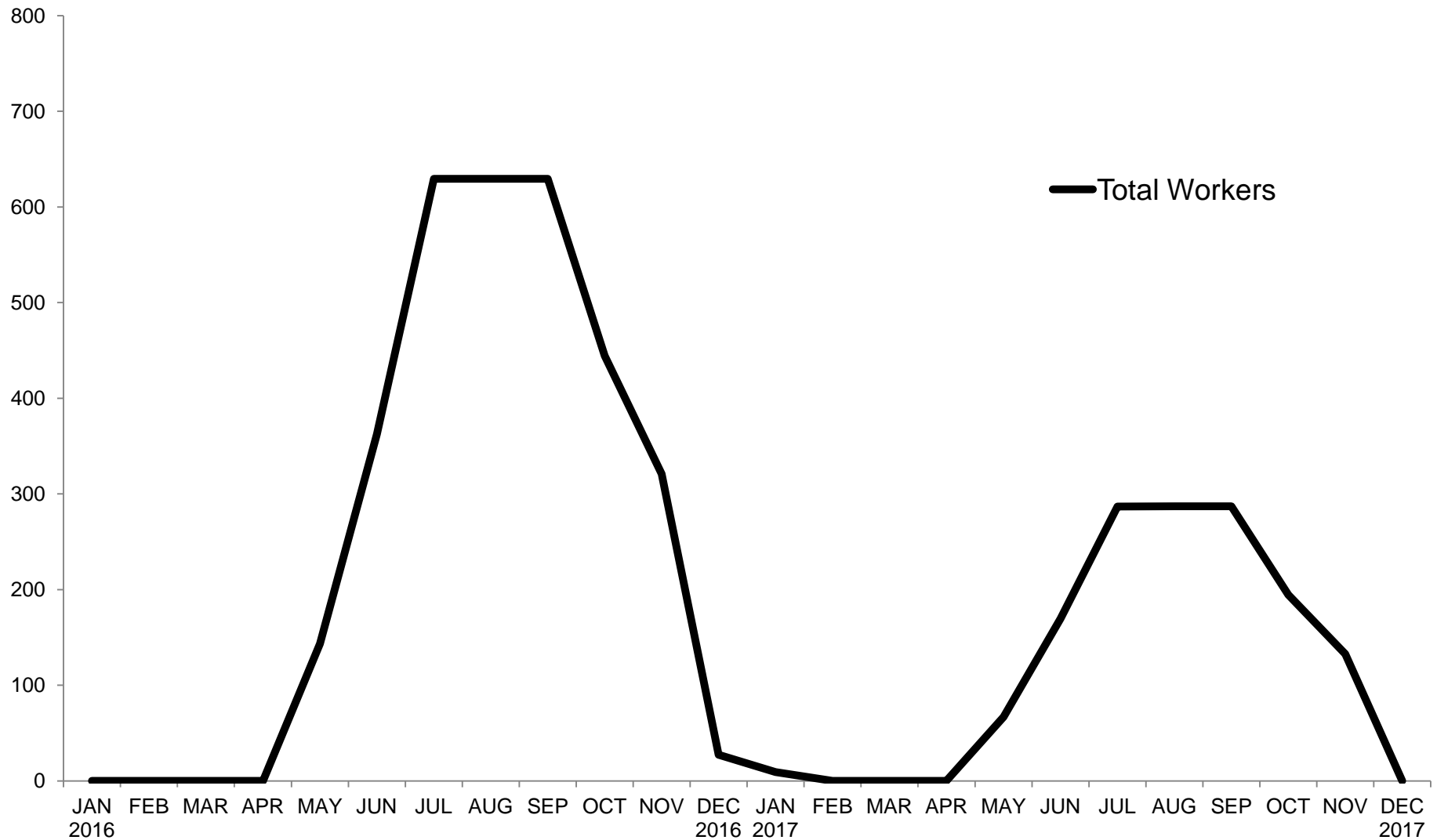
4. Community investment



Project Workforce

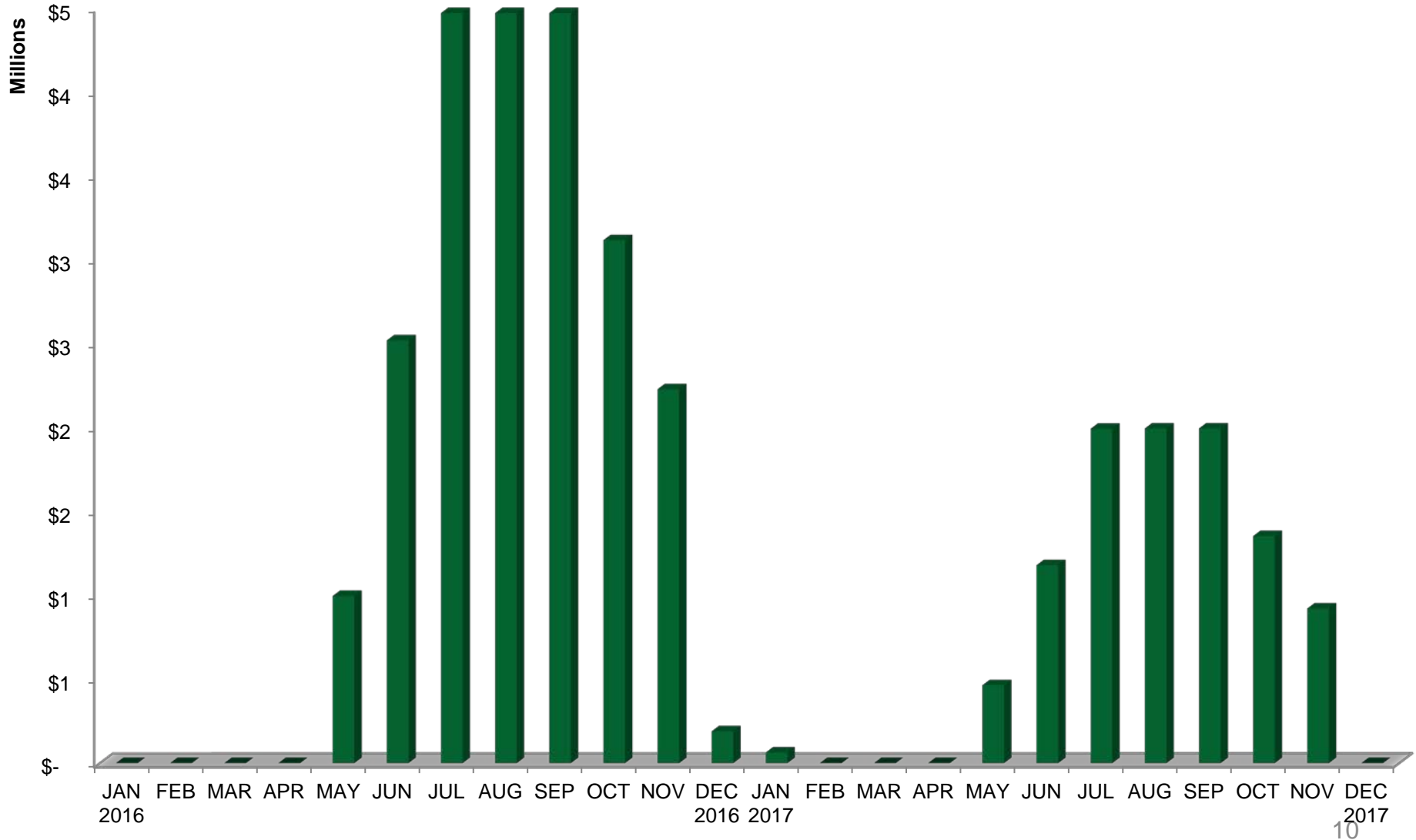


Valemount-Based Work Force



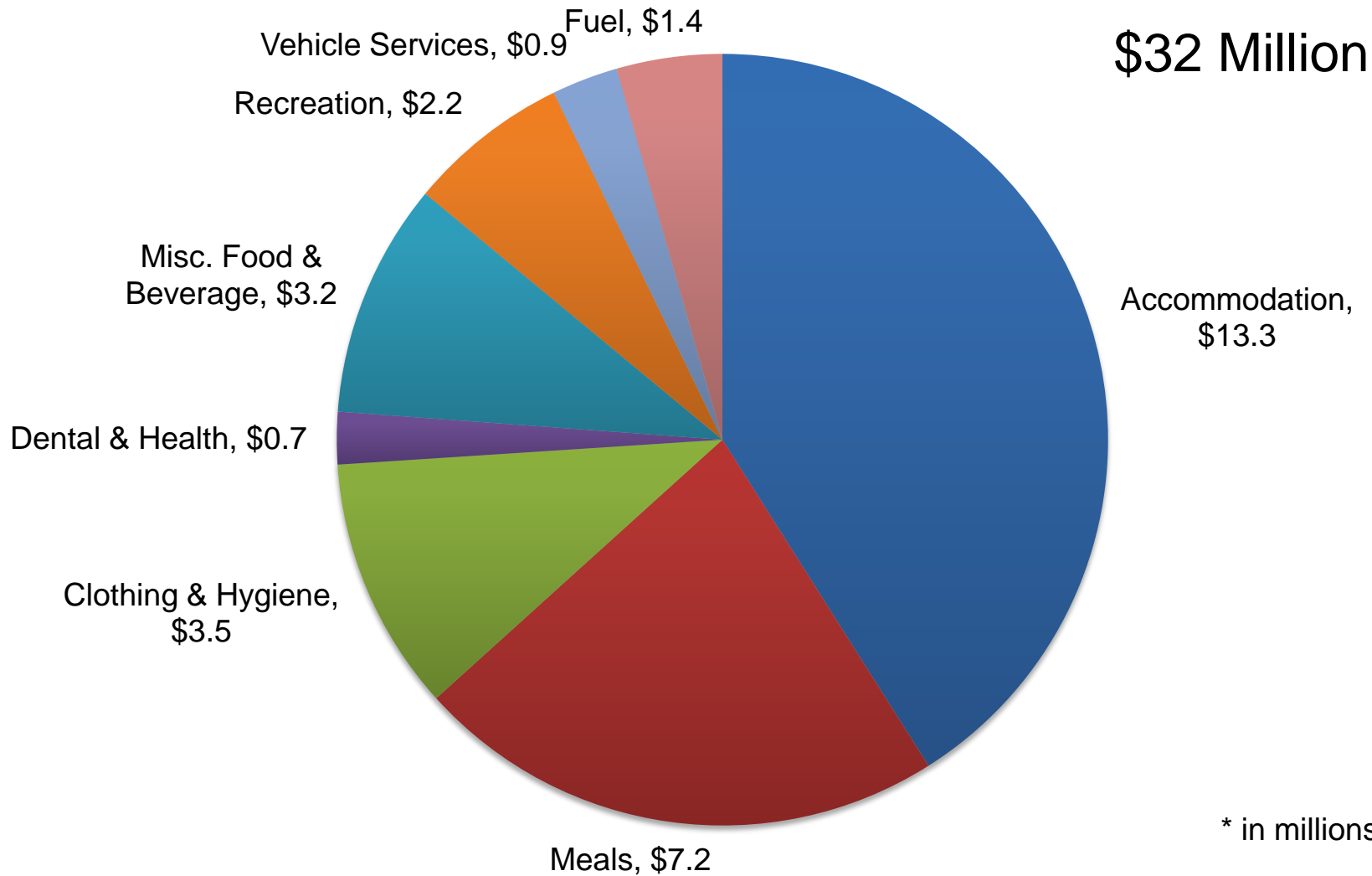
All figures based on project plans as of November 2013

Valemount Workforce Spending



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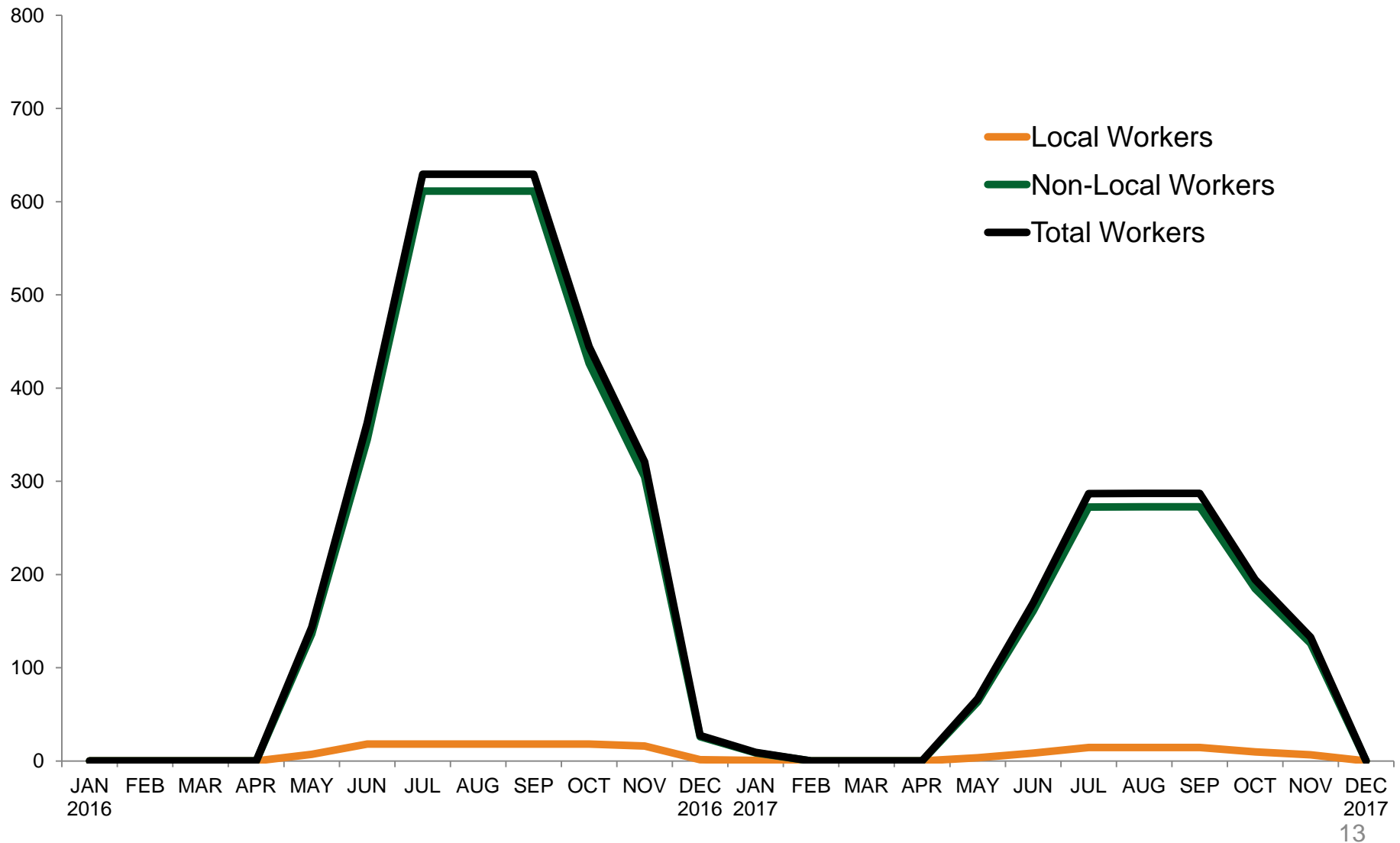
Non-Local Worker Spending*





EMPLOYMENT

Valemount-Based Work Force



All figures based on project plans as of November 2013

Pipeline: Employment

Logging & Clearing

Fallers, Equipment Operators, Trucking

Welder Helpers

Administration

Labourers

**Pipeline Coating/
Sandblasting**

Mechanics

Equipment Operators

Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



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Pipe Fitters

Carpenters

Equipment Operators

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Crane Operators

Electricians

Steelworkers



Pump Station Contracting Opportunities



Prefabricated Buildings

Power Line Installation

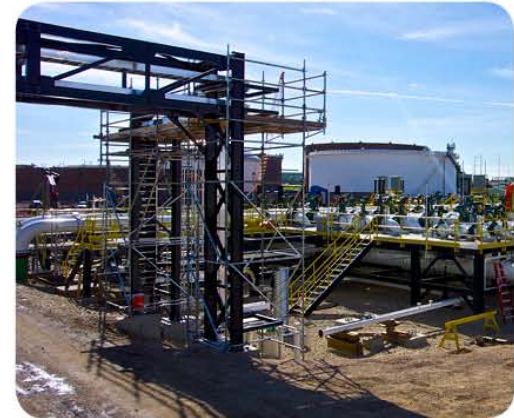
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Trans Mountain Expansion Project Merritt: Local Economic Opportunities

Kate Stebbings, Stakeholder Engagement

Margery Knorr, Training and Employment

November 22, 2013



Canadian Chamber Report



Canadian Oil and Gas: US Supply Increasing. Asia Needs More.

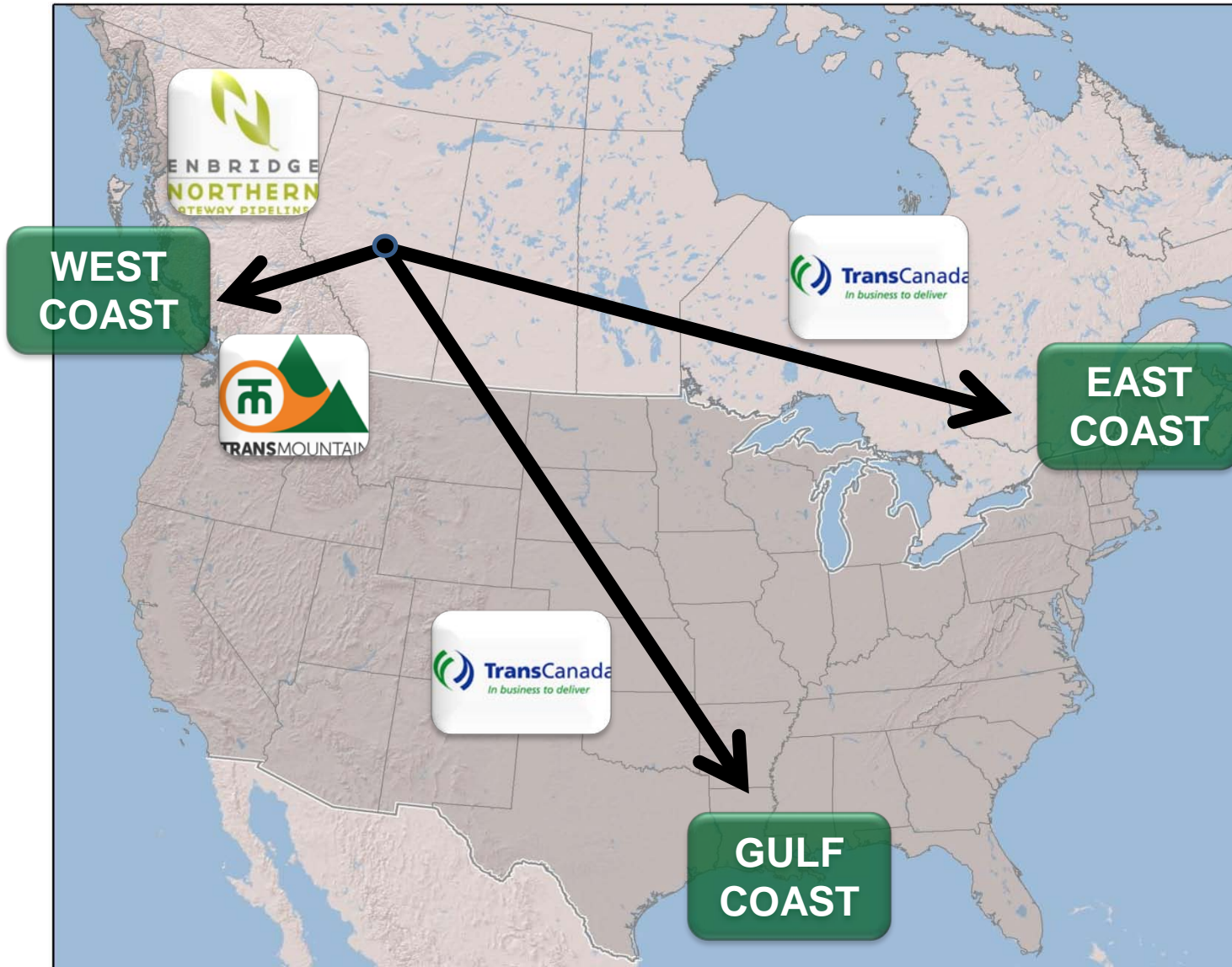
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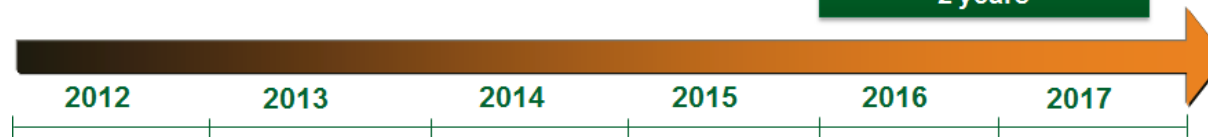


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Construction
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Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:





MERRITT ECONOMIC IMPACT

Benefits to Merritt



1. Property Taxes

- 2013: \$ \$ 99,000
- With expansion: \$ 250,000

1. Local workforce spending – hub community

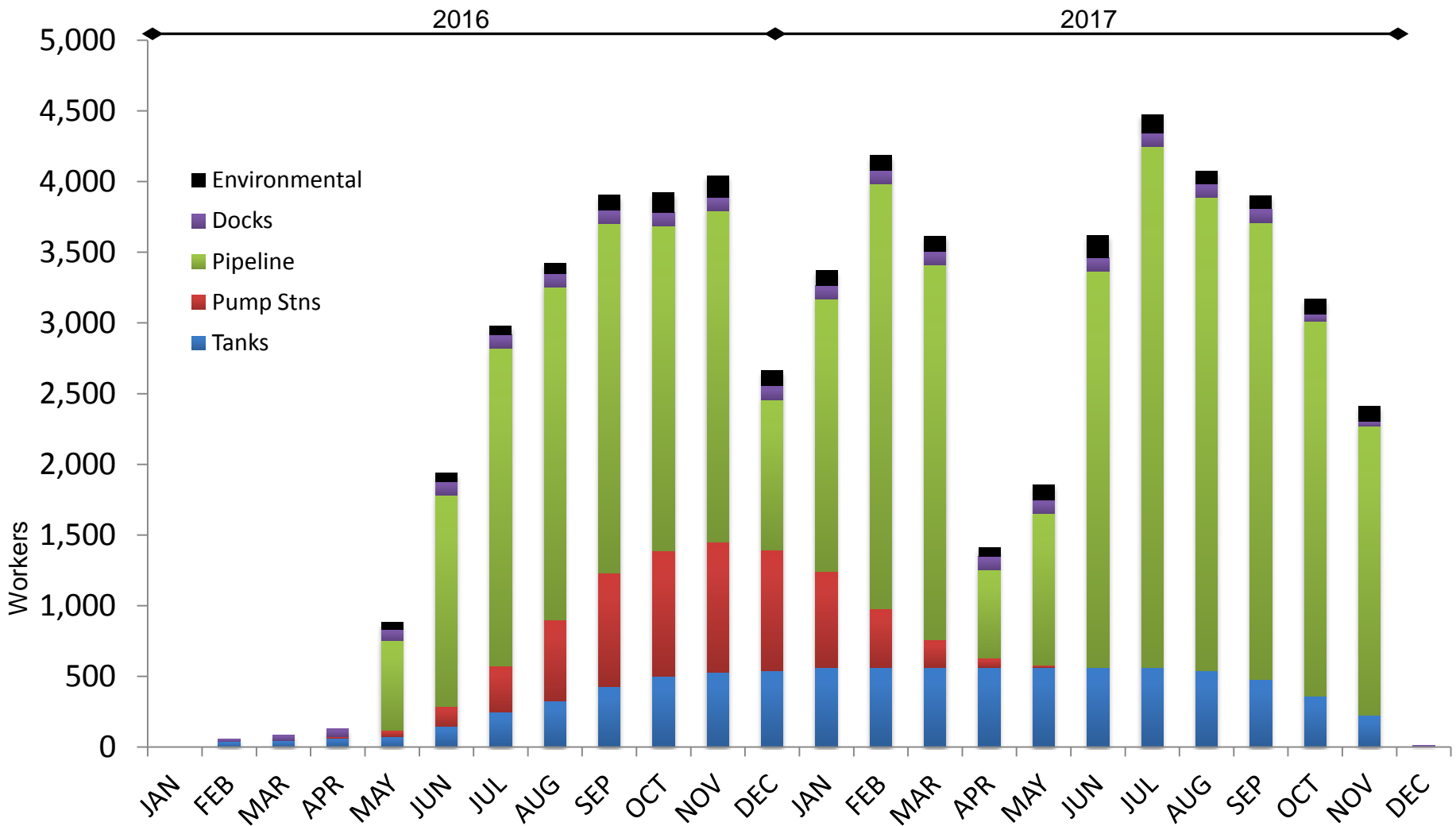
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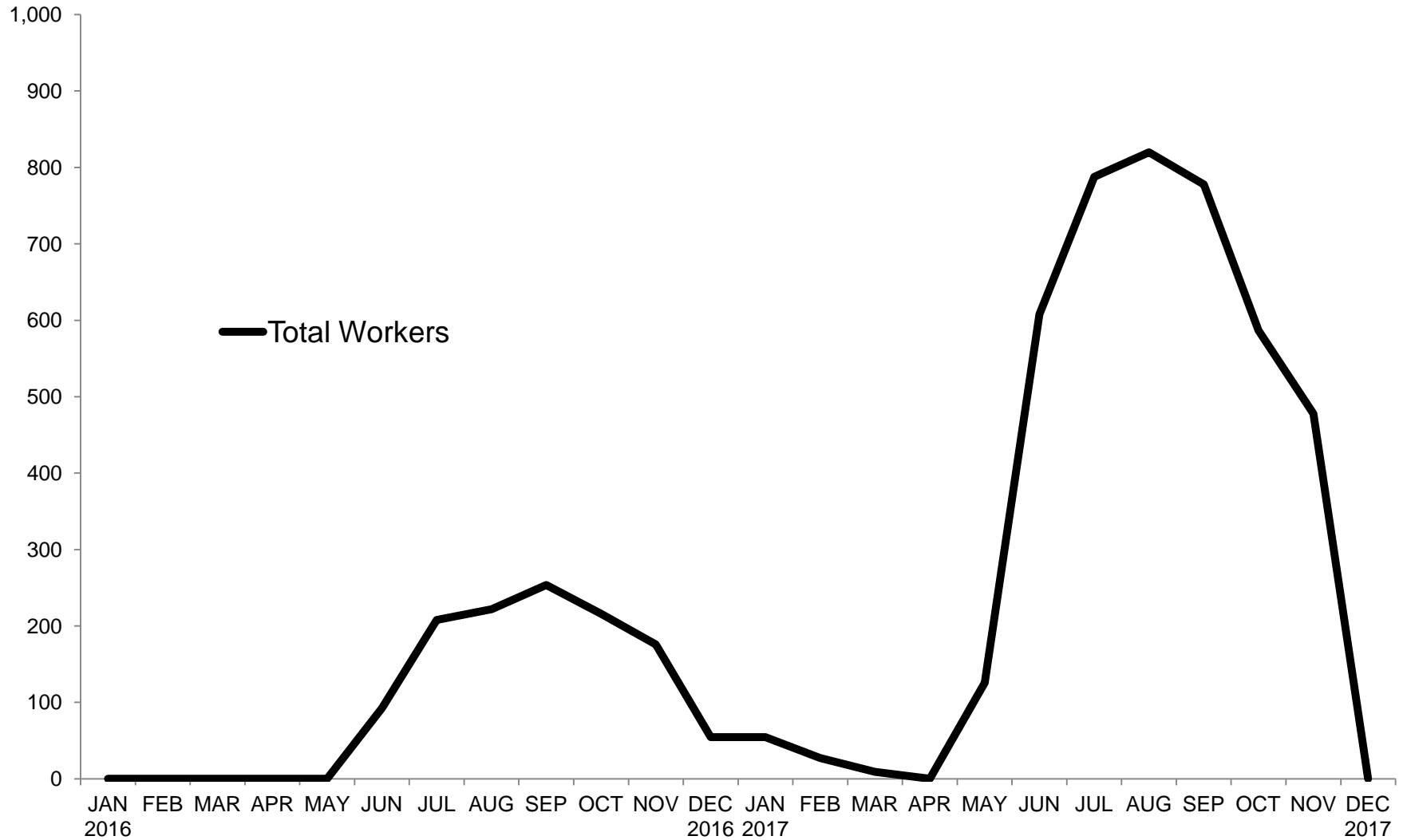
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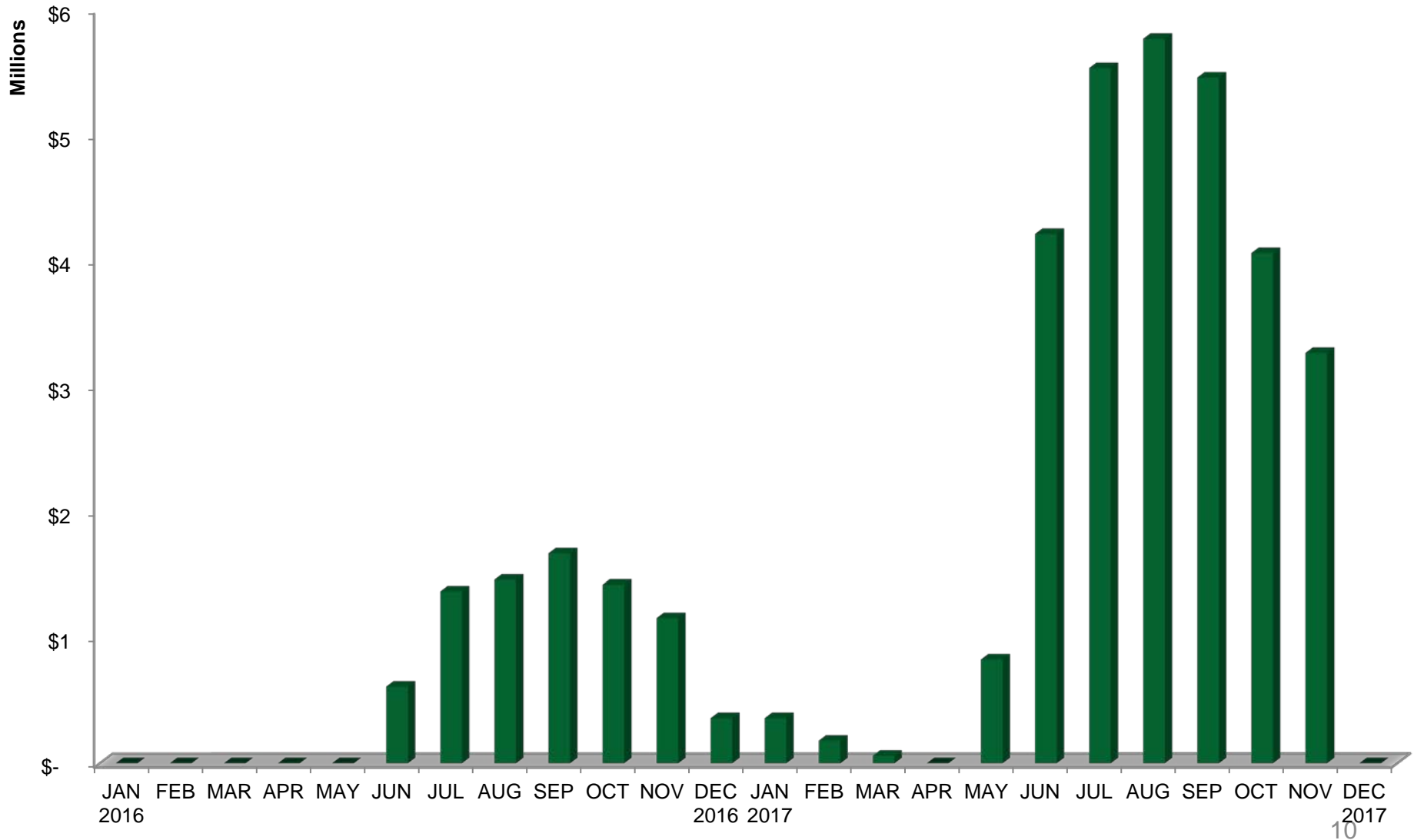
Project Workforce



Merritt-Based Work Force

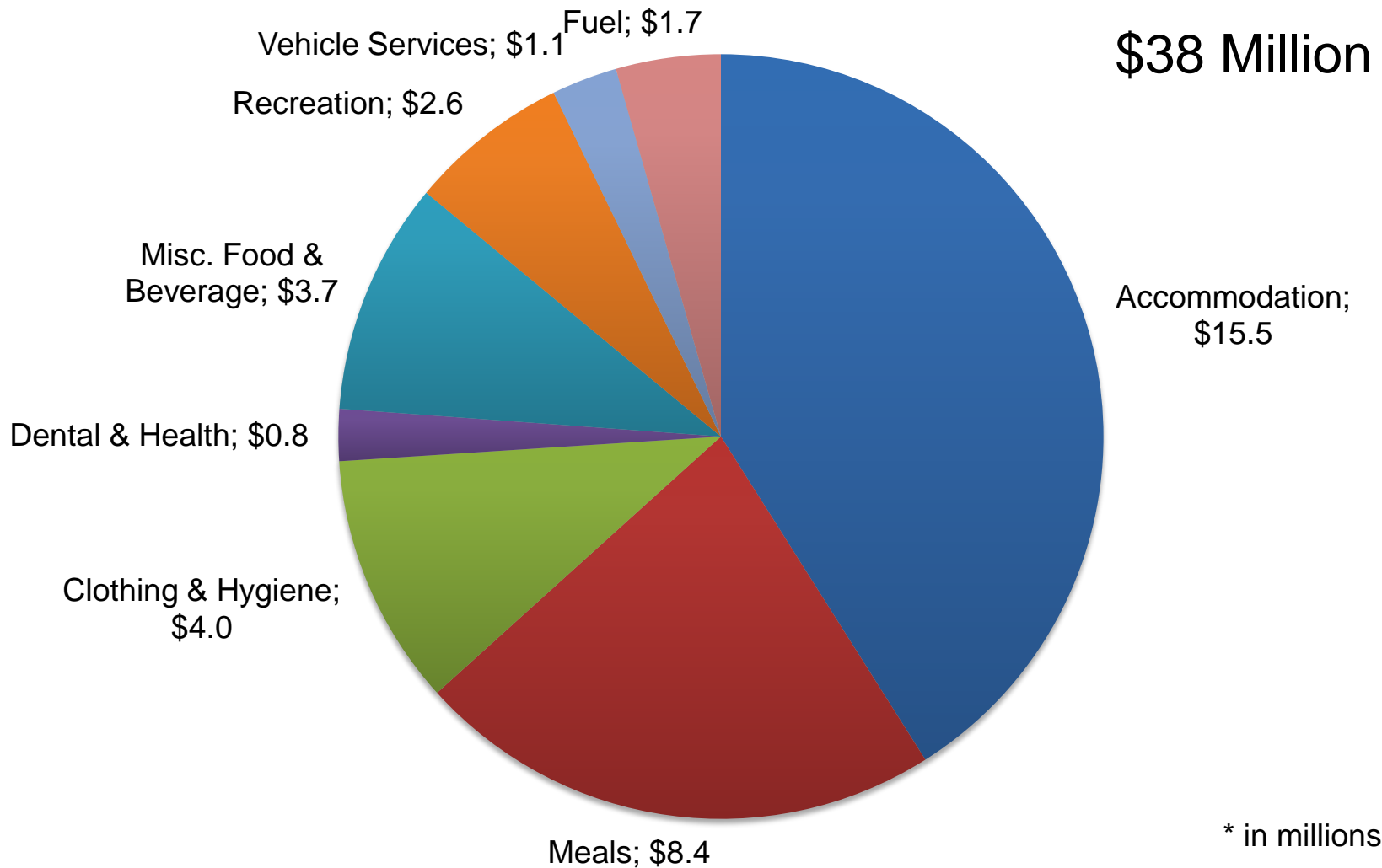


Merritt Workforce Spending



All figures based on project plans as of November 2013

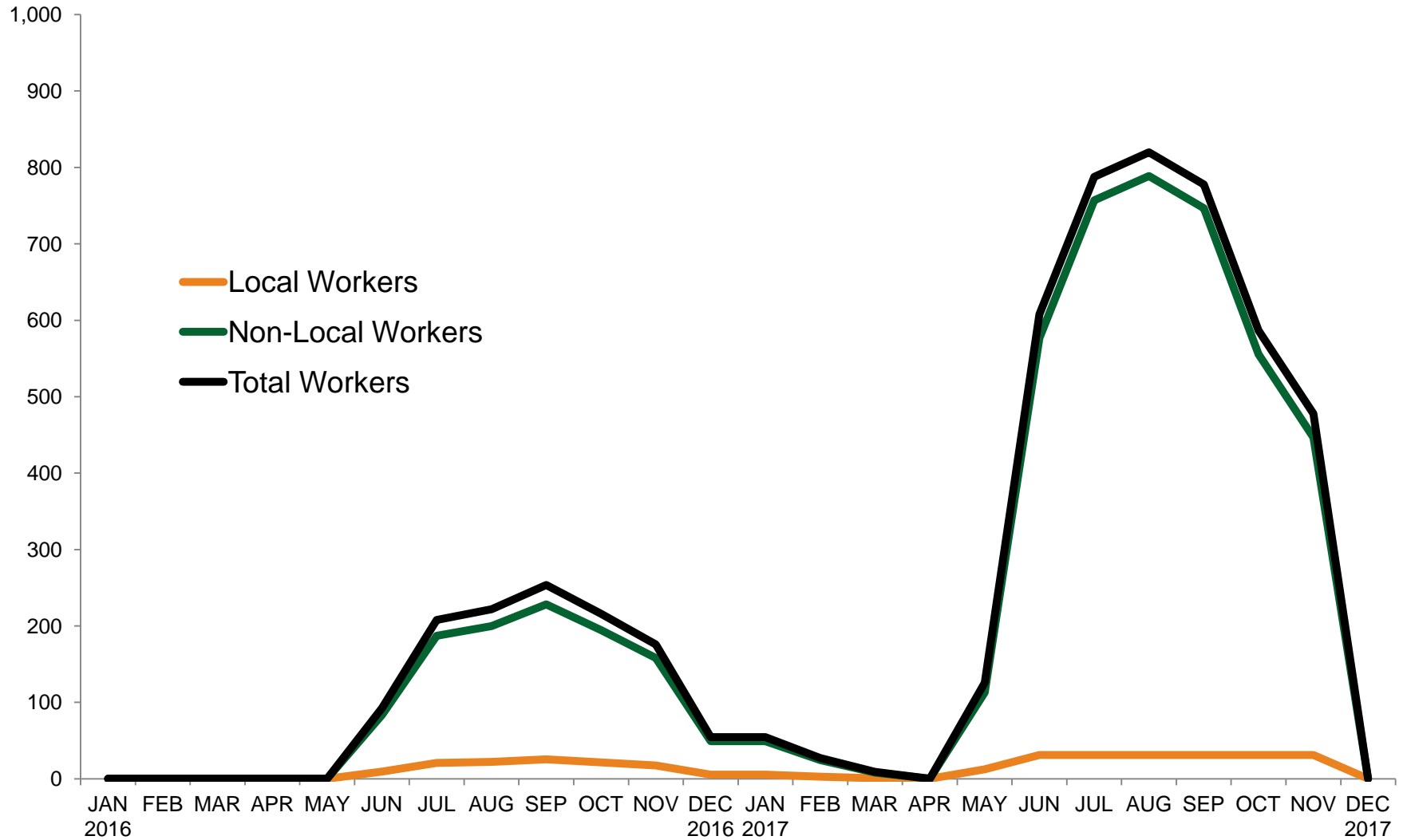
Non-Local Worker Spending*





EMPLOYMENT

Merritt-Based Work Force



Pipeline: Employment

Logging & Clearing

Fallers, Equipment Operators, Trucking

Welder Helpers

Administration

Labourers

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Sandblasting**

Mechanics

Equipment Operators

Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



Construction Management

Survey

Communications

Environmental Monitoring

Hydrovac/Ground Disturbance

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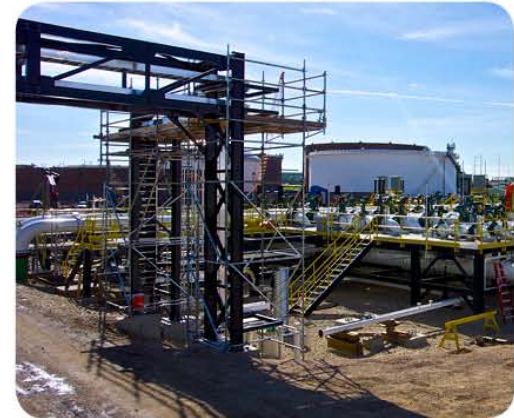
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Vancouver Board of Trade Energy Forum

November 5, 2013

Ian Anderson

President, Kinder Morgan Canada



The Globe and Mail

**"Protesters Storm
Burnaby Pipeline
Facility"**

News 1130

**"Vancouver formally
opposes Kinder Morgan
pipeline expansion"**

Vancouver Sun

**"Dix's Pipeline
Flip-Flop
Key Factor In
Election Outcome"**

**"Study Sets Foundation For
World-Class Marine Spill Plan"**

BC Government Media Release

**"Canada losing \$50 million
per day from landlocked oil:
Chamber of Commerce"**

Business in Vancouver

"As a milestone in economic progress
this pipeline project may be compared
to the pushing of the first railway line
across the Canadian Rockies to the Pacific...
The Canadians and Americans who lent their
talent and brawn to this important project...
have made a substantial contribution
to our mutual security and prosperity"

W.A.C. Bennett, Premier of BC, 1953

“Canada has lost billions from its lack of energy transportation infrastructure. Worse, we are at risk of much greater losses in the future.”

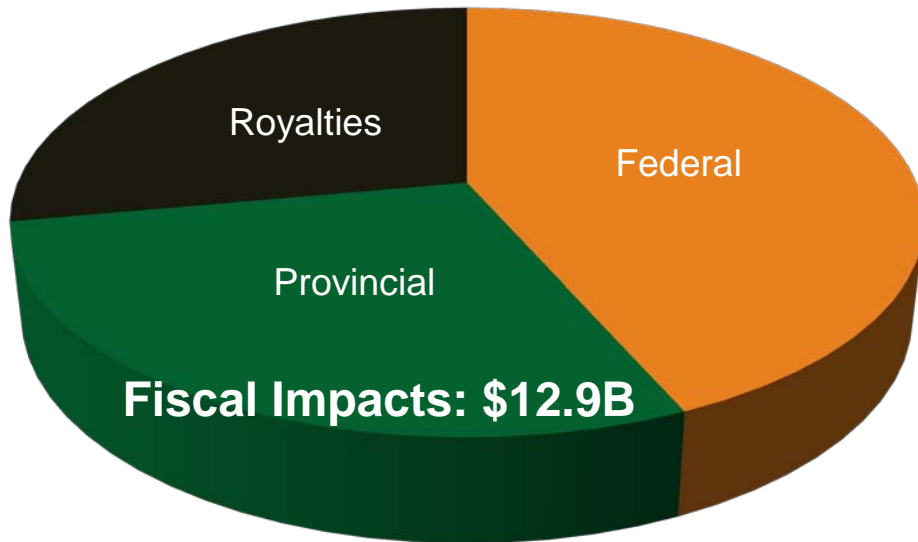
“Fifty million dollars is a lot of money.”

“Tomorrow’s energy growth lies with the rapidly expanding economies of Asia.... Canadian firms have a strong record in transporting oil and gas products safely and should continue to move the frontier for technologies and processes to make the risks of energy transport as low as possible.”

Perrin Beatty, President and CEO of the Canadian Chamber of Commerce.

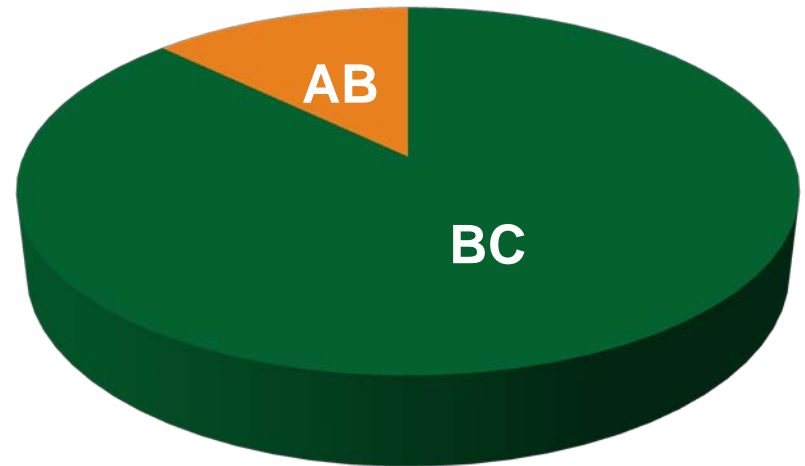
Fiscal & Employment Impacts

Netbacks: \$40B

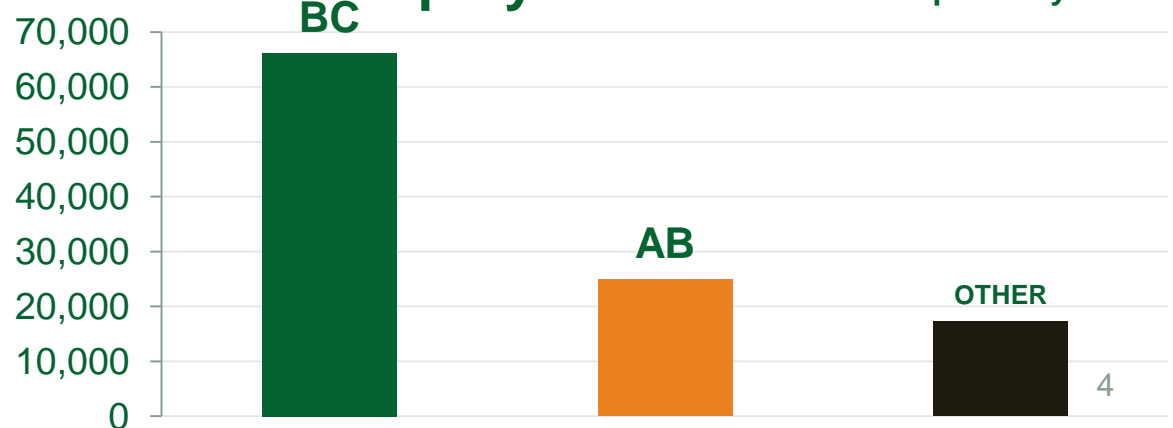


Fiscal Impacts: \$12.9B

Municipal Taxes: \$500M



Employment: 100 000 person-years

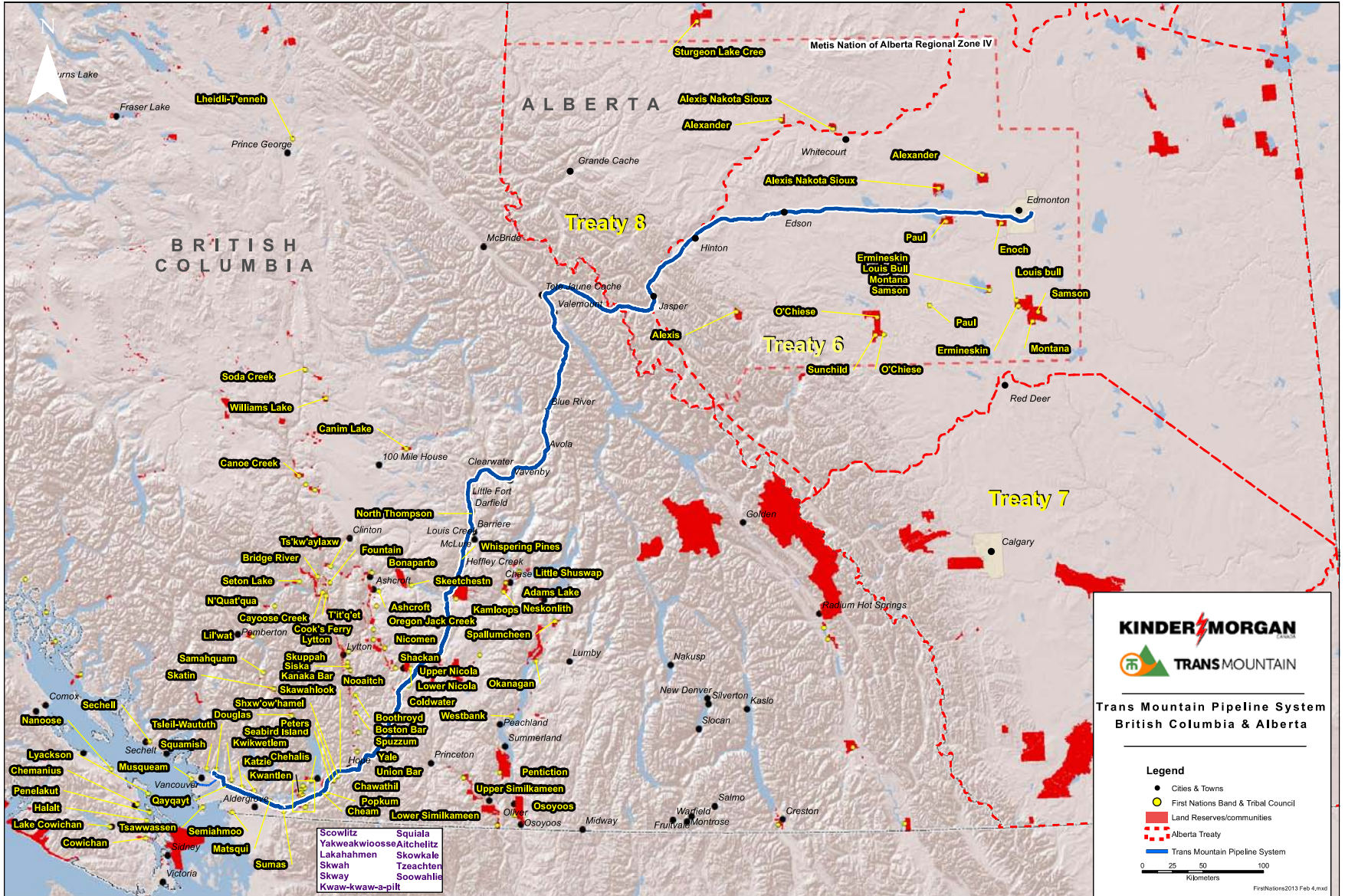


Market Access: Hurdles to Clear

1. Pipeline Performance
 - Safety, integrity
2. Commercial Support
 - Long term, Secure
 - Publicly Supportive
3. Political Support
 - Federal processes and obligations
 - Provincial Conditions
 - Municipal Engagement
4. Regulatory Process
 - Efficient and transparent
 - Inclusive
 - Predictable
5. First Nations
 - Involved and Engaged
 - Natural Resource Development Inclusion
6. Environmental Issues
 - Oil Sands Performance
 - Safety Net Protection
 - Local Sensitivities
7. Local Benefits
 - National Benefits Translated to Local
 - Risk vs. Reward
 - All issues are local
8. Third Party Endorsers
 - Producer Voice
 - Business Community
 - Labour & Small Business



Aboriginal Engagement



KINDER MORGAN

TRANS MOUNTAIN

Trans Mountain Pipeline System
British Columbia & Alberta

Legend

- Cities & Towns
- First Nations Band & Tribal Council
- Land Reserves/communities
- Alberta Treaty
- Trans Mountain Pipeline System

0 25 50 100
Kilometers



Trans Mountain: Local Economic Opportunities Surrey Board of Trade

Norm Rinne, Senior Director Business Development
November 6 2013



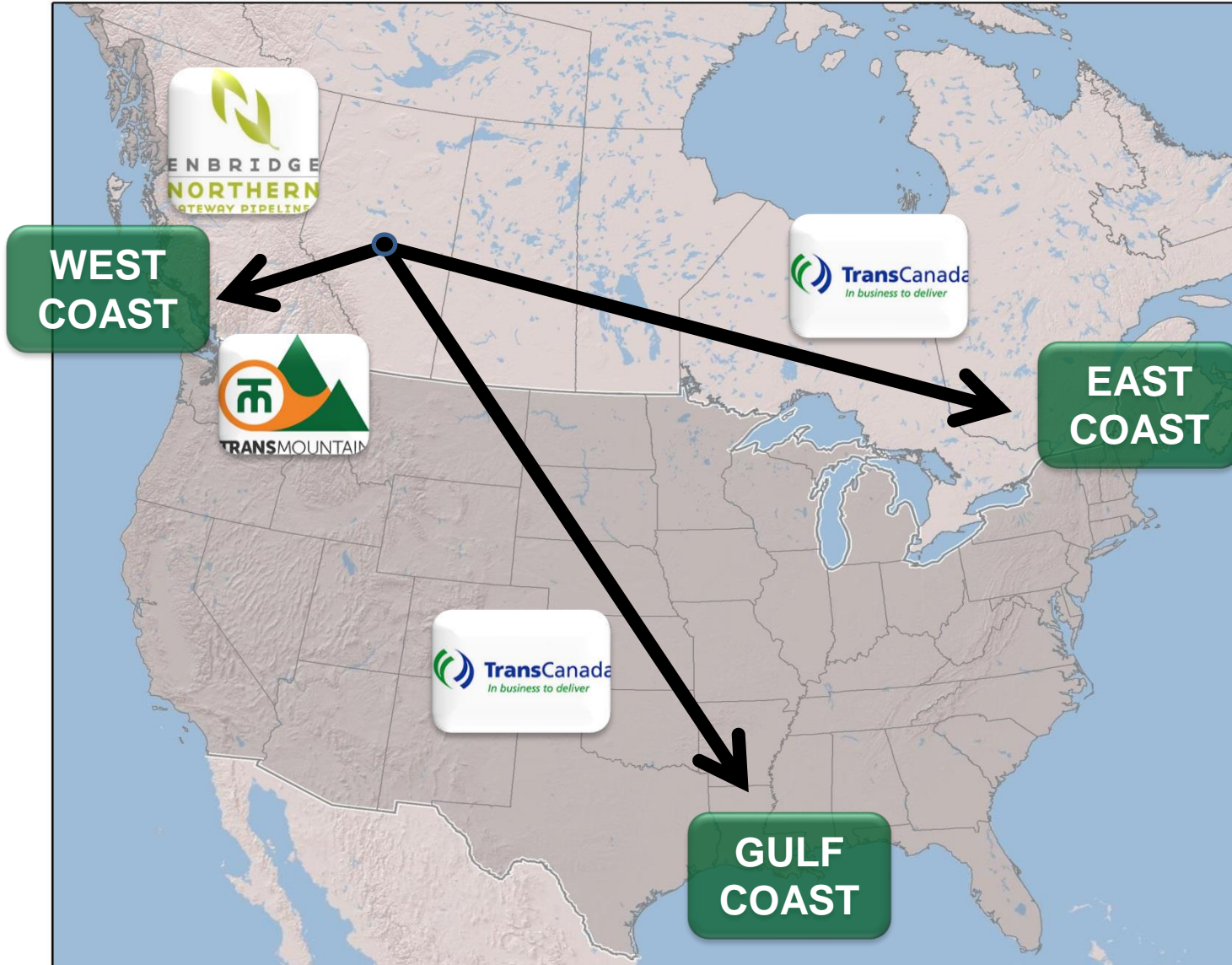
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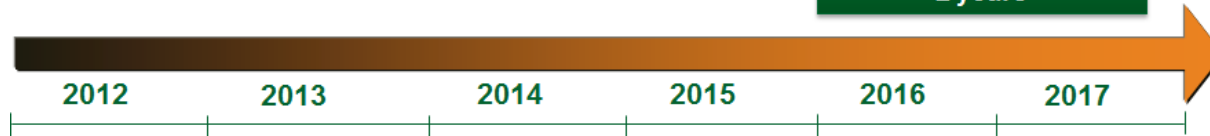


Application Preparation
1.5 years

Commercial

Regulatory Approvals
2 years

Construction
2 years



Economic Benefits



Construction Spending
(to 2018)



Operating Expenditures
(2018 - 2037)



108

66

25

EMPLOYMENT: up to
108,000 person years
during construction &
20 years of operation

66,000 in BC
25,000 in Alberta

~4,500 Construction Jobs at Peak

Expanded Operations: 90 New Permanent Positions with 50 in BC

Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:



\$500 Million

Local

from increased property taxes during operations

BC: \$23 Million Annually (119% increase)

Alberta: \$4 Million Annually (103% increase)



\$1.7 Billion

Provincial

BC: \$1.0 Billion

Alberta: \$0.5 Billion

Rest of Canada: \$0.2 Billion



\$2.1 Billion

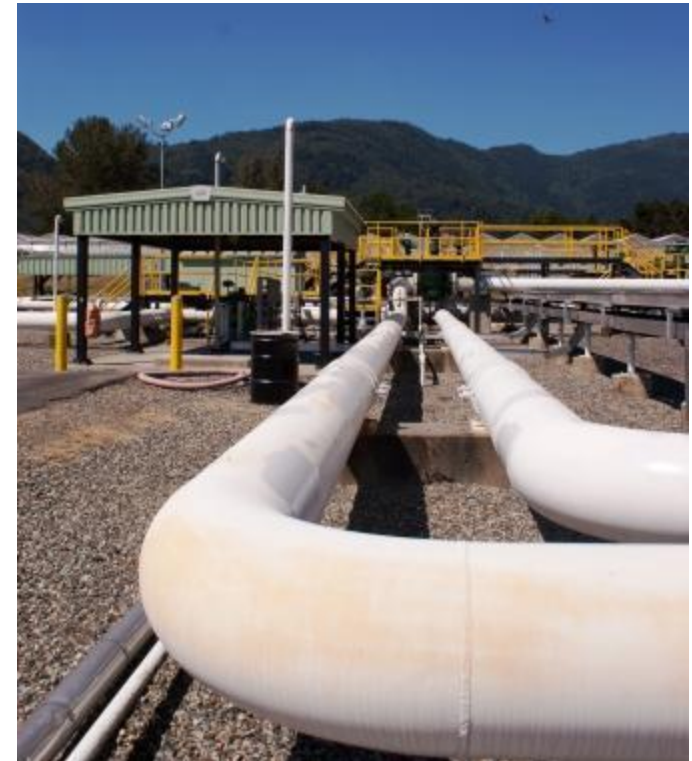
Federal

Plus **\$3** in oil price = **\$1** to:

Alberta	53¢
Federal	44¢

Maximizing Local Opportunities

- Key priorities:
 - Aboriginal
 - Local communities
 - Local/BC/Canadian companies
- Local hiring focus
- Jobs and procurement information on website
 - transmountain.com/jobs
 - transmountain.com/procurement

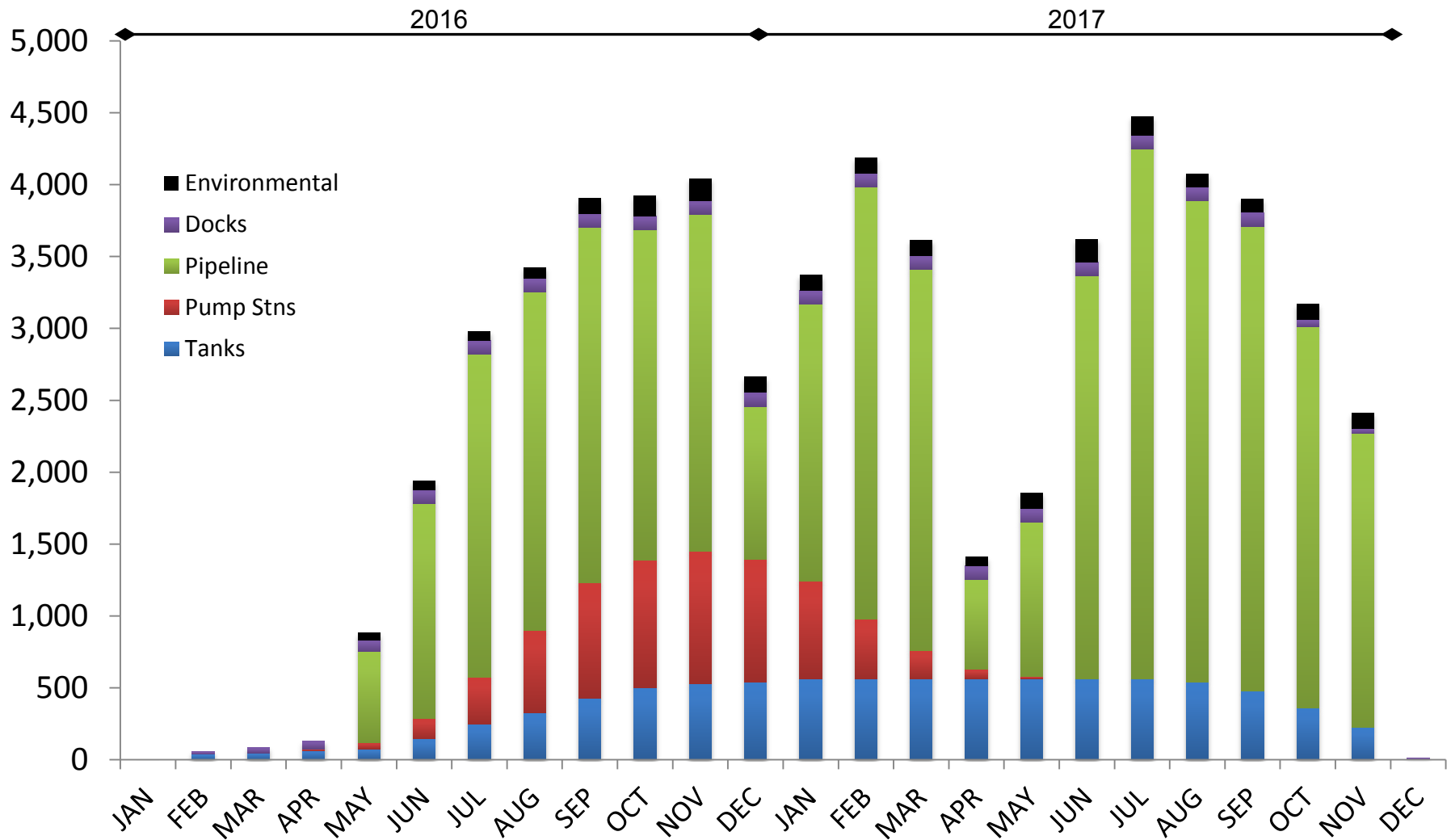


Benefits to Surrey

- Municipal taxes
 - 2013: \$574,000
 - With expansion: \$1,015,000
- Local suppliers, contractors, and consultants
- Local workforce spending
- Community investment



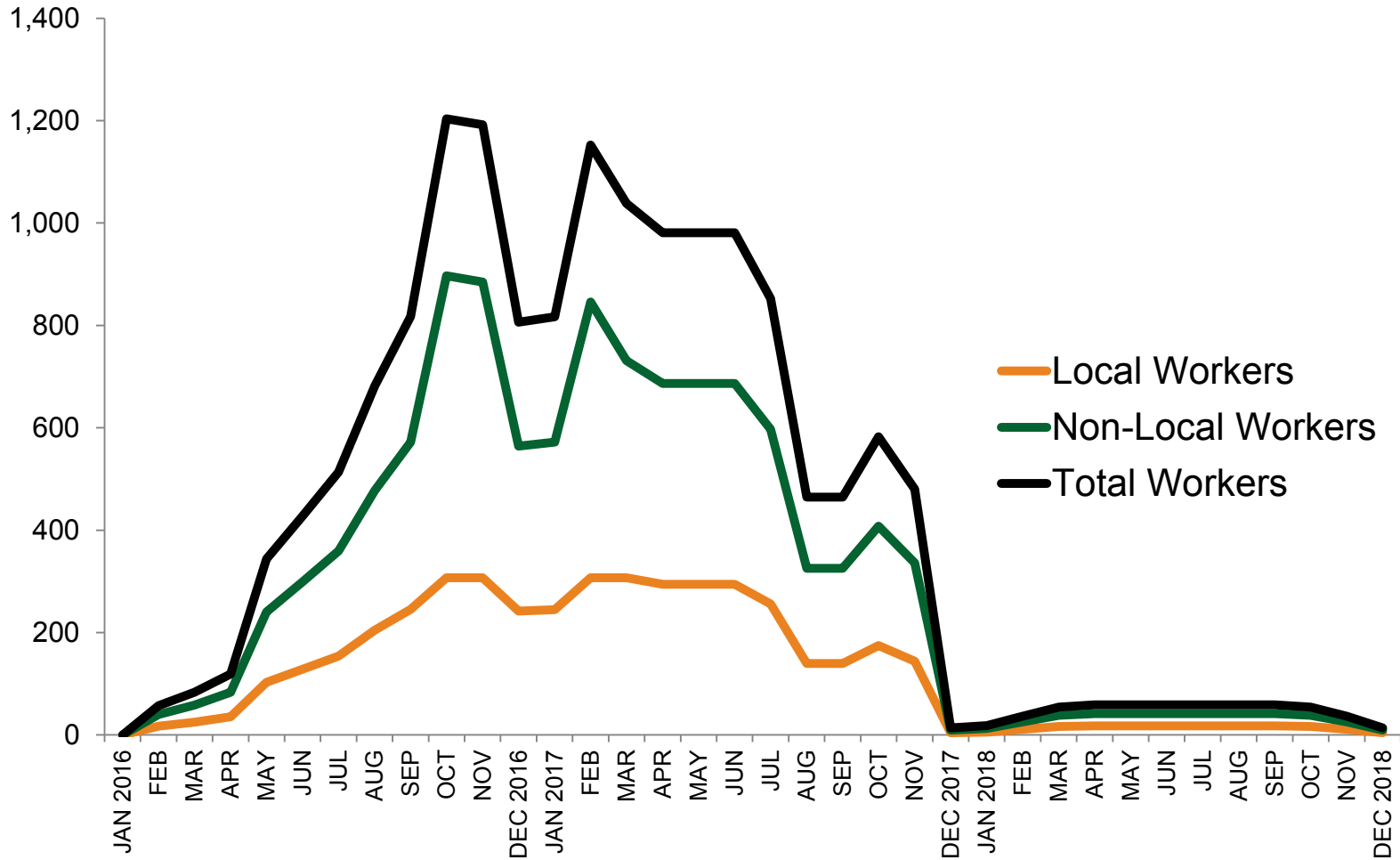
Project Workforce



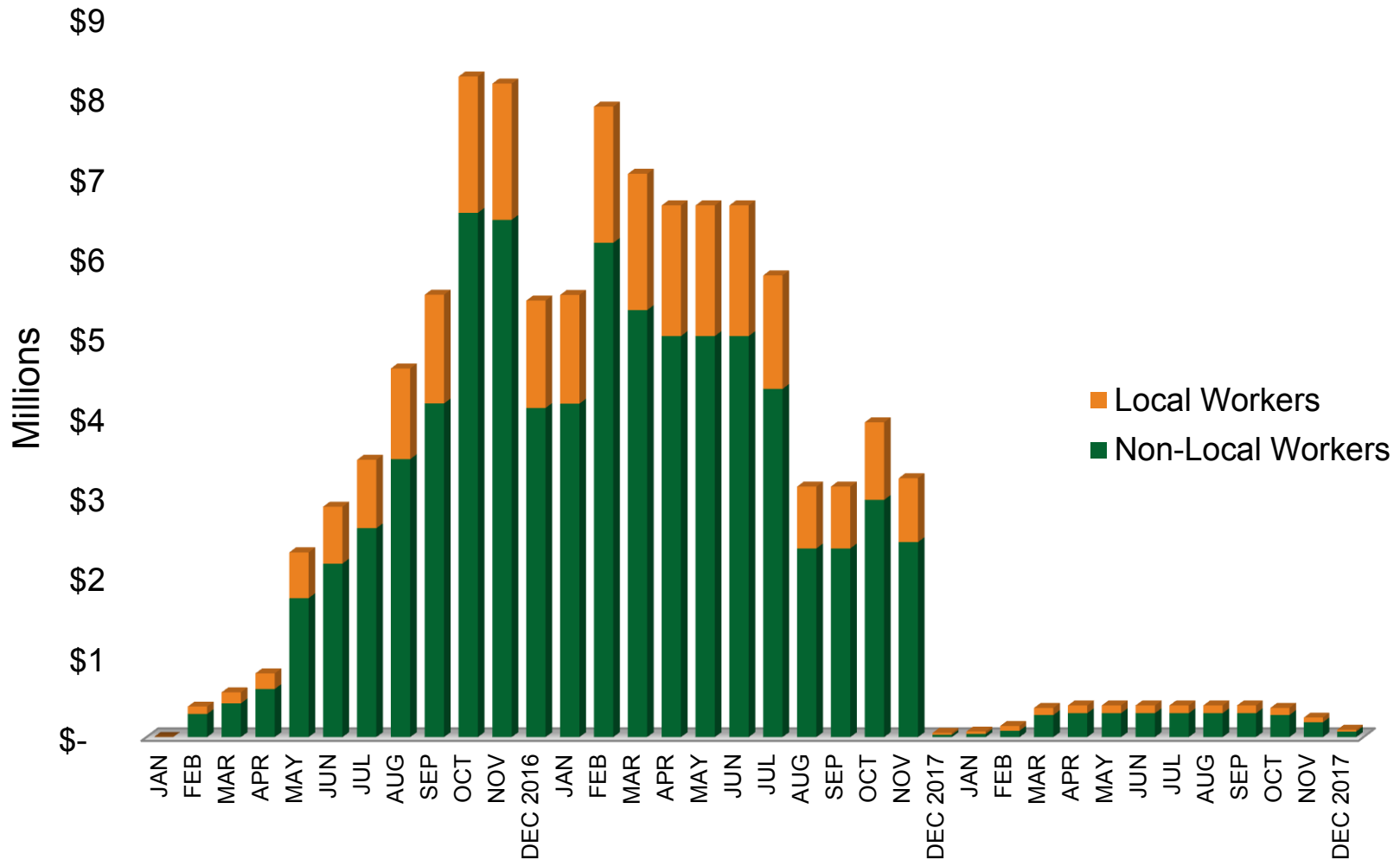
Typical Pipeline Spread

Project Manager	Equipment Operator	Security
Superintendent	Labourer	Quality Control
Project Engineer	Materials Coordinator; Buyer & Receiver	Environmental Coordinator
Engineer & Jr. Engineer	Planner	Foreman Equipment
Foreman labour	Welders	Accounting
Office Manager	Welder's Helper	Administration/Payroll
Purchasing Agent	Drivers	Sandblaster
Bucker	Mechanic	Corporate Safety

Greater Vancouver Work Force

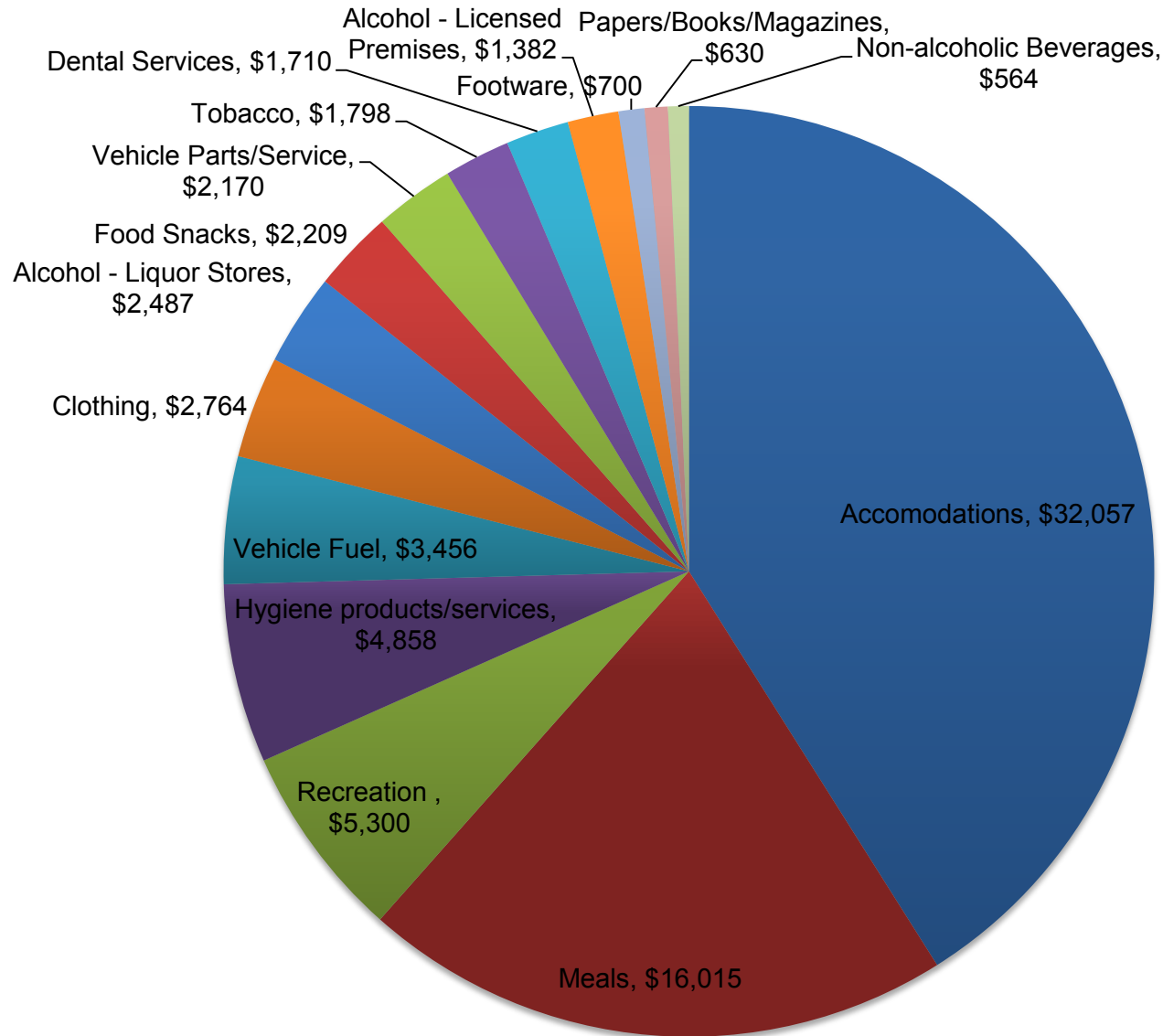


Greater Vancouver Workforce Spending



All figures based on project plans as of November 2013

Greater Vancouver Non-Local Spending



\$80 Million

Long-term Permanent Positions

- ~90 new permanent positions; 50 in BC
- ~435 total Kinder Morgan Canada staff after construction
- Operations Staff
 - Pipeline Maintenance
 - Electrical
 - Mechanical
 - Instrumentation
 - Pipeline Protection
- Contracted staff providing operations support



Next Steps

- File application to the National Energy Board in December
- Regulatory process and public hearings
- Establish a balanced and informed conversation as public interest increases
- Sign up for ongoing procurement and jobs information
 - transmountain.com/jobs
 - transmountain.com/procurement



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Trans Mountain: Local Economic Opportunities Tri-Cities Chamber of Commerce

Ian Anderson, President Kinder Morgan Canada
November 14, 2013



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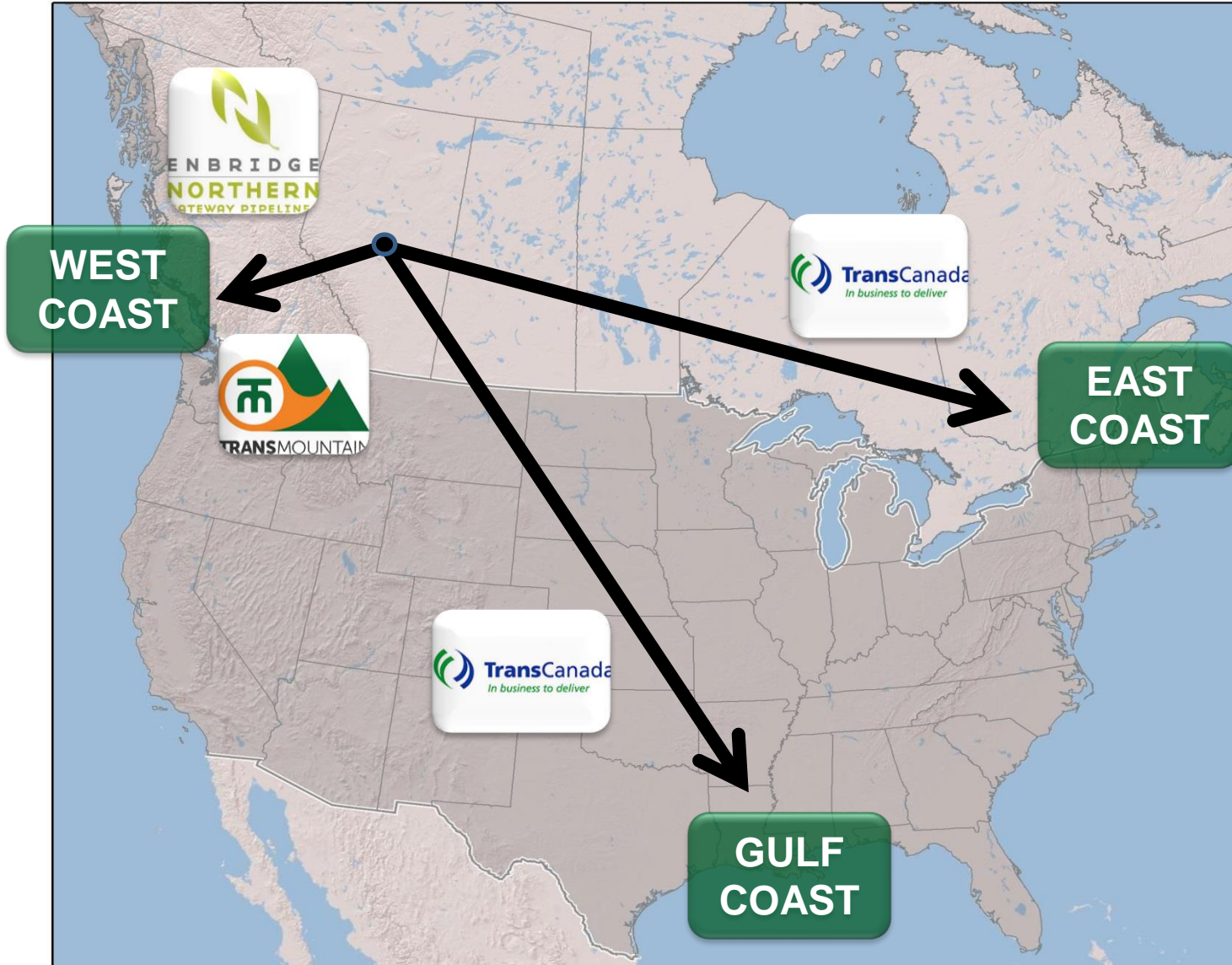
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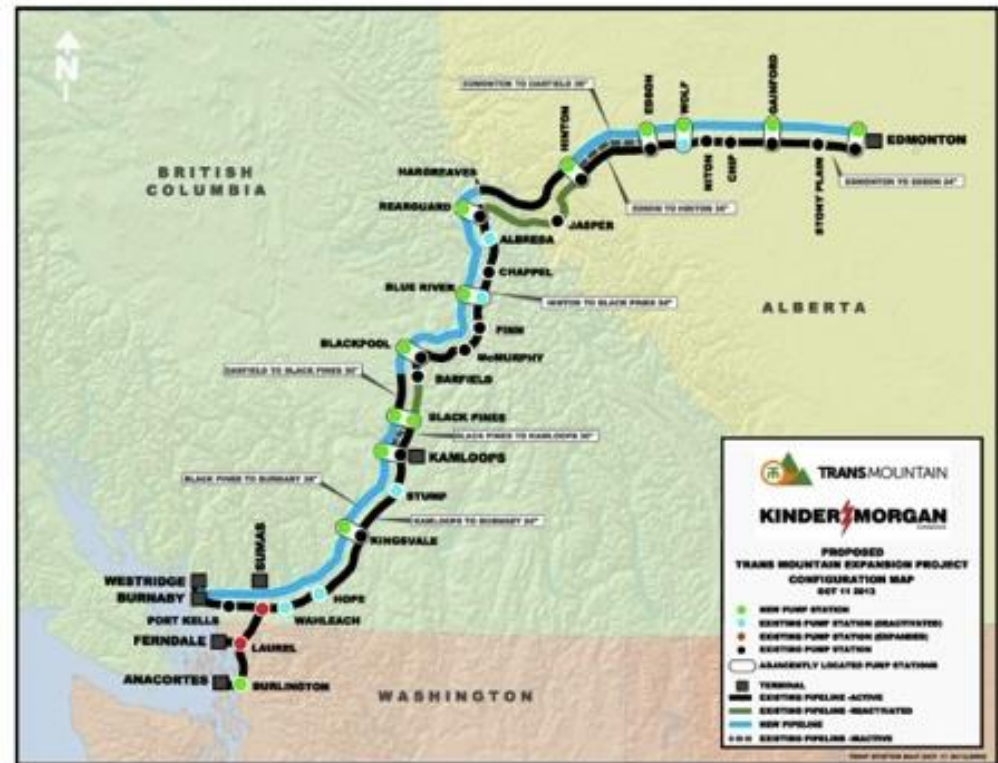
Lack of Market Access Has Cost Canada As Much As \$50 Million A Day

Market Access Pipelines



Trans Mountain Proposed Expansion

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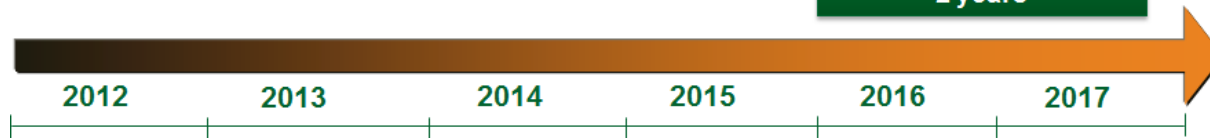


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Economic Benefits



Construction Spending
(to 2018)



Operating Expenditures
(2018 - 2037)



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Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:





TRI-CITIES ECONOMIC IMPACT

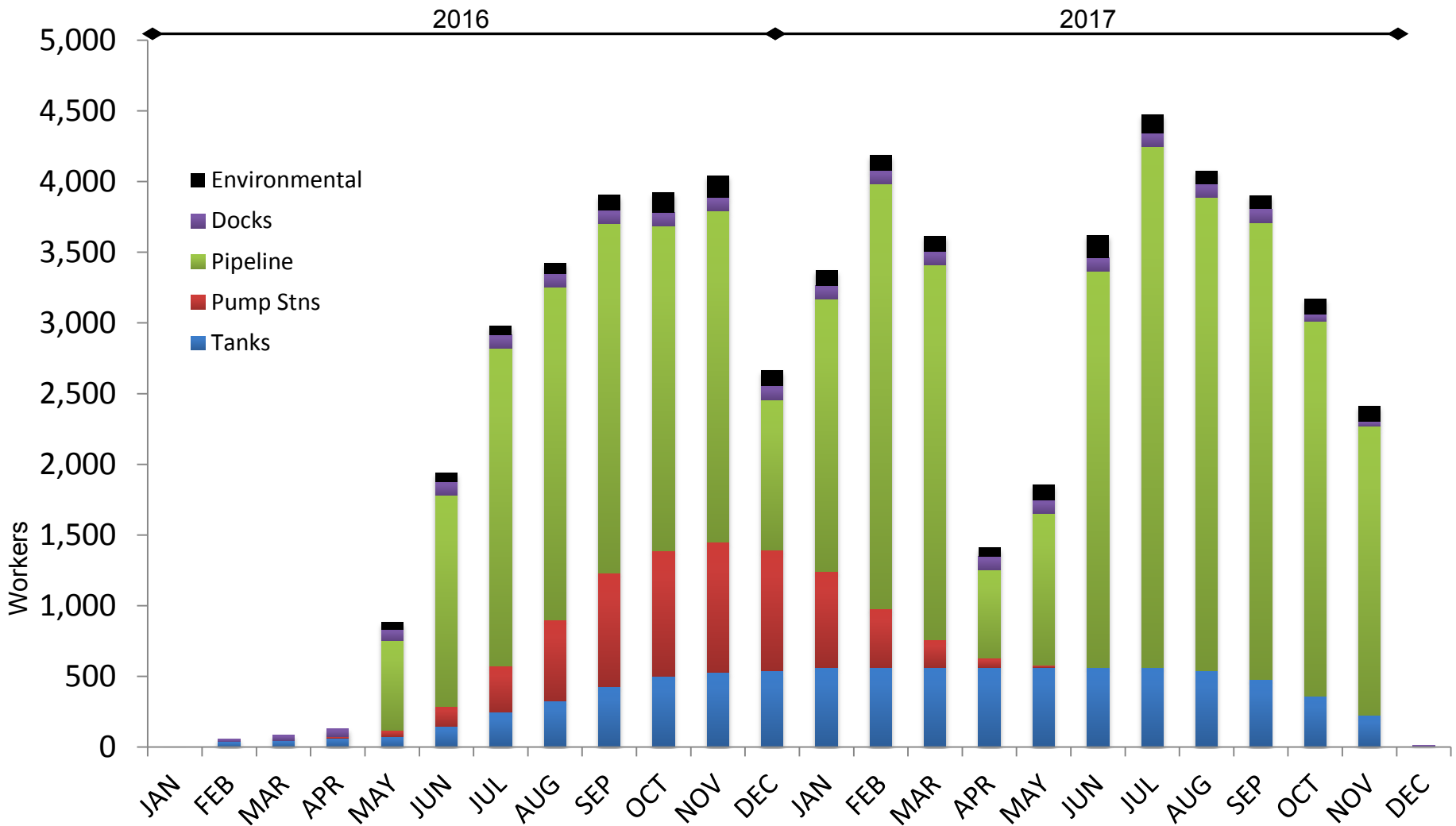
Benefits to City of Coquitlam/Tri-Cities



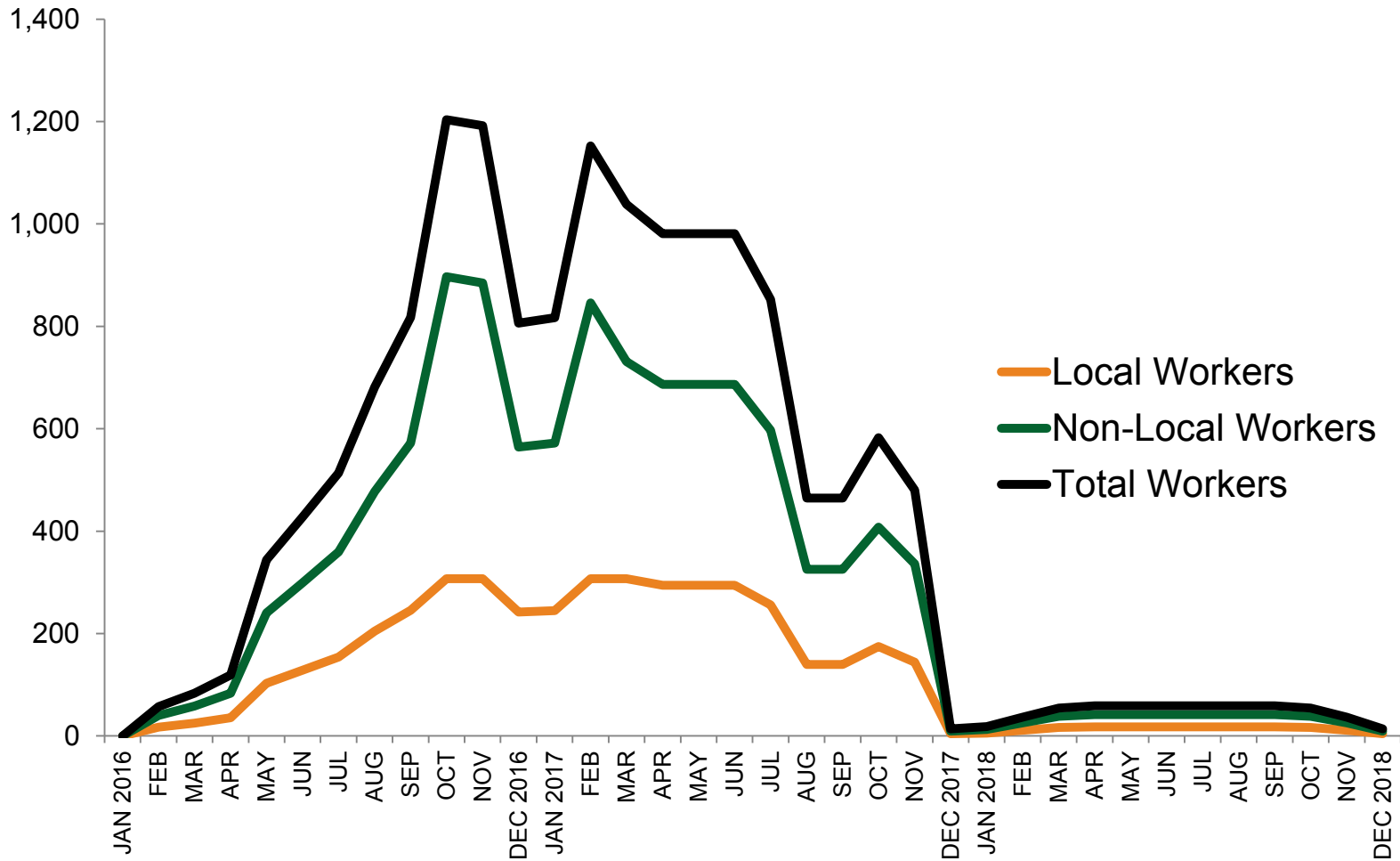
- Municipal taxes
 - 2013: \$ 200,000
 - With expansion: \$ 443,000
- Local suppliers, contractors, and consultants
- Local workforce spending
- Employment
- Procurement
- Community investment



Project Workforce

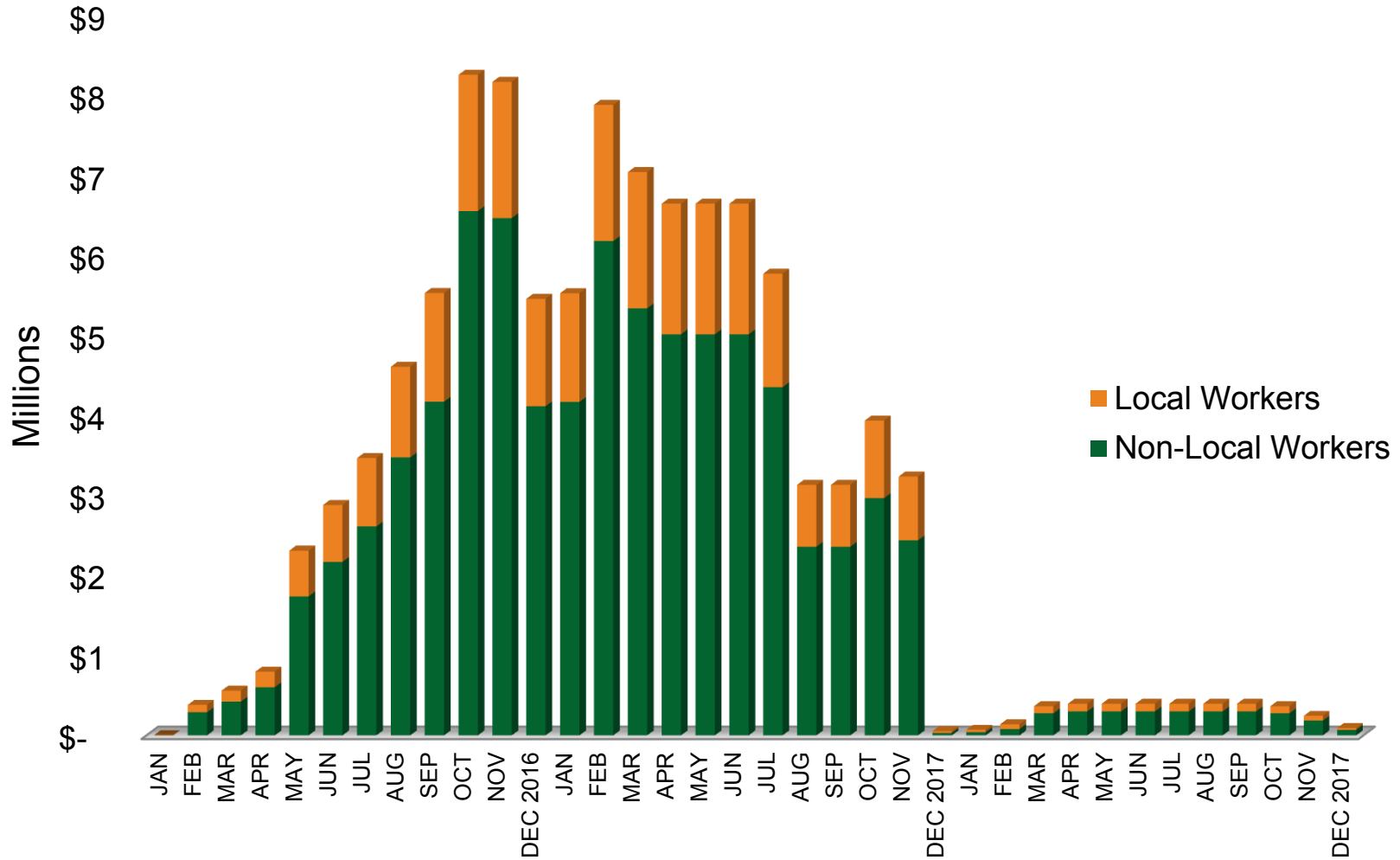


Greater Vancouver Work Force



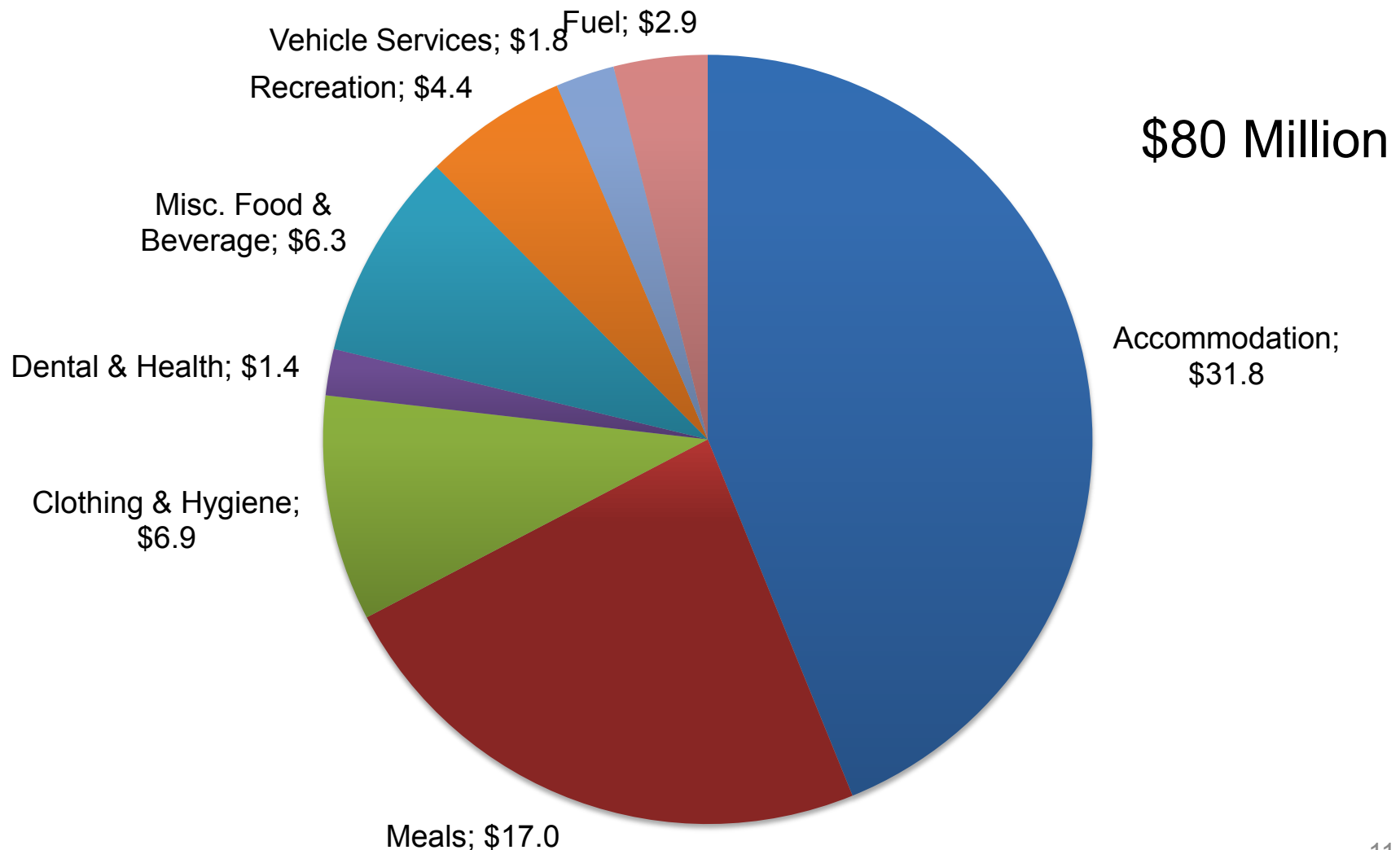
All figures based on project plans as of November 2013

Greater Vancouver Workforce Spending



All figures based on project plans as of November 2013

Greater Vancouver Non-Local Spending





EMPLOYMENT

Pipeline: Employment

Logging & Clearing

Fallers, Equipment Operators, Trucking

Welder Helpers

Administration

Labourers

**Pipeline Coating/
Sandblasting**

Mechanics

Equipment Operators

Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



Construction Management

Survey

Communications

Environmental Monitoring

Hydrovac/Ground Disturbance

Water Supply

Traffic Management

Non Destructive Testing

Wood Products

Health & Safety

Hydrostatic Testing

ROW Reclamation & Restoration

Sand & Gravel

Inspection Tools

Security

Fire Watch & Suppression

Construction Trailers/
Laydown Areas

Trucking

Horizontal Directional Drilling/Boring

Terminals: Employment

Welders

Pipe Fitters

Carpenters

Equipment Operators

Labourers

Crane Operators

Electricians

Steelworkers



Terminals: Contracting Opportunities

Prefabricated Buildings

Power Line Installation

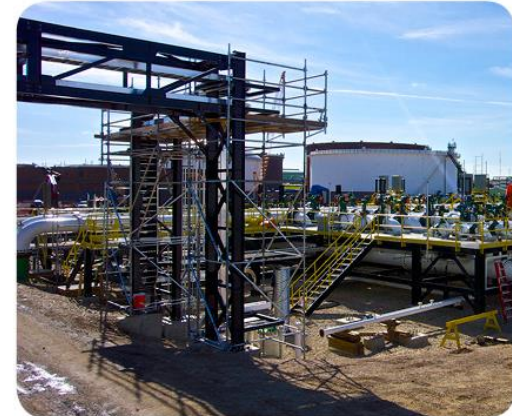
Environmental
Monitoring

On Site Medical & Safety

Surveying

Non-Destructive Testing

Security



Next Steps



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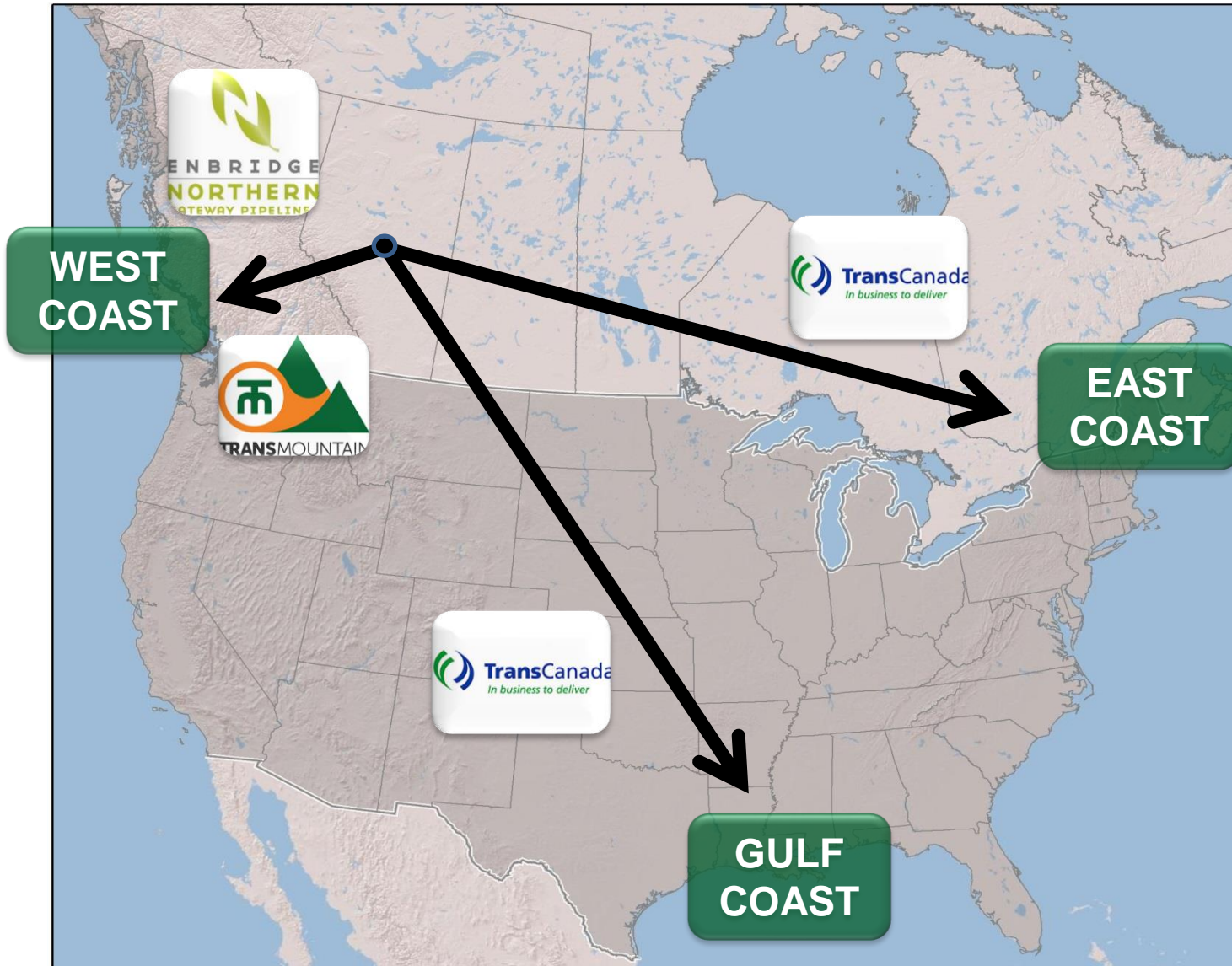
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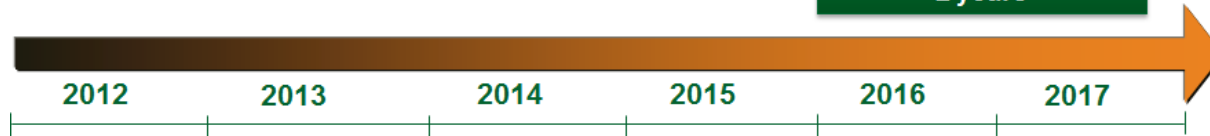


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Economic Benefits



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(to 2018)



Operating Expenditures
(2018 - 2037)



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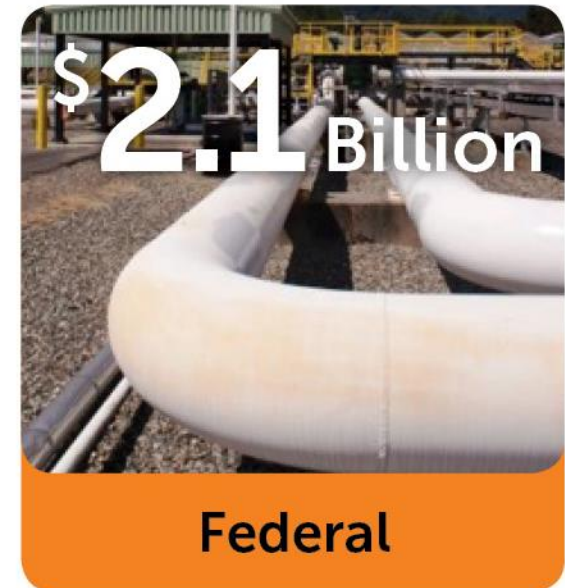
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Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:





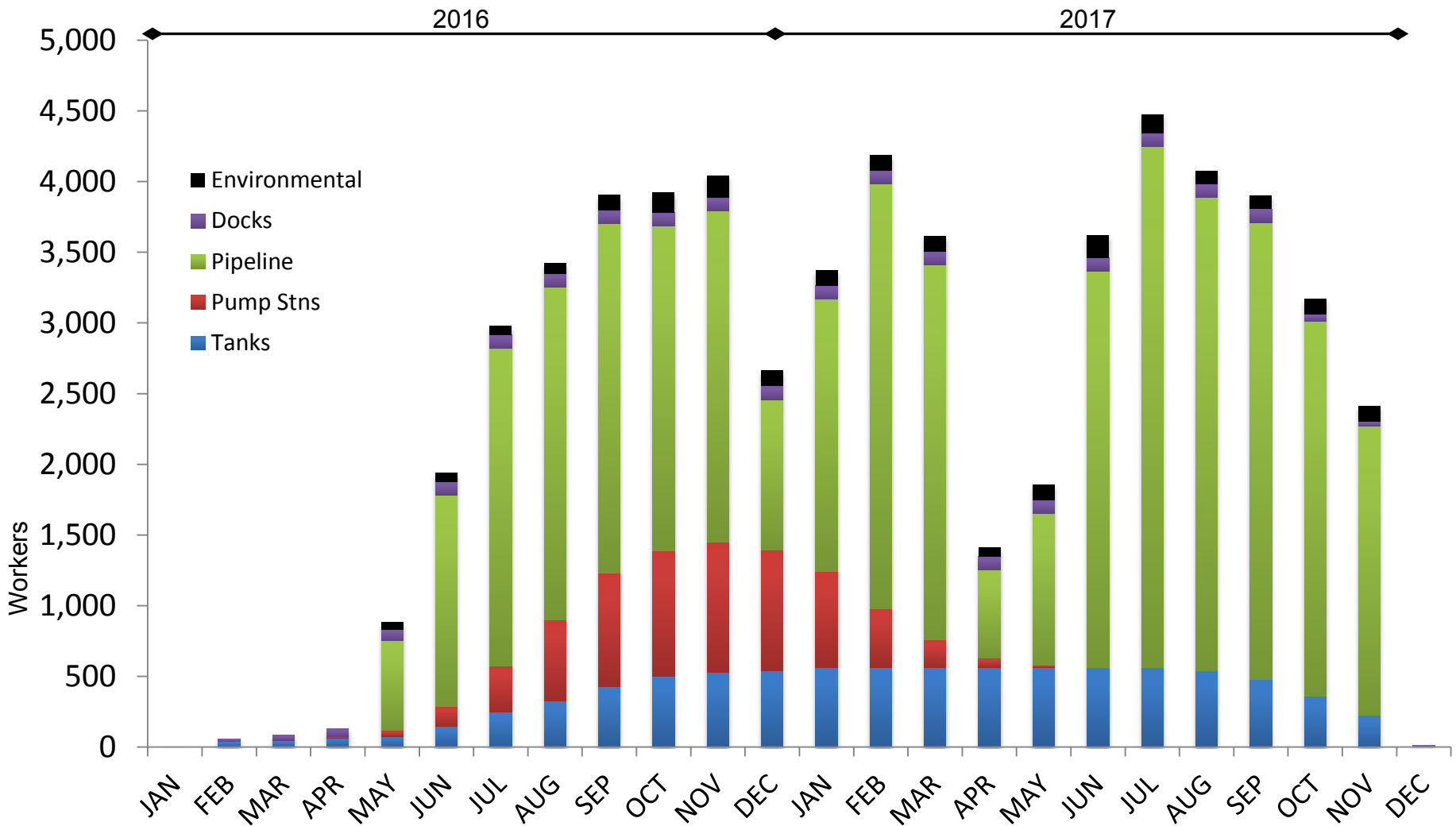
CITY OF ABBOTSFORD ECONOMIC IMPACT

Benefits to City of Abbotsford

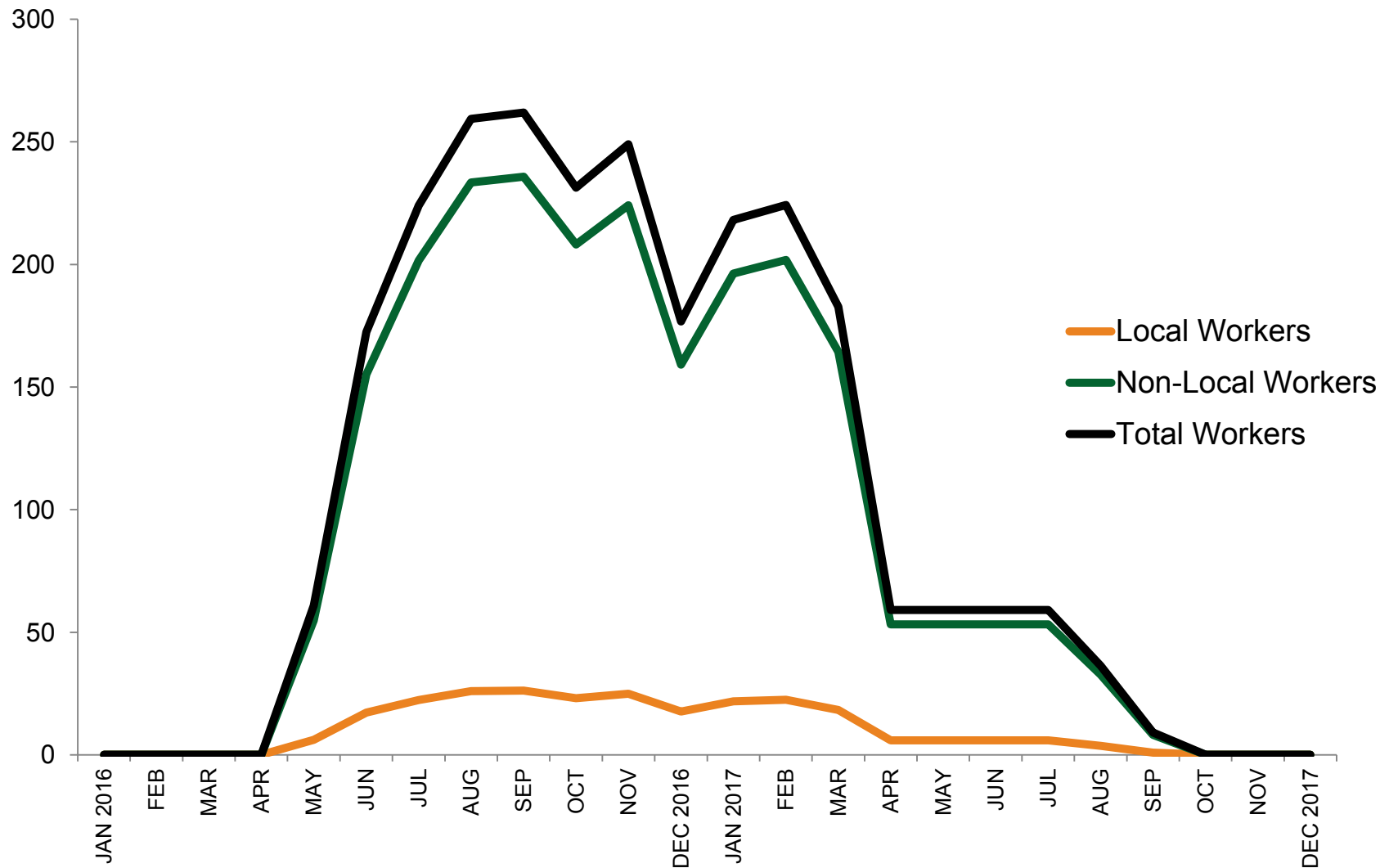
- Municipal taxes
 - 2013: \$ 2,065,000
 - With expansion: \$ 3,369,000
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- Local workforce spending
- Employment
- Procurement
- Community investment



Project Workforce

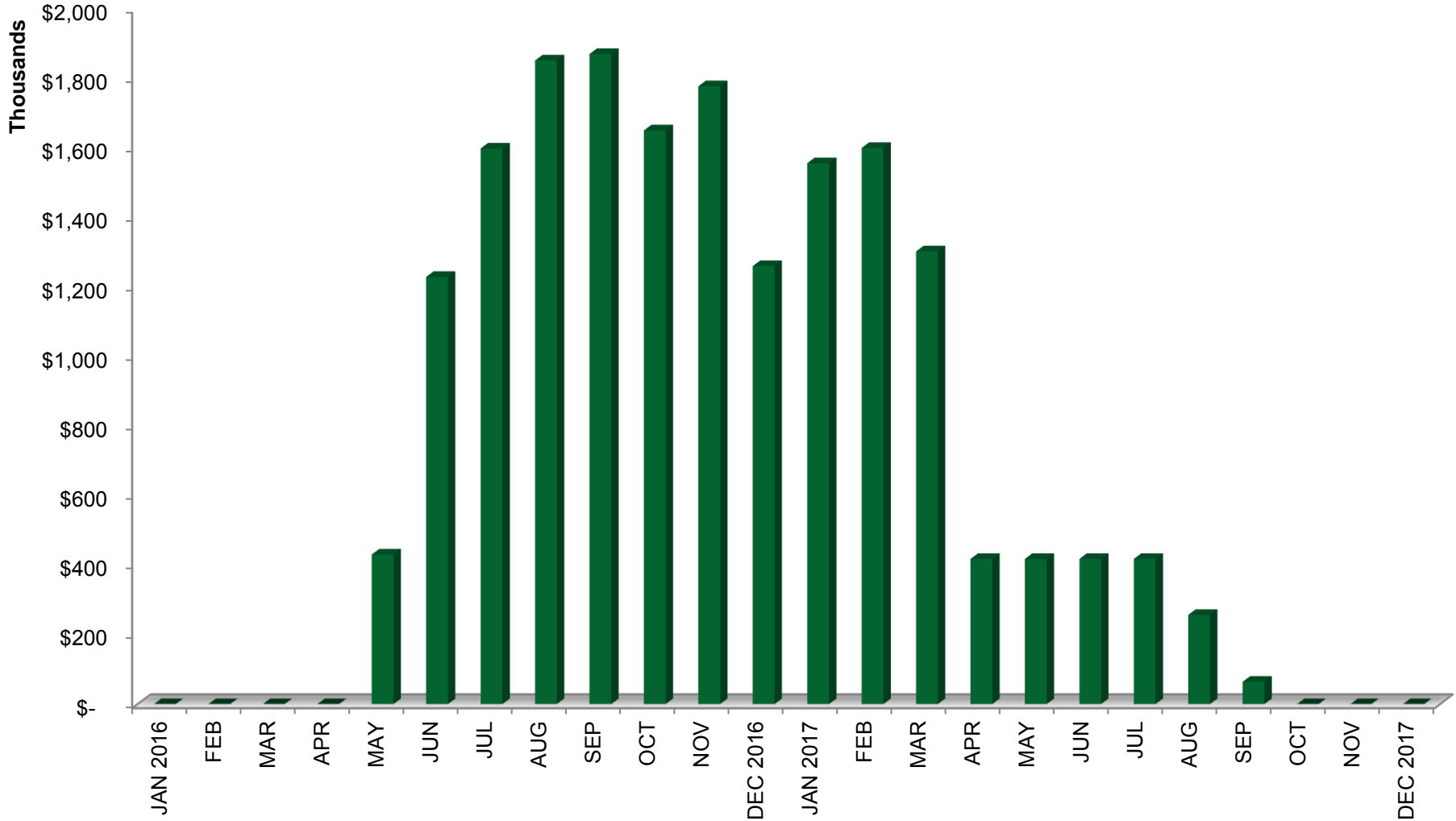


Abbotsford Work Force

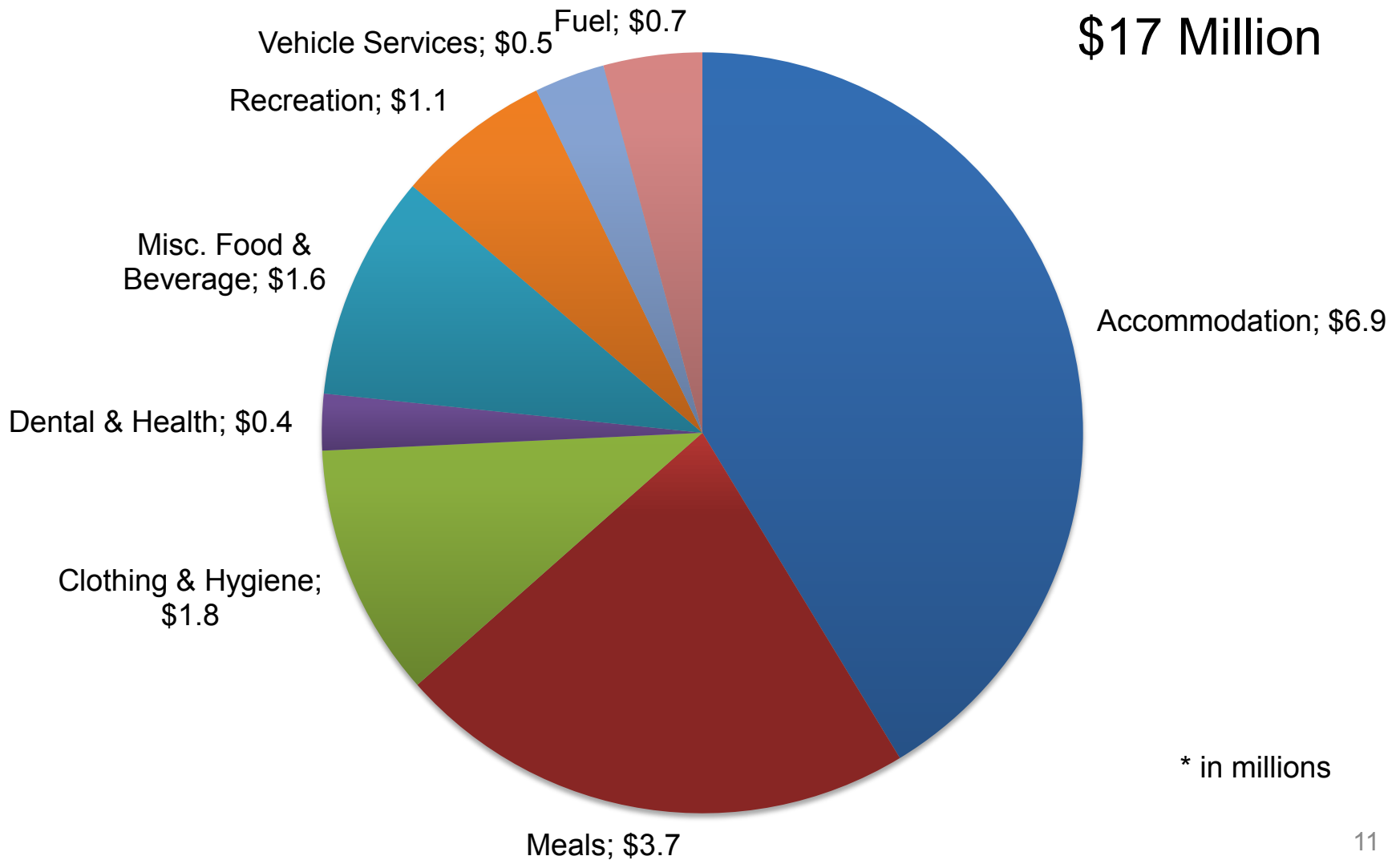


All figures based on project plans as of November 2013

Abbotsford Workforce Spending



Abbotsford Non-Local Worker Spend





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Pipeline: Employment

Logging & Clearing

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Welder Helpers

Administration

Labourers

**Pipeline Coating/
Sandblasting**

Mechanics

Equipment Operators

Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



Construction Management

Survey

Communications

Environmental Monitoring

Hydrovac/Ground Disturbance

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Traffic Management

Non Destructive Testing

Wood Products

Health & Safety

Hydrostatic Testing

ROW Reclamation & Restoration

Sand & Gravel

Inspection Tools

Security

Fire Watch & Suppression

Construction Trailers/
Laydown Areas

Trucking

Horizontal Directional Drilling/Boring

Facilities: Employment

Welders

Pipe Fitters

Carpenters

Equipment Operators

Labourers

Crane Operators

Electricians

Steelworkers



Facilities: Contracting Opportunities



Prefabricated Buildings

Power Line Installation

Environmental
Monitoring

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Trans Mountain: Local Economic Opportunities Greater Langley Chamber of Commerce

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Senior Director Trans Mountain Expansion Project

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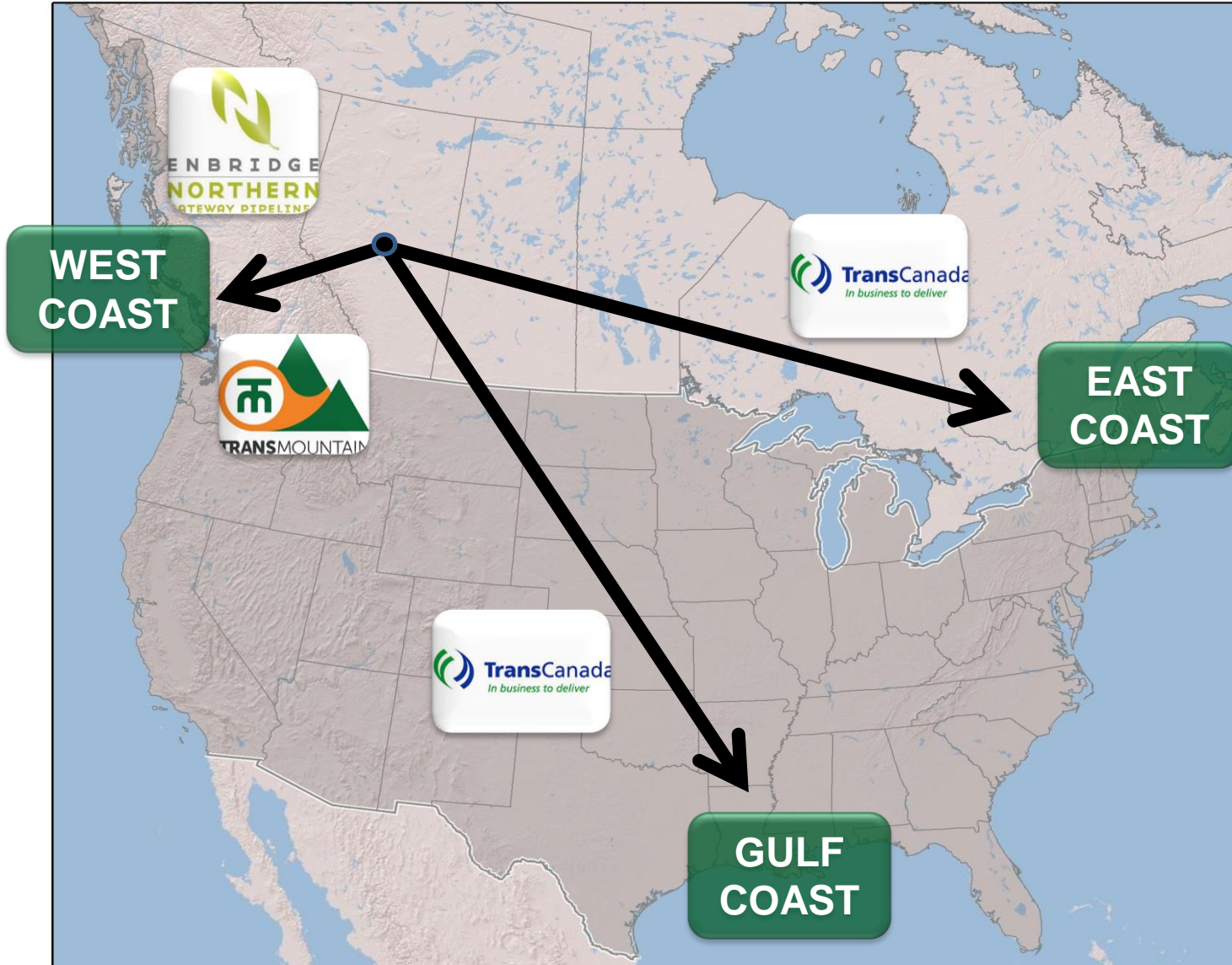
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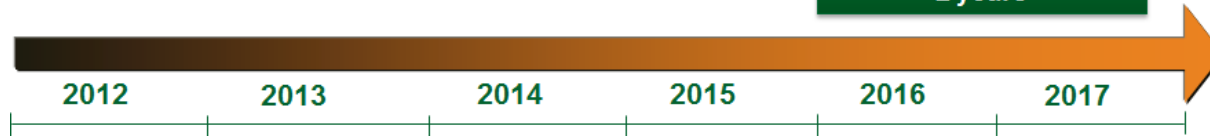


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2 years

Construction
2 years



Economic Benefits



Construction Spending
(to 2018)



Operating Expenditures
(2018 - 2037)



108

66

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EMPLOYMENT: up to
108,000 person years
during construction &
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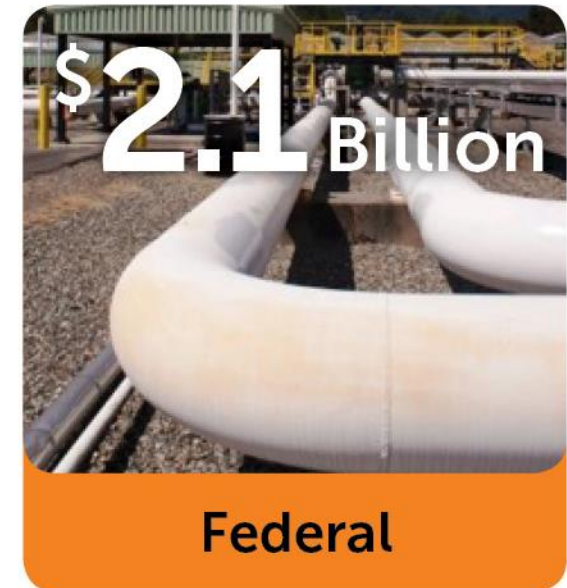
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Benefits to Governments

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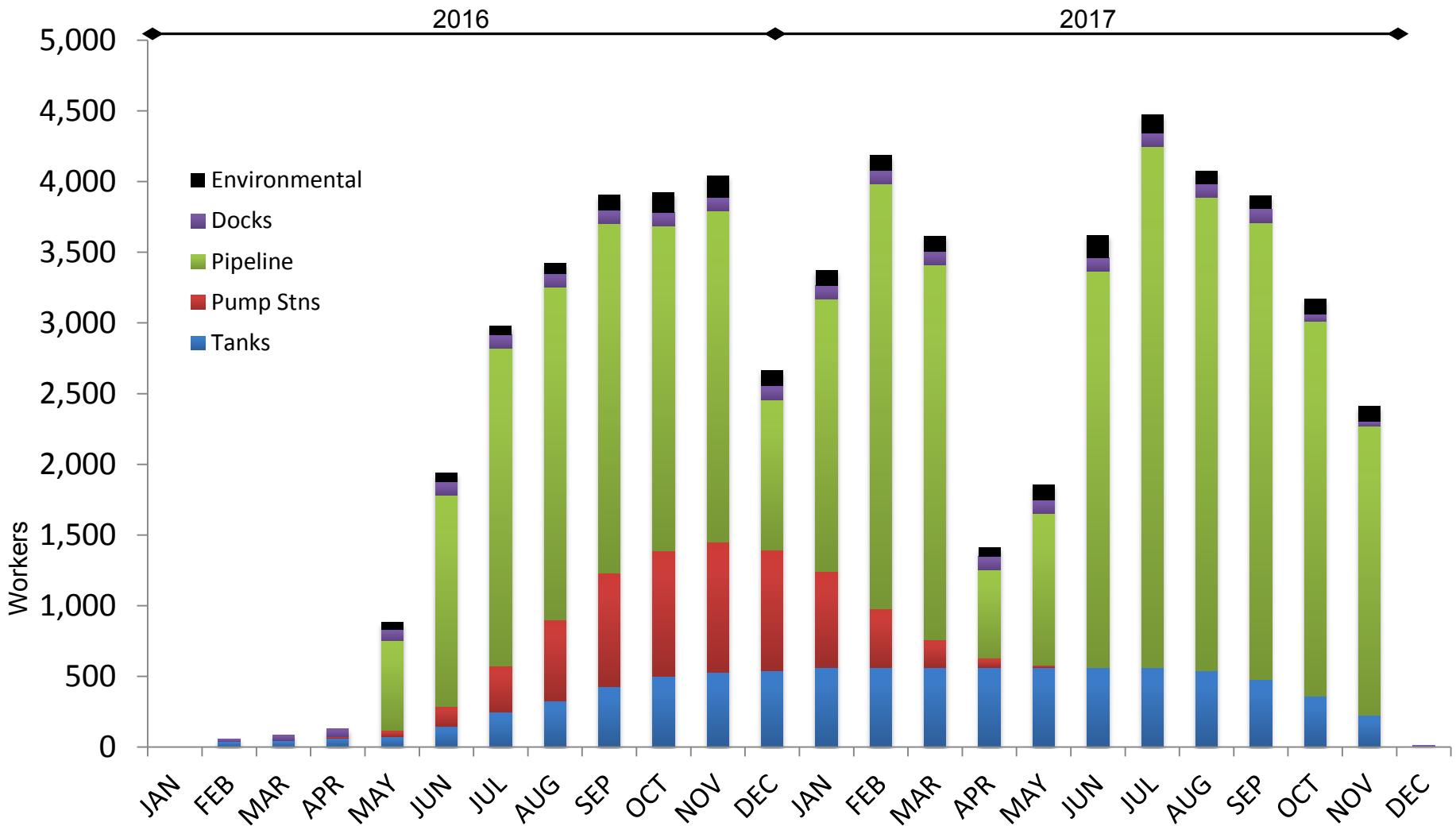
LANGLEY ECONOMIC IMPACT

Benefits to Langley

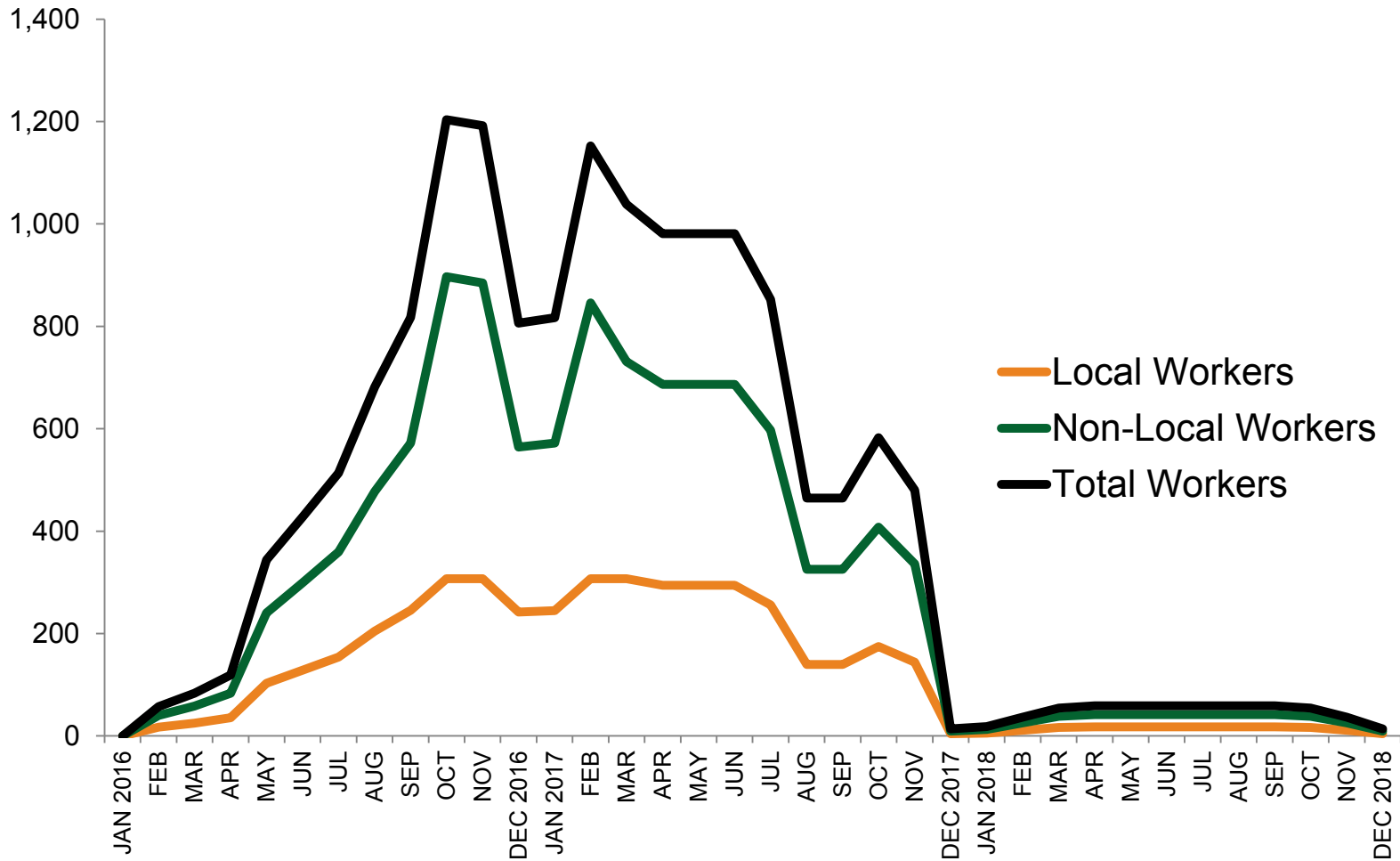
- Municipal taxes
 - 2013: \$ 367,000
 - With expansion: \$ 942,000
- Local suppliers, contractors, and consultants
- Local workforce spending
- Employment
- Procurement
- Community investment



Project Workforce

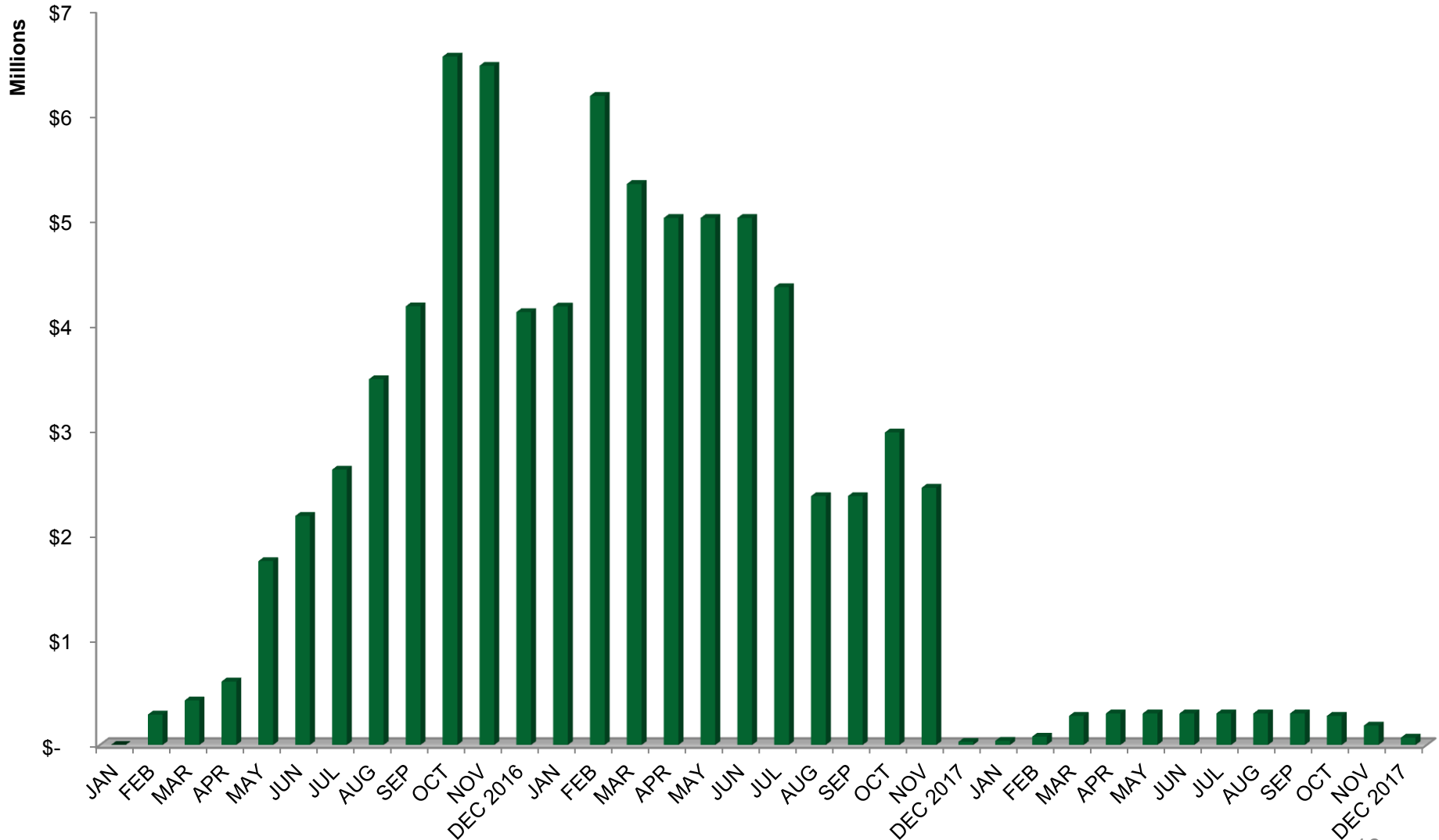


Greater Vancouver Work Force



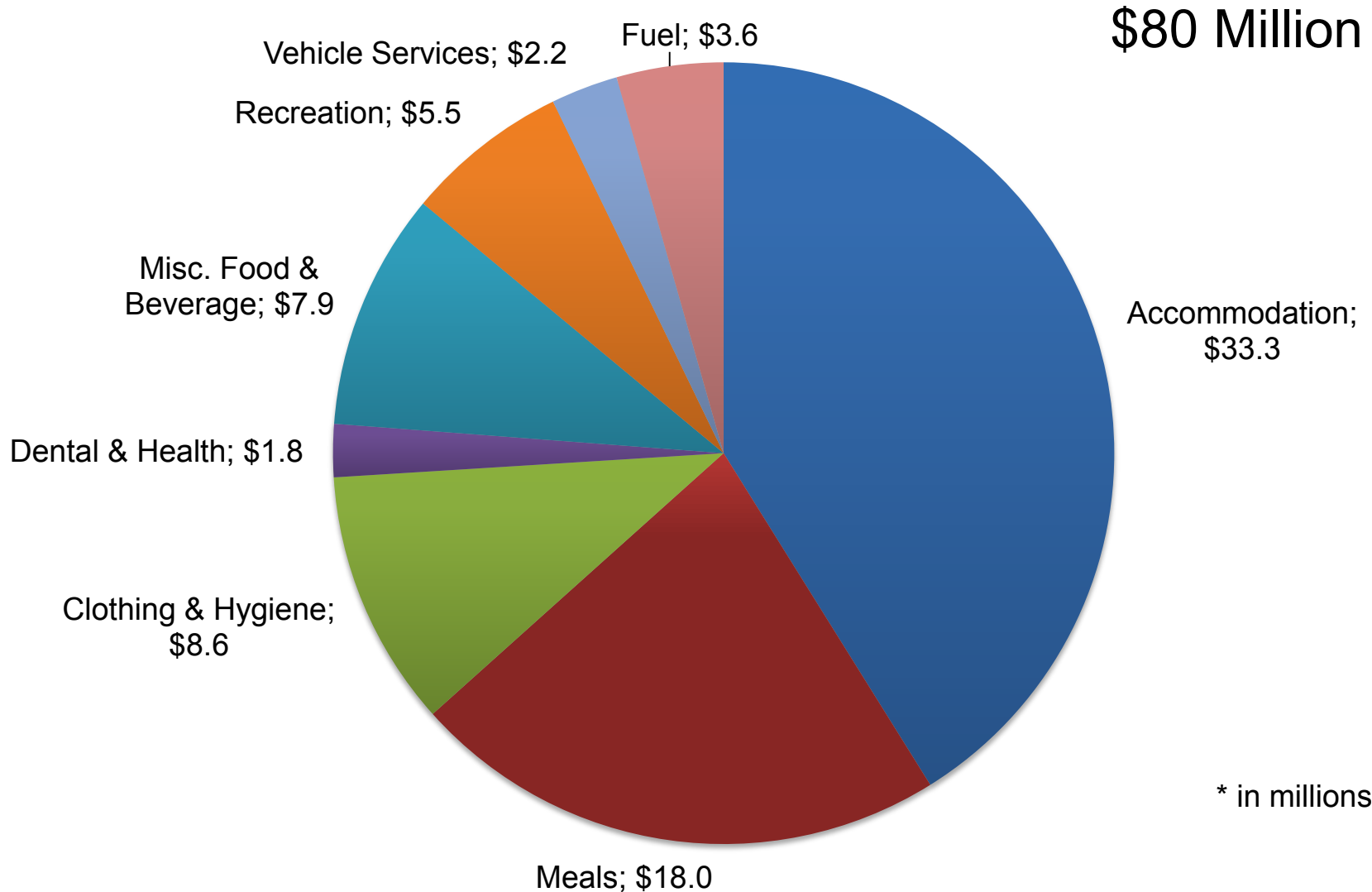
All figures based on project plans as of November 2013

Greater Vancouver Workforce Spending



All figures based on project plans as of November 2013

Non-Local Worker Spending*



All figures based on project plans as of November 2013



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Pipeline: Employment

Logging & Clearing

Fallers, Equipment Operators, Trucking

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Administration

Labourers

**Pipeline Coating/
Sandblasting**

Mechanics

Equipment Operators

Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



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Health & Safety	Hydrostatic Testing	ROW Reclamation & Restoration
Sand & Gravel	Inspection Tools	Security
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Facilities Employment

Welders

Pipe Fitters

Carpenters

Equipment Operators

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Crane Operators

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Facilities Contracting Opportunities



Prefabricated Buildings

Power Line Installation

**Environmental
Monitoring**

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November 27, 2013



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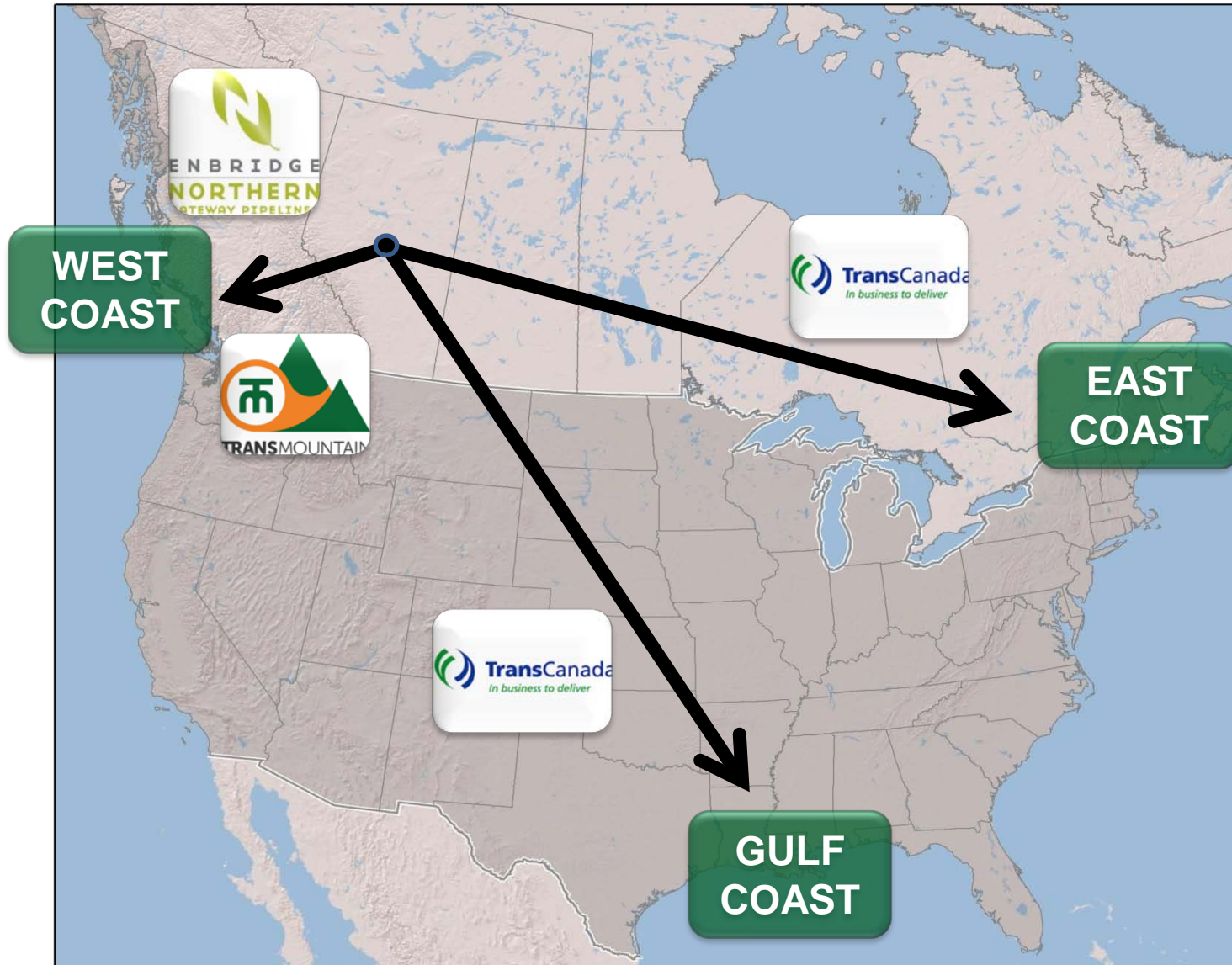
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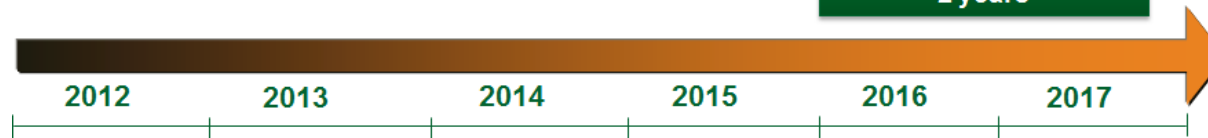


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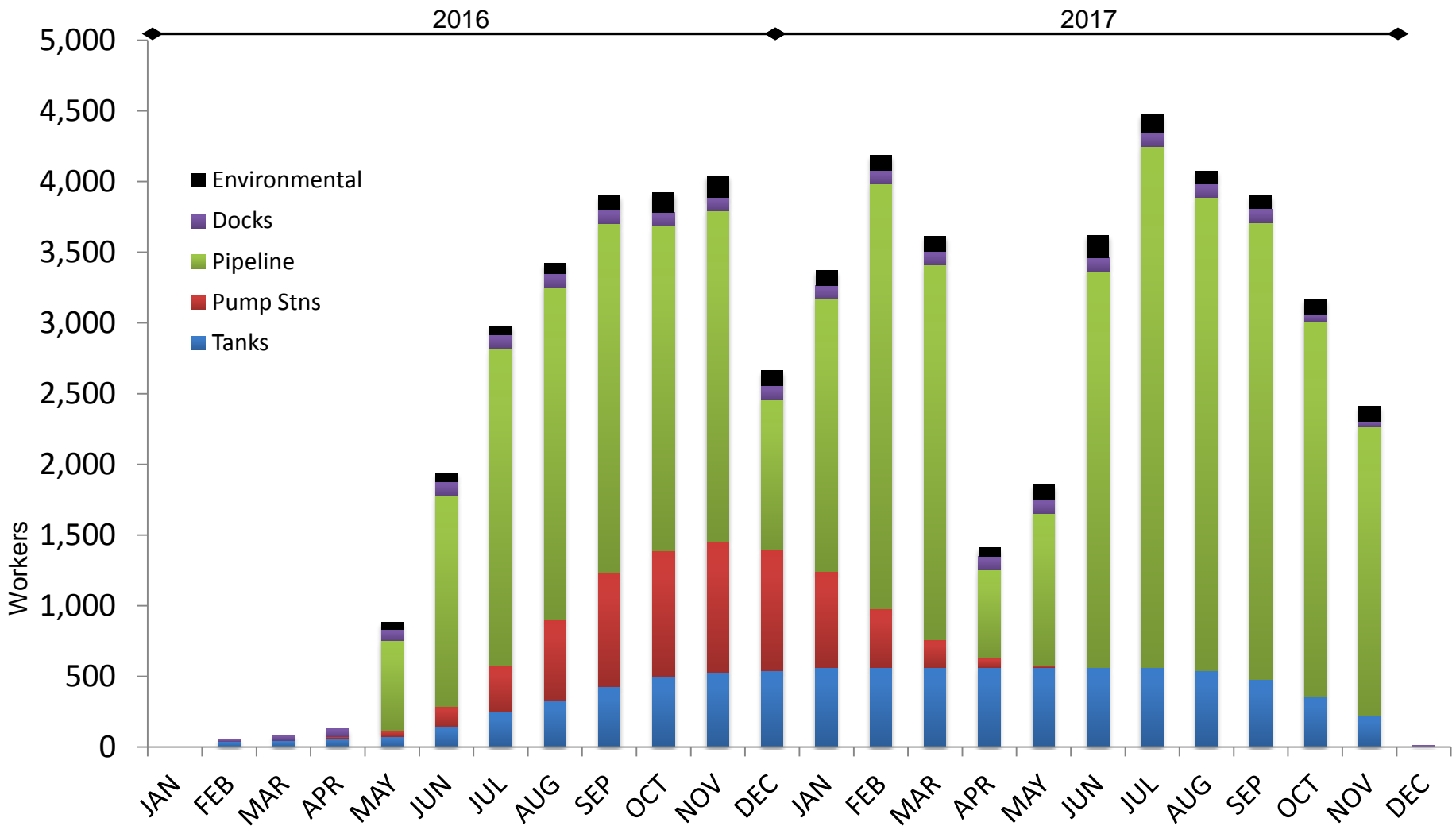
BURNABY ECONOMIC IMPACT

Benefits to Burnaby community

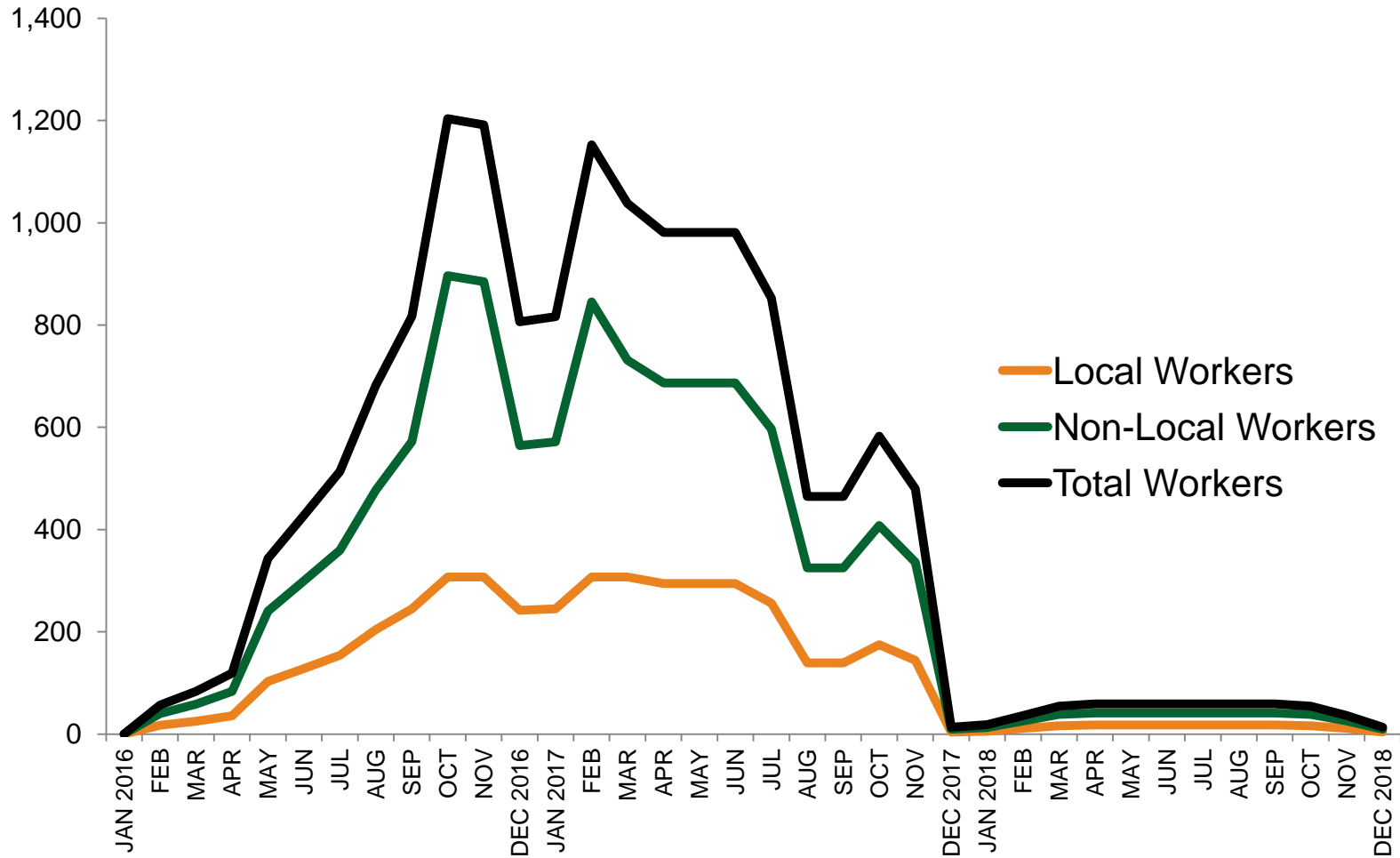
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 - 2013: \$7,022,000
 - With expansion: \$13,243,000
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- Procurement
- Community investment
 - Local



Project Workforce

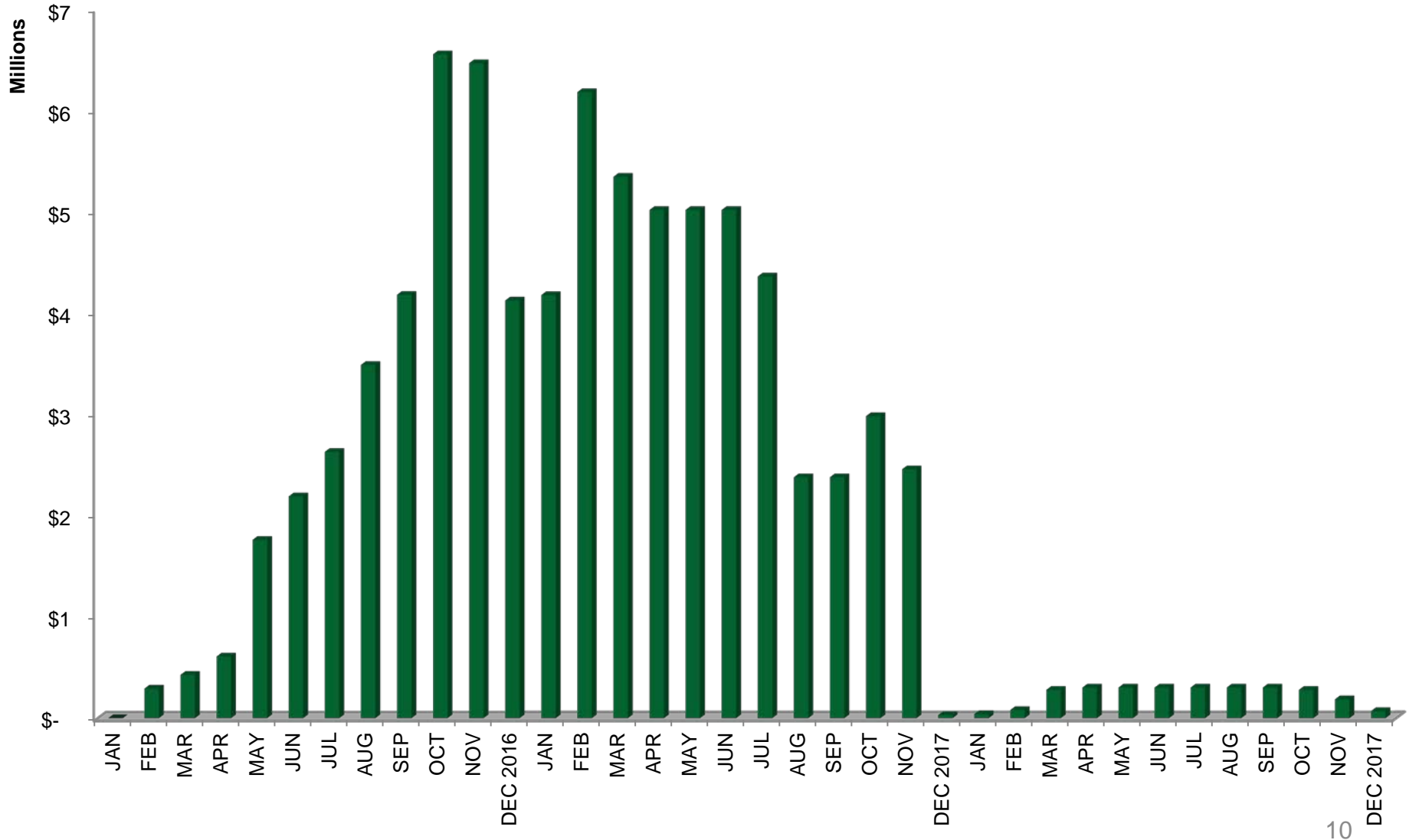


Greater Vancouver Work Force



All figures based on project plans as of November 2013

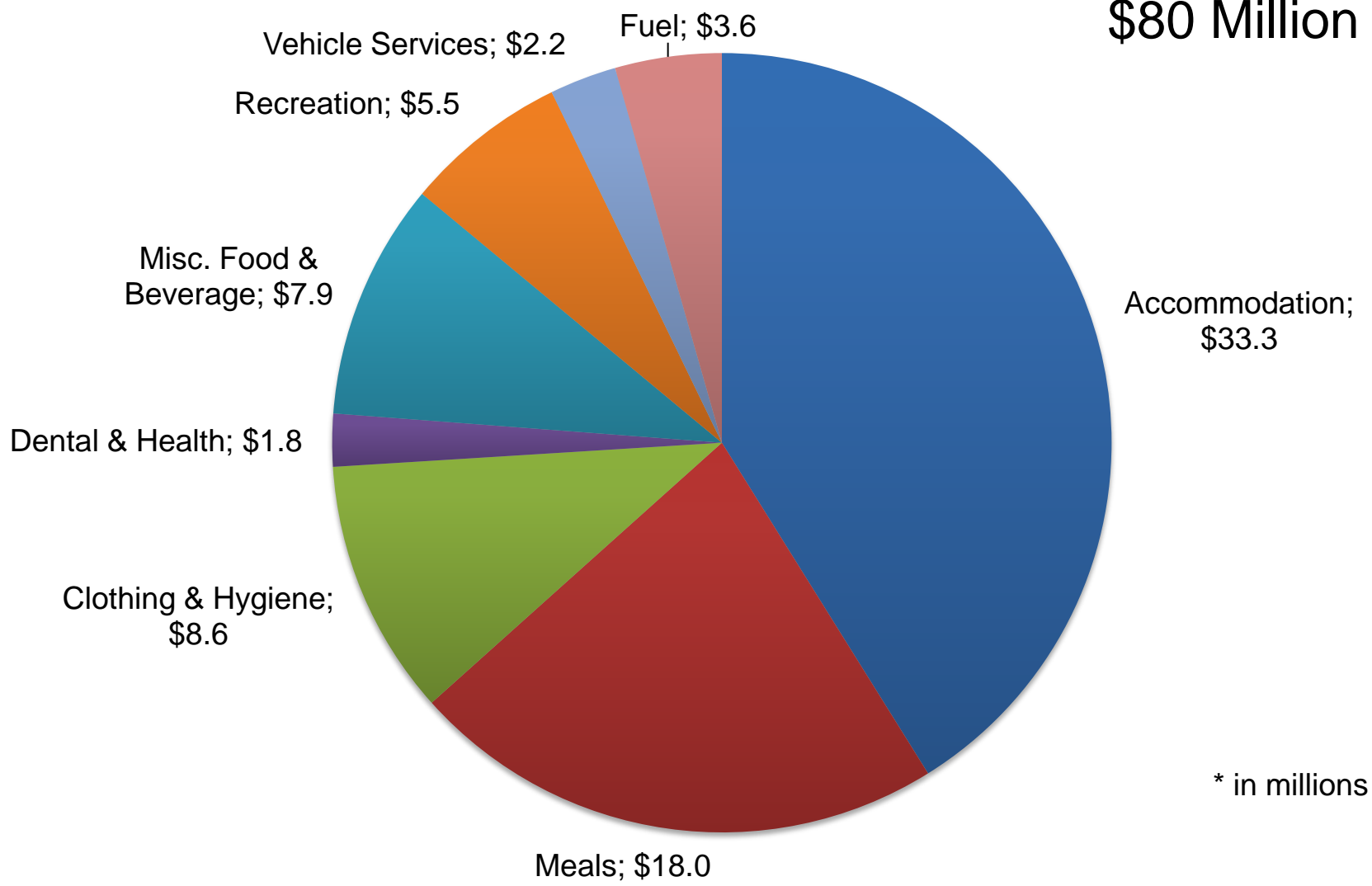
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* in millions



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Pipe Fitters

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Terminals: Contracting Opportunities



Prefabricated Buildings

Power Line Installation

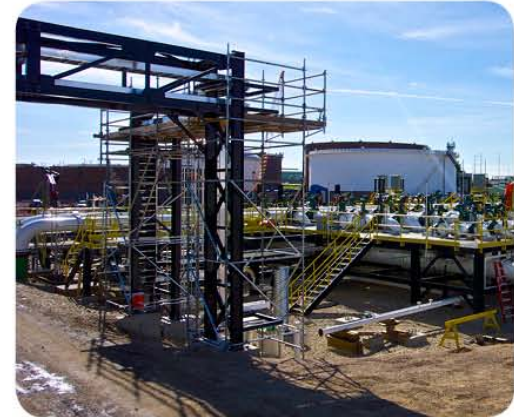
**Environmental
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Surveying

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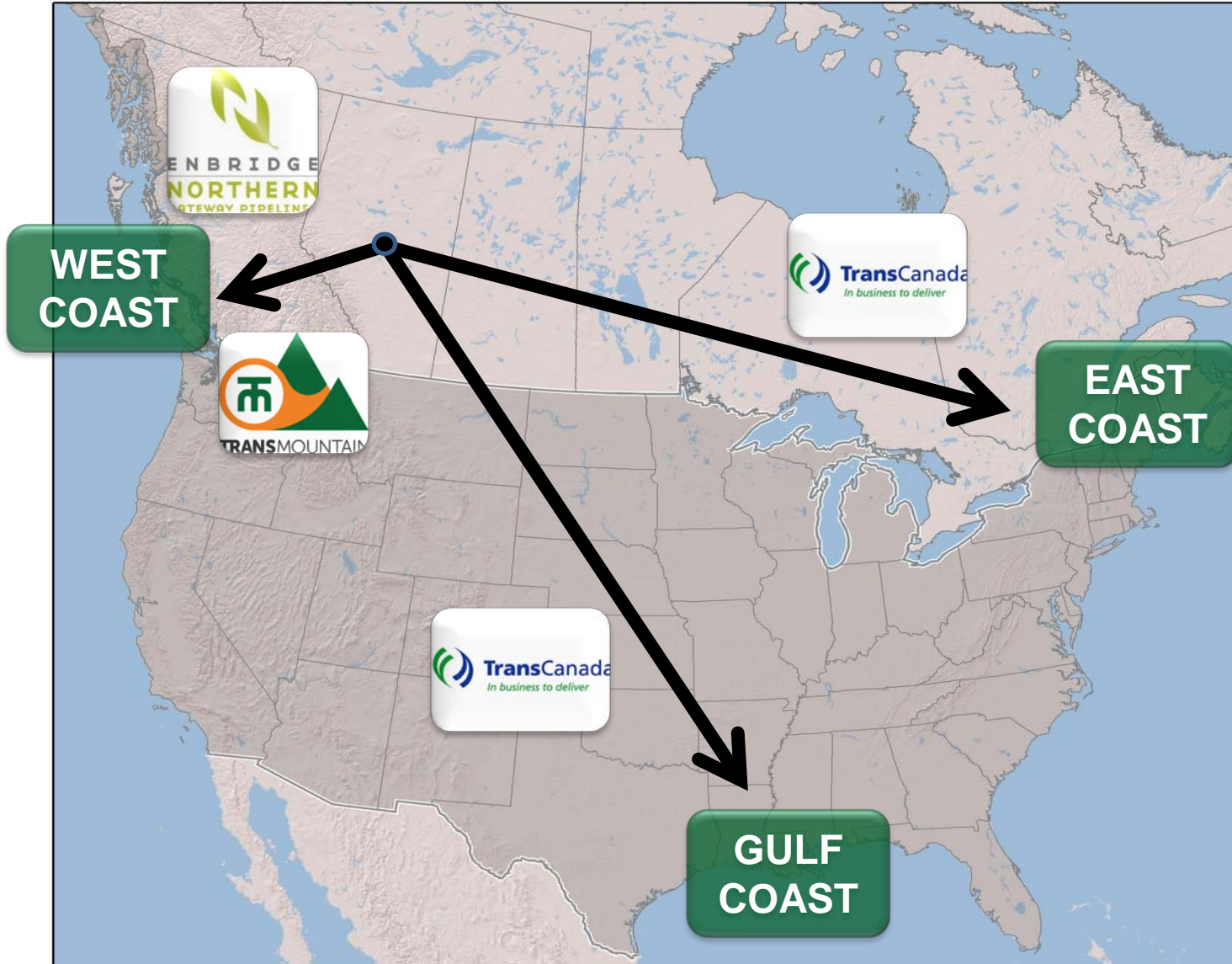
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- \$5.4 billion investment
- 18 months of engagement and issue identification
- NEB granted commercial approval in May 2013
- Formal Project Description, NEB Issues List and NEB process definition now complete

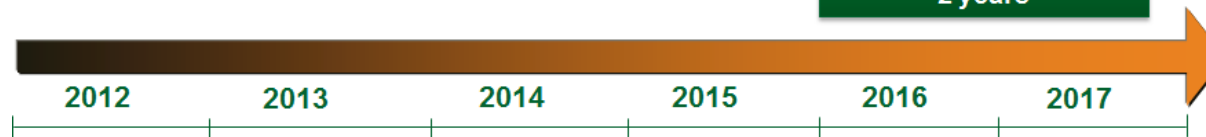


Application Preparation
1.5 years

Commercial

Regulatory Approvals
2 years

Construction
2 years



Economic Benefits



Construction Spending
(to 2018)



Operating Expenditures
(2018 - 2037)



108

66

25

EMPLOYMENT: up to
108,000 person years
during construction &
20 years of operation

66,000 in BC
25,000 in Alberta

~4,500 Construction Jobs at Peak

Expanded Operations: 90 New Permanent Positions with 50 in BC

Benefits to Governments

Estimated Tax Revenue from Construction & 20 Years Operation:





CHILLIWACK ECONOMIC IMPACT

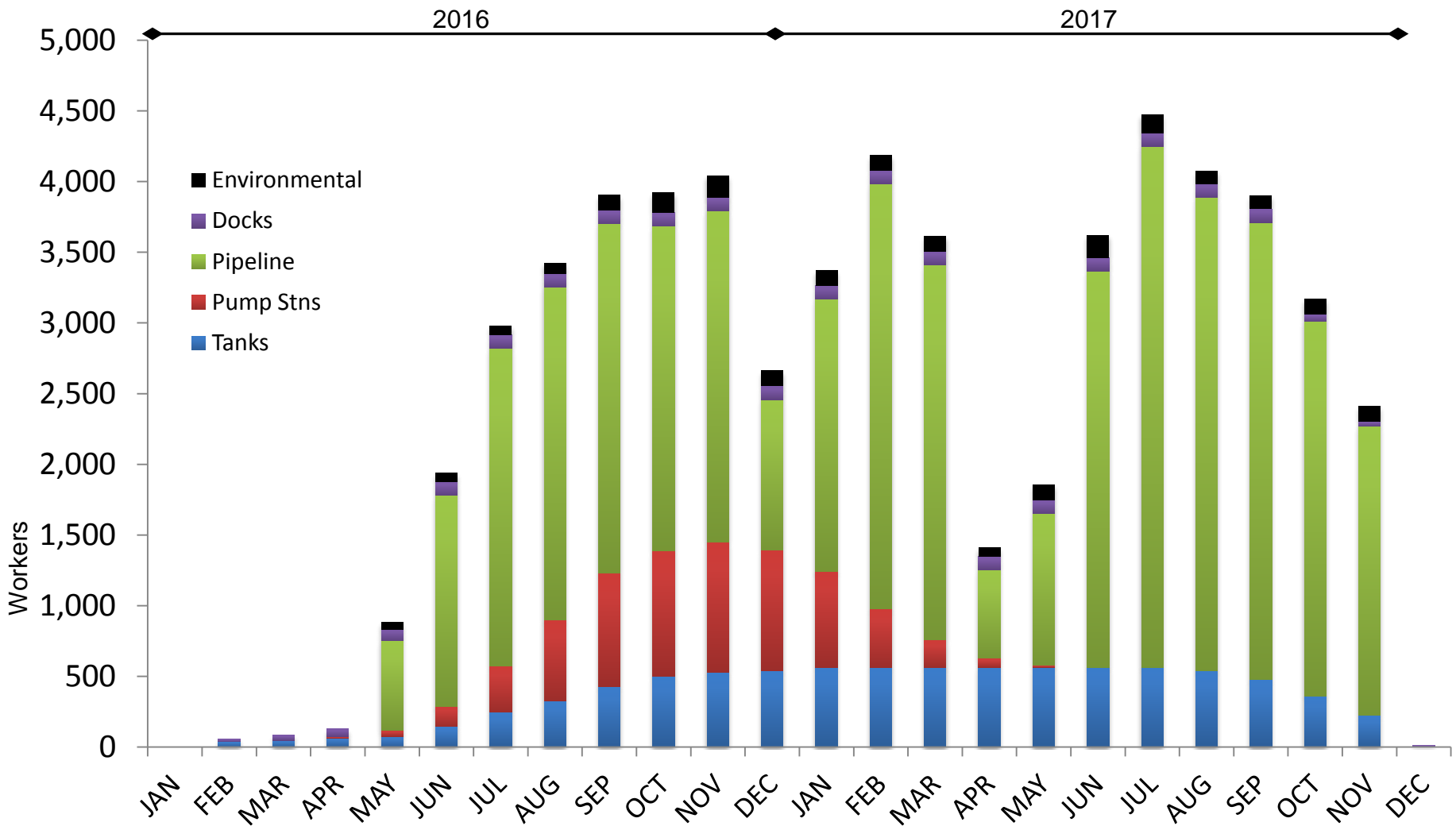
Benefits to Chilliwack Community



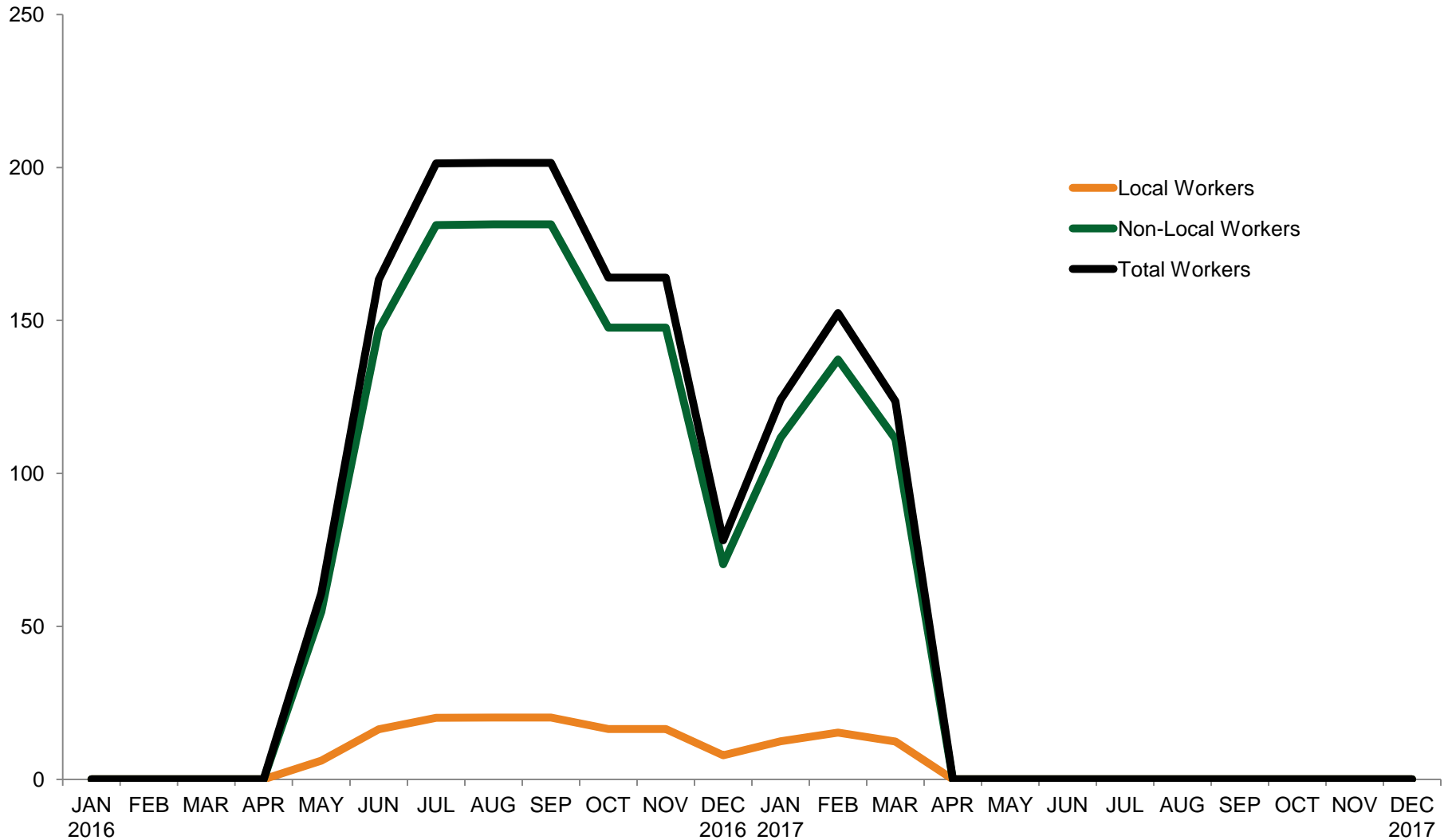
- Municipal taxes
 - 2013: \$664 000
 - With expansion: \$1 608 000
- Local suppliers, contractors, and consultants
- Local workforce spending
- Employment
- Procurement
- Community investment



Project Workforce

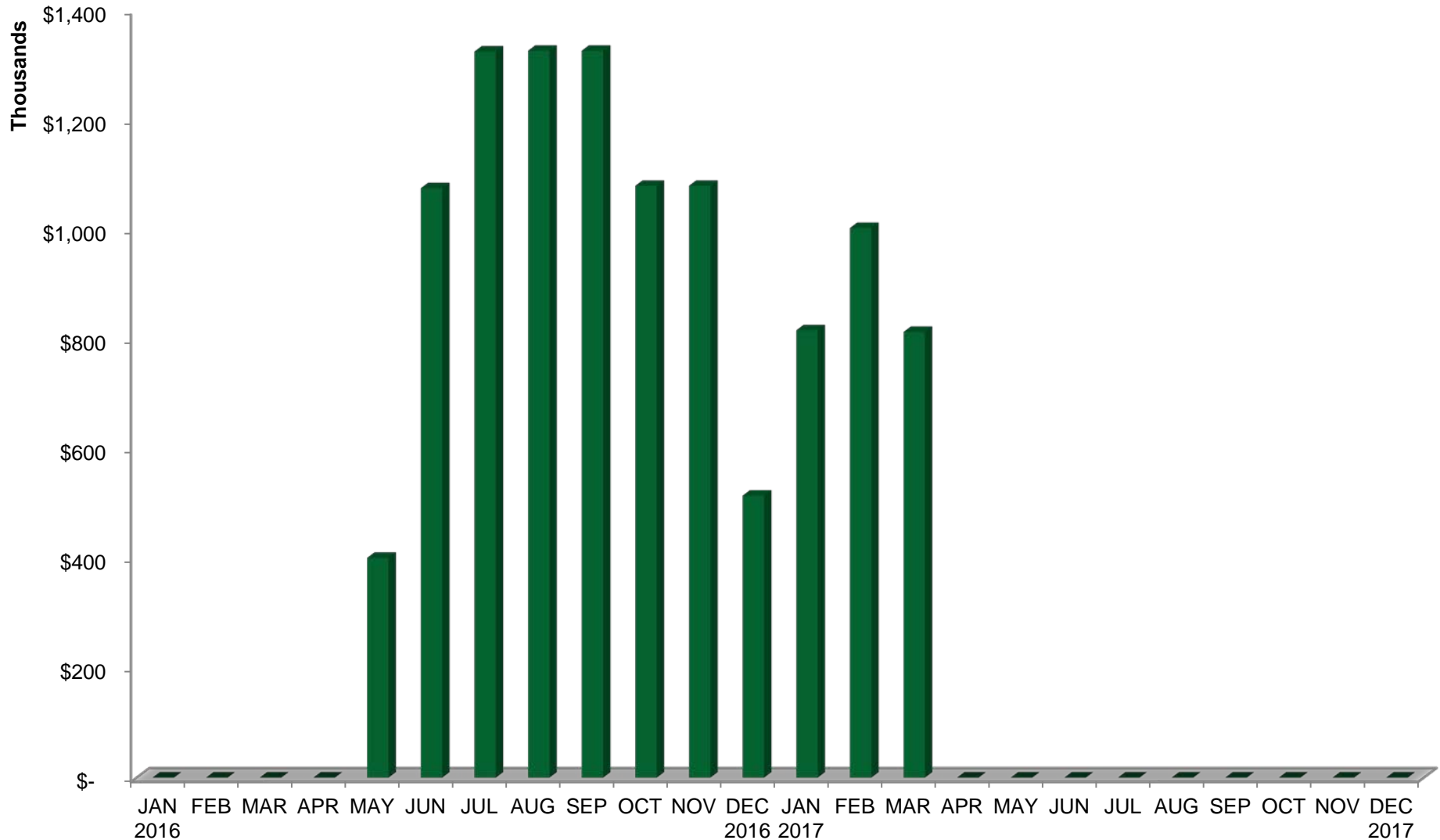


Fraser Valley-Based Work Force



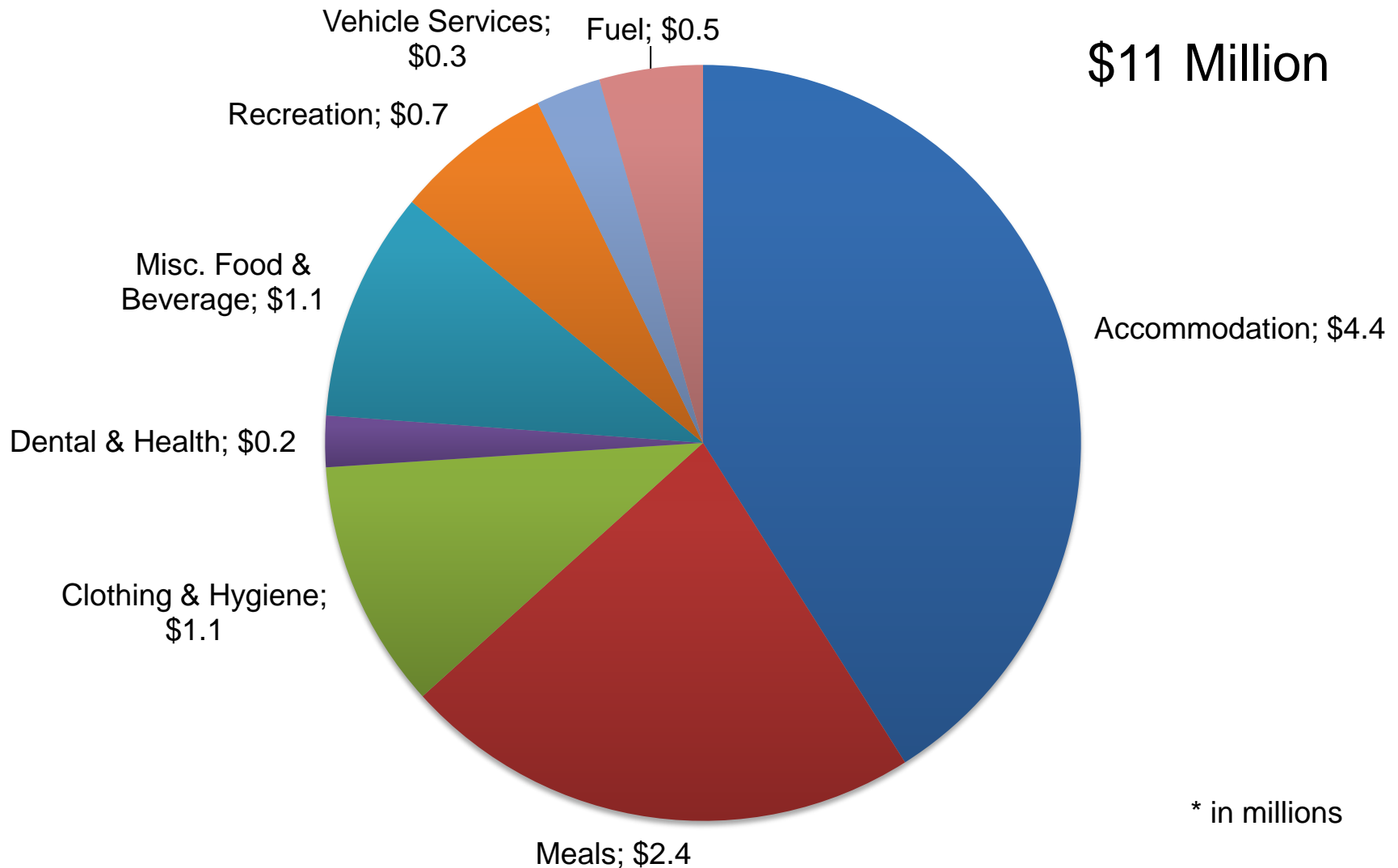
All figures based on project plans as of November 2013

Fraser Valley Workforce Spending



All figures based on project plans as of November 2013

Fraser Valley Non-Local Worker Spending*





EMPLOYMENT

Pipeline: Employment

Logging & Clearing

Fallers, Equipment Operators, Trucking

Welder Helpers

Administration

Labourers

**Pipeline Coating/
Sandblasting**

Mechanics

Equipment Operators

Trucks & Drivers

Welders

Blasting



Pipeline: Contracting Opportunities



Construction Management	Survey	Communications
Environmental Monitoring	Hydrovac/Ground Disturbance	Water Supply
Traffic Management	Non Destructive Testing	Wood Products
Health & Safety	Hydrostatic Testing	ROW Reclamation & Restoration
Sand & Gravel	Inspection Tools	Security
Fire Watch & Suppression	Construction Trailers/ Laydown Areas	Trucking
Horizontal Directional Drilling/Boring		

Facilities Employment

Welders

Pipe Fitters

Carpenters

Equipment Operators

Labourers

Crane Operators

Electricians

Steelworkers



Facilities Contracting Opportunities



Prefabricated Buildings

Power Line Installation

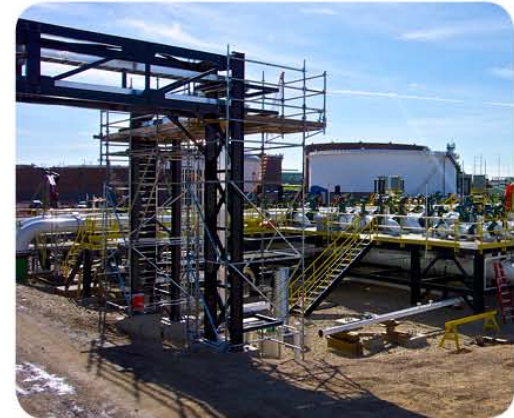
Environmental
Monitoring

On Site Medical & Safety

Surveying

Non-Destructive Testing

Security



Next Steps



- What we will do next:
 - Continue to refine our project requirements and estimates
 - Identify trades and available workforce
 - Work to maximize local opportunities and benefits
 - Work with communities to continue to learn about project interests, restoration possibilities and community benefits
- Stay in touch:
 - Sign-up for ongoing procurement and / or jobs information
 - Keep up-to-date through our website and e-newsletter
 - Register for NEB updates

CONTACT US:

Trans Mountain Expansion Project



Email: info@transmountain.com



Phone: 1.866.514.6700



Website: www.transmountain.com



@TransMtn



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PO Box 84028 Bainbridge

Burnaby, BC V5A 4T9

Jobs and Procurement:

transmountain.com/jobs

transmountain.com/procurement

APPENDIX D
OTHER COMMUNICATION MATERIALS

Materials:

- Project Update, August 2013



TRANSMOUNTAIN EXPANSION PROJECT

PROJECT UPDATE

August 2013 Issue

COMMITTED TO MOVING FORWARD, THOUGHTFULLY AND WITH RESPECT

It's been just over a year since we announced our intention to expand the Trans Mountain Pipeline – a critical piece of energy infrastructure in Western Canada. Since our announcement to pursue the project in April 2012, we've been taking a very deliberate, methodical approach to navigating the many steps involved in such a complex and multi-faceted project.

Later this year, we plan to formally submit our proposed expansion application to the National Energy Board (NEB). Filing this Facilities Application will represent thousands of hours of diligent, thoughtful and committed work across many different areas including Environmental and Socio-Economic Assessment, field studies, engineering studies, route planning, community and First Nations discussions and more. As part of this process, we are confident that we can fully address and satisfy the BC Government's five conditions for the province to support the construction of new heavy oil pipelines within its borders.

A key part of our project planning is engaging with people through an open, extensive and thorough process. We've heard from Aboriginal groups, landowners, communities



Ian Anderson is president of Kinder Morgan Canada.

and others along the marine and pipeline corridors, receiving feedback through various channels including community-based public information sessions, one-on-one stakeholder meetings, email, Twitter and our transmountain.com website.

On May 23, 2013, following a decision by the NEB to approve the commercial terms of the proposed project, we submitted a Project Description to the NEB. The Project Description is a preliminary document that signals our intent to submit our Facilities Application. See page 2 of this Project Update for an overview of the Project Description.

Trans Mountain currently delivers 300,000 barrels per day of crude oil and refined products along the 1,150-kilometre pipeline between Alberta and BC. The proposed

INSIDE:

An overview of the Project Description for the Proposed Trans Mountain Expansion Project	2
Getting to the route The Timeline / The Terminology	3
"Talk Trans Mountain" continues	4
A look back at 60 years of service	4

expansion, which would provide space for up to 890,000 barrels per day to be moved through the pipeline, will allow Trans Mountain to meet expanded customer commitments for Canadian crude oil and petroleum products.

We are continuing to gather feedback so we can develop the best possible project plan. We encourage people to have their say at transmountain.com/talk.

Sixty years ago, the Trans Mountain Pipeline began responsibly transporting energy products. Looking ahead, an expanded Trans Mountain system can deliver the same safe and reliable service and additional jobs and expanded economic benefits for BC and Alberta communities.



TRANSMOUNTAIN MAKES SUBMISSION TO TANKER SAFETY EXPERT PANEL

In a submission to the Government of Canada's Tanker Safety Expert Panel, Kinder Morgan Canada (KMC), operator of the Trans Mountain Pipeline (TMPL), has outlined how it is working closely with the maritime community on the tanker safety aspect of the transportation chain.

The panel, which was announced earlier this year, is conducting an evidence-based review and assessment of Canada's tanker safety system to make recommendations to the Government of Canada on the development of a world-class system.

Trans Mountain's engagement activities over the last year, related to its proposed twinning of the pipeline and expansion of its marine loading facility, have included public information sessions, workshops, meetings with community leaders and online discussions. Of all the feedback received so far, risk and safety – particularly pipeline safety and marine safety – have been the primary concerns. These include tanker safety, spill response capacity and the liability for spills.

This input is being used to guide the development of studies, plans and design for the proposed expansion project. While Trans Mountain has a clearly-defined role related to tanker safety, the company is concerned that every aspect of the tanker safety transportation chain is well understood, managed and critically assessed. Trans Mountain is taking action by:

- Working closely with the maritime community
- Working to improve local mapping and preparedness
- Working with Western Canada Marine Response Corporation (WCMRC) to establish planning standards to address the proposed expansion

Trans Mountain's submission to the panel is available online at transmountain.com.



TRANSMOUNTAIN



THE PROJECT DESCRIPTION: A SNAPSHOT OF THE PROPOSED TRANS MOUNTAIN EXPANSION PROJECT

In April 2012, Trans Mountain, in response to customer commitments – the shippers who use the line to transport petroleum products – announced plans to expand the pipeline. The Project Description, submitted to the National Energy Board (NEB) in May 2013, is a summary of all the studies and engagement conducted over the last year.

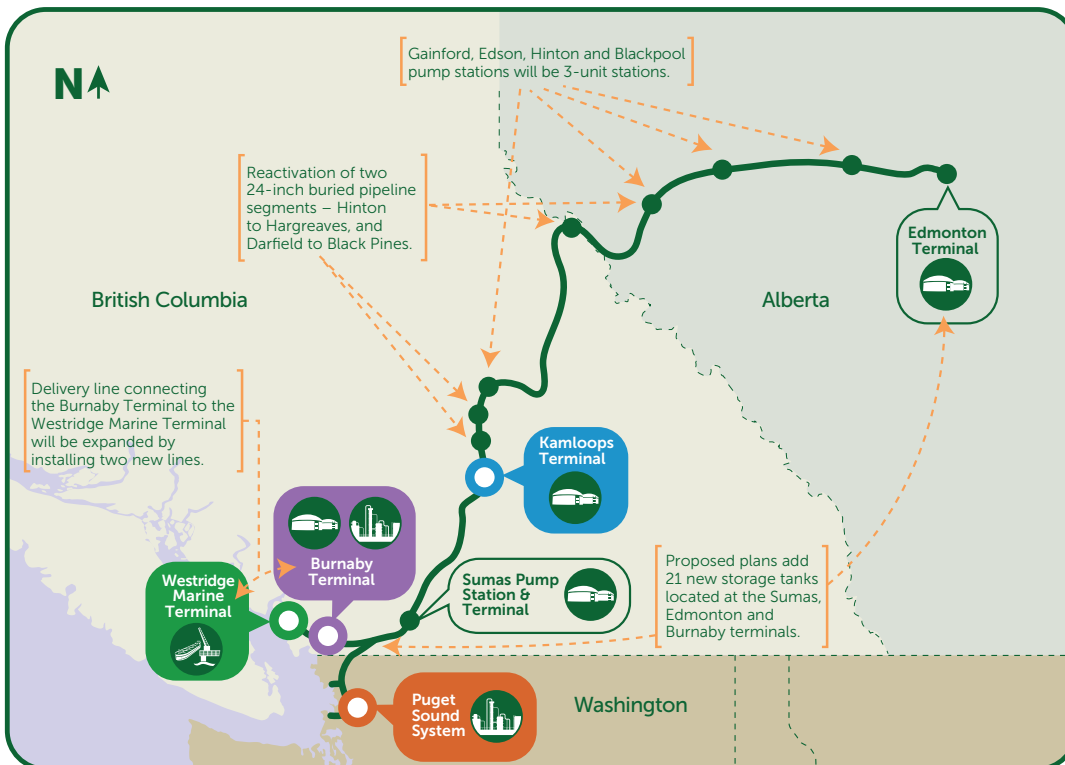
Currently, Trans Mountain can move 300,000 barrels of product per day. The proposed expansion calls for a nominal capacity of up to 890,000 barrels per day.

Preliminary engineering work along with the input and feedback gathered as part of the comprehensive engagement program will continue to refine and inform the development of the Facilities Application, to be submitted

to the NEB in late 2013. The Application will include the various engineering and routing studies, Environmental and Socio-Economic Assessment and engagement activities with landowners, stakeholders, communities and Aboriginal groups. The submission of the Facilities Application will initiate the NEB's regulatory review of the proposed project.

TO INCREASE THE CAPACITY ON THE PIPELINE SYSTEM, TRANS MOUNTAIN IS PROPOSING:

- About 980 km of new buried pipeline to be located adjacent to the existing pipeline where practical.
- 36-inch pipe, manufactured from high-grade steel to stringent Canadian Standards Association (CSA) and American Petroleum Institute (API) specifications, will be used.
- 11 new pump stations at 10 locations (9 of which are at existing sites) with a total of 33 pumping units.
- 21 new storage tanks. All new storage tanks will be designed and constructed in accordance with with the API Standard 650 - Welded Steel Tanks for Oil Storage.
- New storage tanks will be constructed within the existing terminal fence lines and require no additional land.



- Edmonton Terminal**
 - 6 new storage tanks
 - 5-unit pump station
- Kamloops Terminal**
 - 4-unit pump station
- Sumas Pump Station & Terminal**
 - 1 new storage tank
- Burnaby Terminal**
 - 14 new storage tanks
- Westridge Marine Terminal**
 - Construction of two new loading docks and a utility dock
- Puget Sound System**
 - Plans to increase capacity on the Puget Sound system to meet refinery demand are in development. The timeline for the proposed upgrades is dependent on the proposed expansion of the Trans Mountain Pipeline.



GETTING TO THE ROUTE – THE TIMELINE

Timing	Activities
2012-2013	Routing studies, engagement activities (in person and online), survey work
Spring-Fall 2013	Communicate 30-metre to 150-metre pipeline corridors, seek input
Late 2013	File Facilities Application to National Energy Board with proposed pipeline corridors
2014-2015	Continue to refine the right-of-way and construction footprint
Late 2015	Finalize location of pipe for construction



Trans Mountain provides opportunities for people to have their say about the proposed pipeline route at open houses or online.

ROUTING TERMINOLOGY

- Pipeline Corridor
 - A width of land within which the pipeline can be built
 - It is generally much wider than the actual construction area required in order to provide flexibility before locating the final centerline of the pipeline
- Selected Study Corridor
 - The pipeline corridor that best meets the routing objectives
 - The area where field environmental studies are focused
- Alternative Corridor
 - Where more than one corridor may meet the routing objectives, alternative corridors are defined
 - The corridors may be along the existing right-of-way, outside of the right-of-way or a combination of the two



Route markers and the Trans Mountain Pipeline right-of-way near the Yellowhead Highway in BC.

STUDIES AND DISCUSSIONS HELP DETERMINE THE NEW PIPELINE ROUTE

Developing a route for a pipeline is a detailed process that involves much more than sketching lines on maps. It is the culmination of a process involving gathering existing and new data for analysis and comparison of the Trans Mountain Pipeline alignment versus practical alternatives.

Since announcing our intention to pursue the proposed expansion, Trans Mountain has been undertaking comprehensive routing, environmental and engineering studies, and having discussions with local governments, landowners, Aboriginal groups and stakeholders along the existing pipeline route. All of this research and input will come together for the Facilities Application to the National Energy Board (NEB), where we'll be submitting the proposed routing of the pipeline through study corridors.

"People need to understand that the exact location of the pipeline won't be finalized until much later in this process," said Greg Toth, Senior Project Director, Trans Mountain Expansion Project. "The Facilities

Application will include the results of the studies and engagement activities and show a proposed pipeline corridor for the new pipe to be laid and in some instances, multiple alternatives."

The pipeline study corridors are generally anywhere between 30 metres (urban) and 150 metres (non-urban) wide and show the area in which Trans Mountain would like to put the pipeline. The areas are wider than the typical construction area, or typical permanent right-of-way that would be established by the NEB, if the proposed project is approved. This is in order to ensure there's flexibility to respond to stakeholder input or place the pipe in the area that best minimizes local impacts that arise during the detailed design process.

The study corridors would be refined to right-of-ways after the project goes through the NEB process and receives approval. In the final stages before construction, when detailed engineering and construction plans are being developed, the exact location of the pipe within the right-of-way is determined.

WHAT'S HAPPENING NOW?

We are working our way along the pipeline and communicating our progress to date on determining the route. We are sharing proposed study corridors with local stakeholders and seeking input as we continue to develop and refine the Facilities Application to the NEB.

Our goal for the expansion project is to follow the existing Trans Mountain right-of-way, where practical. We think this can be achieved for 75 to 85 per cent of the route. The reasons for alternate routes include the practicalities of the Trans Mountain Pipeline route, particularly in urban locations where there have been significant land use changes since 1953 or in areas with high environmental sensitivity.

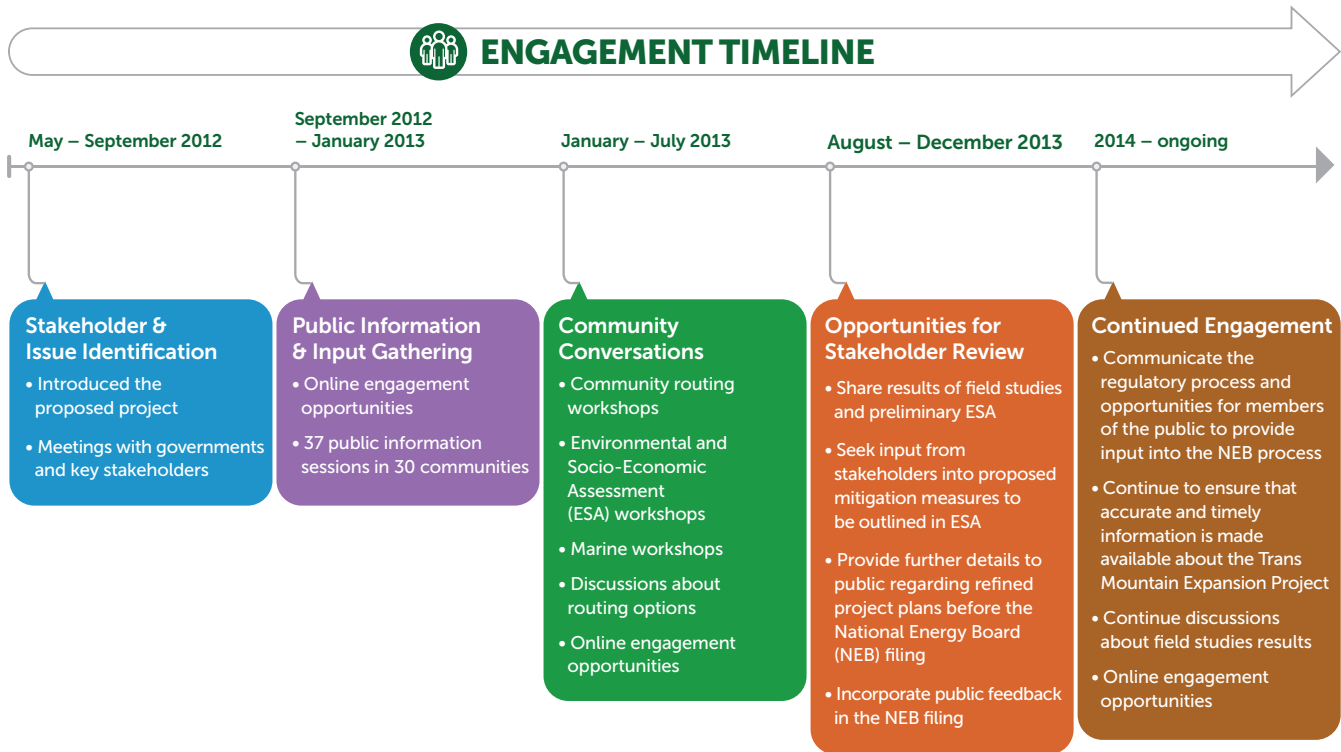
"In the areas where we're looking for route alternatives we're considering locations that would minimize possible impacts," added Toth. "Following existing linear infrastructure such as roads, rail corridors, utility corridors or areas without dense development are all being considered as less disruptive options."

Even in areas where it is proposed to stay within the existing right-of-way, the Facilities Application to the NEB will show the wider pipeline study corridors where we've been undertaking studies and surveys.

Find out more about the routing process and engagement opportunities at transmountain.com/talk.

ENGAGEMENT TIMELINE: TALK TRANS MOUNTAIN CONTINUES

Members of the Trans Mountain Expansion Project team will continue to share accurate and timely project information at every step of the way. The engagement with landowners, stakeholders, communities and Aboriginal groups will continue during all stages of the proposed expansion project. We invite you to connect with us: visit our website, send us an email, follow the project on Twitter, give us a call or attend an event.



A LOOK BACK AT 60 YEARS OF SERVICE: A PIPELINE PIONEER – JIM BOYDELL

Jim Boydell of Kamloops had a 33-year career with Trans Mountain, a career that began in October 1953 – one week after the oil first started flowing through the pipeline between Alberta and British Columbia. It was a career that included many different jobs, as well as colourful memories and characters and long-lasting friendships.

For those looking at working in the pipeline industry, although times have changed in the last 60 years

since he first began his Trans Mountain adventure, Jim says it was “one of the best jobs in the outdoors,” and a really unique opportunity.

Jim retired from the pipelining business in 1986 to travel with his wife, which included driving to the Gulf of Mexico and Alaska. Now, at 82, he keeps busy with metal-working projects in his backyard workshop.



Jim Boydell



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PART 3 – ABORIGINAL ENGAGEMENT UPDATE NO. 1
OCTOBER 1 TO DECEMBER 31, 2013

TABLE OF CONTENTS

	<u>Page</u>
1.0 ABORIGINAL ENGAGEMENT	3-1
1.1 Introduction.....	3-1
1.1.1 Purpose of Consultation Update.....	3-1
1.2 Identification of Aboriginal Communities, Groups, Associations, Councils and Tribes	3-1
1.2.1 Identification of New Communities, Associations, Councils and Tribes.....	3-1
1.2.2 Aboriginal Communities, Groups, Associations, Councils and Tribes.....	3-2
1.3 Consultation Update: October 1, 2013 to December 31, 2013.....	3-6
1.3.1 Engagement Activity	3-6
1.3.2 Summary of Outcomes of Engagement.....	3-7
1.4 Aboriginal Engagement by Community, Group, Association, Council and Tribe	3-8
1.4.1 Agreements	3-8
1.4.2 Preliminary Aboriginal Interests	3-9
1.4.3 Traditional Land Use Studies, Traditional Marine Use Studies and Traditional Ecological Knowledge.....	3-10
1.4.4 Engagement Summaries: New Communities, Groups, Associations, Councils and Tribes.....	3-11
1.5 Future Aboriginal Engagement Activities.....	3-15

LIST OF TABLES

Table 1.2.1 Aboriginal Communities Located in the Edmonton to Alberta/British Columbia Border Region	3-3
Table 1.2.2 Aboriginal Communities Located in the Alberta/British Columbia Border to Kamloops Region	3-3
Table 1.2.3 Aboriginal Communities Located in the Kamloops to Hope Region	3-4
Table 1.2.4 Aboriginal Communities Located in the Hope to Burnaby Terminal/Burrard Inlet Region	3-4
Table 1.2.5 Aboriginal Communities Located in the Marine Corridor	3-5
Table 1.2.6 Aboriginal Groups – Non-boundary Specific	3-6
Table 1.2.7 Aboriginal Associations, Councils and Tribes.....	3-6
Table 1.3.1 Summary of Aboriginal Interests and Concerns Identified	3-7
Table 1.4.1 Agreements Executed during Reporting Period	3-9
Table 1.4.2 TLU/TMU/TEK Activity during Reporting Period.....	3-11

LIST OF APPENDICES

- APPENDIX A Engagement Logs
- APPENDIX B Project Engagement Letters

1.0 ABORIGINAL ENGAGEMENT

1.1 Introduction

1.1.1 Purpose of Consultation Update

Part 3 of the Consultation Update No. 1 & Errata (the Update) provides information on the Trans Mountain Expansion Project (the Project) Aboriginal Engagement Program, for the pipeline and marine corridors between October 1 and December 31, 2013. This Update outlines engagement activity during the period and summarizes the comprehensive information provided and feedback received during the three-month reporting period following the submission of the Application to the National Energy Board (NEB) pursuant to Section 52 of the *National Energy Board Act (NEB Act)* for the Project.

Detailed information on engagement activities conducted to date with each Aboriginal community, group, association, council and tribe can be found in Appendix A of this Part.

1.2 Identification of Aboriginal Communities, Groups, Associations, Councils and Tribes

Trans Mountain has taken an open, extensive and thorough Aboriginal engagement approach for the Project along the Project corridor between Strathcona County, Alberta (AB) and Burnaby, British Columbia (BC), as well as the marine corridor.

At the time of filing the Project Application on December 16, 2013 with the NEB, Trans Mountain reported active engagement with 103 Aboriginal communities and two non-boundary specific Aboriginal groups. Since this time, using a consultation reporting period of October 1 to December 31, 2013 the consultation set has grown to 112 Aboriginal communities, two non-boundary specific Aboriginal groups, and nine associations, councils and tribes.

1.2.1 Identification of New Communities, Associations, Councils and Tribes

On September 30, 2013 a letter* was sent to Aboriginal communities, groups, associations, councils and tribes who had not yet been directly contacted by Trans Mountain, but were contacted by the NEB on August 13, 2013 with a Project information letter. After sending a Project introductory letter on September 30, 2013, each of the following communities, associations, councils and tribes was added to the Aboriginal engagement consultation list. These are:

Aboriginal communities:

- Kelly Lake Cree Nation;
- Kelly Lake First Nation;
- Kelly Lake Metis Settlement Society;
- Ktunaxa First Nation;
- Llenlney'ten First Nation (High Bar);
- Stoney Nakoda First Nation;
- Sts'wecem'cXgat'tem (Canoe Creek/Dog Creek);
- T'exelc First Nation (Williams Lake); and

**Note: this letter was noted within the December 2013 NEB Application however community details were inadvertently not provided.*

- Ts'kw'aylaxw (Pavillion Indian Band).

Aboriginal associations, tribes and councils:

- Nuu-chah-Nulth Tribal Council;
- Maa Nulth First Nations;
- Sencot'en Alliance;
- St'at'imc Chiefs Council; and
- Tsilhoqot'in National Government.

After demonstrating an interest in the Project or the potential of having Aboriginal interests affected by the Project, two additional marine-based communities and two additional land-based communities were added to the Aboriginal engagement consultation list in October 2013:

- Ditidaht First Nation;
- Metis Nation of Alberta Gunn Metis Local 555;
- Michel First Nation; and
- Huu-Ay-Aht First Nation.

1.2.2 *Aboriginal Communities, Groups, Associations, Councils and Tribes*

Trans Mountain has organized its Aboriginal Engagement Program into the following five regions, based on the location of Aboriginal communities along the pipeline corridor:

- Edmonton, AB to the Alberta/BC border;
- Alberta/BC border to Kamloops, BC;
- Kamloops, BC to Hope, BC;
- Hope, BC to the Burnaby Terminal-Burrard Inlet, BC; and
- Marine transportation corridor from the Burrard Inlet to international waters.

Trans Mountain is engaging with 112 Aboriginal communities in proximity to the pipeline corridor and marine transportation corridor (Tables 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.5, 1.2.6) that might have an interest in the Project or have Aboriginal interests potentially affected by the Project. As stated in Section 1.2, Trans Mountain is also engaging with two Aboriginal non-land based groups, the BC Metis Federation and the Metis Nation of BC (Table 1.2.5) and nine Aboriginal associations, tribes and councils. This list is intended to be inclusive and Trans Mountain will engage with additional Aboriginal communities, groups, associations, councils and tribes who express an interest in Project engagement.

TABLE 1.2.1

**ABORIGINAL COMMUNITIES LOCATED IN THE
 EDMONTON TO ALBERTA/BRITISH COLUMBIA BORDER REGION**

Alexander First Nation
Alexis Nakota Sioux Nation
Aseniwuche Winewak Nation of Canada
Enoch Cree Nation
Ermineskin Cree Nation
Foothills Ojibway First Nation
Horse Lake First Nation
Louis Bull Tribe
Métis Nation of Alberta Gunn Métis Local 55
Métis Regional Council Zone IV of the Métis Nation of Alberta
Michel First Nation
Montana First Nation
Nakcowinewak Nation of Canada
O'Chiese First Nation
Paul First Nation
Saddle Lake Cree
Samson Cree Nation
Sturgeon Lake Cree Nation
Sunchild First Nation

TABLE 1.2.2

**ABORIGINAL COMMUNITIES LOCATED IN THE
 ALBERTA/BRITISH COLUMBIA BORDER TO KAMLOOPS REGION**

Adams Lake Indian Band
Ashcroft Indian Band
Canim Lake Band
Kelly Lake Cree Nation
Kelly Lake First Nation
Kelly Lake Métis Settlement Society
Ktunaxa Nation
Little Shuswap Indian Band
Lheidli T'enneh First Nation
Lhtako Dene Nation
Llenlleny'ten First Nation (High Bar)
Neskonlith Indian Band
Oregon Jack Creek Band
Shuswap Indian Band
Simpcw First Nation
Skeetchestn First Nation
Splatsin First Nation

TABLE 1.2.2 Cont'd

Stoney Nakoda First Nation
Sts'wecem'cXgat'tem (Canoe Creek/Dog Creek)
Tk'emlups te Secwepemc
Toosey Indian Band
Whispering Pines/Clinton Band
Williams Lake (T'exelc) Band
Xat'sull First Nation (Soda Creek)

TABLE 1.2.3

**ABORIGINAL COMMUNITIES
 LOCATED IN THE KAMLOOPS TO HOPE REGION**

Boothroyd Band
Boston Bar Band
Coldwater Indian Bar
Cook's Ferry Indian Band
Kanaka Bar
Lower Nicola Indian Band
Lower Similkameen Indian Band
Lytton First Nation
Nicomen Indian Band
Nooaitch Indian Band
Penticton Indian Band
Shackan Indian Band
Siska Indian Band
Skuppah Indian Band
Spuzzum First Nation
St'uxwtews (Bonaparte Indian Band)
Upper Nicola Indian Band
Upper Similkameen Indian Band

TABLE 1.2.4

**ABORIGINAL COMMUNITIES LOCATED IN THE
 HOPE TO BURNABY TERMINAL/BURRARD INLET REGION**

Aitchelitz First Nation
Chawathil First Nation
Cheam First Nation
Katzie First Nation
Kwantlen First Nation
Kwaw-kwaw-aplit First Nation
Kwikwetlem First Nation
Leq'a:mel First Nation

TABLE 1.2.4 Cont'd

Matsqui First Nation
Musqueam Indian Band
Peters Band
Popkum First Nation
Qayqayt First Nation (New Westminster)
Scowlitz First Nation
Seabird Island Band
Semiahmoo First Nation
Shxw'ow'hamel First Nation
Shxw'ha:y Village
Skawahlook First Nation
Skowkale First Nation
Skwah First Nation
Soowahlie Indian Band
Squamish Nation
Squiala First Nation
Sts'ailes Band (Chehalis Indian Band)
Sumas First Nation
Tsawwassen First Nation
Tsleil-Waututh Nation
Tzeachten First Nation
Union Bar First Nations
Yakwekwioose Band
Yale First Nation

TABLE 1.2.5

ABORIGINAL COMMUNITIES LOCATED IN THE MARINE CORRIDOR

Cowichan Tribes
Ditidaht First Nation
Esquimalt Nation
Halalt First Nation
Huu-ay-aht First Nation
Hwlitsum First Nation
Lake Cowichan First Nation
Lyackson First Nation
Malahat First Nation
Pacheedaht First Nation
Pauquachin First Nation
Penelakut First Nation
Scia'new Indian Band (Beecher Bay)
Sechelt Indian Band
Snaw-Naw-As (Nanoose)

TABLE 1.2.5 Cont'd

Snuneymuxw First Nation
Songhees Nation
Stz'uminus First Nation (Chemainus)
T'Souke First Nation
Tsartlip First Nation
Tsawout First Nation
Tseycum First Nation

TABLE 1.2.6

ABORIGINAL GROUPS – NON-BOUNDARY SPECIFIC

BC Métis Federation
Métis Nation of BC

TABLE 1.2.7

ABORIGINAL ASSOCIATIONS, COUNCILS AND TRIBES

Cowichan Nation Alliance
Maa Nulth First Nations
Nicola Tribal Association
Nuu-chah-nulth Tribal Council
Sencot'en Alliance
St'at'imc Chiefs Councils
Stk'emlupsemc te Secwepemc Nation
Ts'elxweyeqw Tribe Management Limited
Tsilhqot'n National Government

1.3 Consultation Update: October 1, 2013 to December 31, 2013

1.3.1 Engagement Activity

The Trans Mountain Aboriginal Engagement Program is designed to allow for meaningful engagement with all involved, using multiple forms of engagement. Over 9,800 engagement activities have been carried out to date, with approximately 1,345 taking place between October 1, 2013 and December 31, 2013. A detailed summary of engagement with each Aboriginal community, group, association, council and tribe is detailed in Part 3 Appendix A of this Update.

1.3.1.1 Project Engagement Letters

A letter was sent from Trans Mountain on November 13, 2013 to Aboriginal marine communities to provide information about its work with Transport Canada regarding Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) studies. Communities were requested to respond to Trans Mountain if interested in receiving copies of the study results, once complete. A summary of TERMPOL studies was attached to the letter and a copy of the letter and its attachments is included in Part 3 Appendix B.

On December 16, 2013 a Project update letter was sent to Aboriginal communities, Aboriginal groups, associations, tribes and councils to provide notification that the application pursuant to Section 52 of the National Energy Board Act (NEB Act) for the Project had been filed. A copy of the letter is included in Part 3 Appendix B.

Also on December 16, 2013, copies of the completed TERMPOL studies were shared with those communities who responded to the letter on November 13, 2013. A copy of the letter is included in Part 3 Appendix B. The TERMPOL studies that were provided to communities are included in Volume 8C of the Application to the NEB.

1.3.1.2 Project Meetings

Multiple meetings and presentations took place between October 1, 2013 and December 31, 2013 to share information and receive feedback about the Project. A detailed summary of engagement with each Aboriginal community, Aboriginal group, association, council and tribe is detailed in Part 3 Appendix A of this Update.

1.3.1.3 Trans Mountain Expansion Project Website

Updates were made to the content on the Trans Mountain Expansion Project website in December, 2013 to reflect the content included in the NEB Project Application including specific updates to the Aboriginal Peoples section. Details about website updates are provided in Part 2 of this Update.

1.3.2 Summary of Outcomes of Engagement

1.3.2.1 Overview of Comments and Concerns from Aboriginal Engagement Program

The Aboriginal Engagement Program is intended to provide for meaningful engagement and to discuss areas of interest and of potential affect with all Aboriginal communities, groups associations, councils and tribes. Table 1.3.1 provides an overview of the Aboriginal interests and concerns identified by Trans Mountain to date, as included in the December 2013 NEB Application. With the exception of adding 'breaching Douglas Treaty rights', no additional interests and concerns to those presented in the December filing have been identified; however it is important to note the reoccurring nature of the interests and concerns identified throughout the ongoing engagement process. The results of engagement activities, as well as Trans Mountain's response to any issues raised through these activities, are detailed in Part 3 Appendix A of this Update.

TABLE 1.3.1

SUMMARY OF ABORIGINAL INTERESTS AND CONCERNS IDENTIFIED

Category	Interests and Concerns Raised
Regulatory Process	<ul style="list-style-type: none"> • Adequacy and suitability of the NEB process to address Aboriginal interests. • Adequacy for participant funding for meaningful engagement. • Timing of engagement process.
Land Environment	<ul style="list-style-type: none"> • Protection of the environment. • Assertion of rights and title governing traditional and cultural use of land. • Environmental impact of spills on land and in water. • Protection of historical and cultural sites. • Protection of air quality. • Medicinal plant harvesting. • Effect that spills might have on traditional activities. • Number and size of historical spills on the TMPL system.

TABLE 1.3.1 Cont'd

Category	Interests and Concerns Raised
Land Environment (cont'd)	<ul style="list-style-type: none"> • Effect that spills or pipeline leaks might have on water supply. • Limited land area of Indian Reserves for water wells and potential effects on aquifers. • Protection of inland fisheries. • Wildlife health and well-being. • Reclamation process.
Marine Environment	<ul style="list-style-type: none"> • Protection of the marine environment. • Assertion of rights and title governing traditional and cultural use of marine environment. • Environmental impact of spills on the marine environment. • Impacts on traditional cultural harvesting practices. • Protection of historical and cultural sites. • Rehabilitation and protection of the salish sea. • Clarification on dredging in proximity to the Westridge marine terminal. • Impact of increased tanker traffic through Burrard Inlet. • Clarification on the size of tankers. • Pollution at the Westridge marine terminal. • Breaching Douglas treaty rights.
Routing and construction	<ul style="list-style-type: none"> • Right-of-way traversing traditional territories and Indian Reserves. • Pipeline integrity. • Products for shipment within pipeline.
Socio-Economic Interests	<ul style="list-style-type: none"> • Impacts on traditional hunting and fishing areas, gathering areas, sacred sites, highly sensitive areas and wildlife habitat. • Protection of heritage resources. • Need to resolve historical issues first, before participating in the project review. • Employment. • Training and skill development. • Contracting opportunities. • Preferred procurement opportunities. • Revenue sharing. • Community enhancement opportunities. • Equity participation.
Engagement	<ul style="list-style-type: none"> • Timing of the engagement process. • Respectful and meaningful engagement. • Capacity funding. • Consultation should be with the crown. • Participation in environmental field studies.

1.4 Aboriginal Engagement by Community, Group, Association, Council and Tribe

1.4.1 Agreements

Trans Mountain has executed 56 agreements including Letters/Memorandums of Understanding, capacity funding, and integrated cultural assessments with an aggregate total dollar commitment to date for capacity funding in excess of \$6 million. During the period of October 1, 2013 and December 31, 2013 ten agreements were executed.

TABLE 1.4.1
AGREEMENTS EXECUTED DURING REPORTING PERIOD

Community	Agreement Name	Execution Date
Alexander First Nation	Confidential Capacity Funding Agreement	October 23, 2013
Canim Lake Band	Confidential Letter of Understanding (LOU)	November 21, 2013
Foothills Ojibway First Nation	Confidential Mutual Benefits Agreement (MBA)	December 18, 2013
Hwiltsum First Nation	Confidential Amendment to LOU	October 24, 2013
Malahat Nation	Confidential LOU	November 29, 2013
Pacheedaht First Nation	Confidential LOU	November 12, 2013
Popkum	Confidential Amendment to LOU	October 30, 2013
Seabird Island Band	Confidential Protocol Agreement	November 27, 2013
Semiahmoo First Nation	Confidential Amendment to LOU	December 6, 2013
Tsartlip First Nation	Confidential Letter of LOU	December 12, 2013

1.4.2 Preliminary Aboriginal Interests

During the period of October 1, 2013 to December 31, 2013, Trans Mountain received preliminary interests from six communities.

1.4.2.1 Montana First Nation

Preliminary interests were shared by Montana First Nation on June 17, 2013 however were inadvertently left out of the December 2013 Application. Interests focused on:

- migratory birds and listed species affected by noise;
- rare plants affected by the inability to move pipelines;
- fish/water quality affected by herbicides;
- need for meaningful consultation on pre-disturbance assessments, water crossings, environmental monitoring and adaptive management and health-related research;
- traditional land and resource use; and
- pre-contact artefacts uncovered during construction.

1.4.2.2 Hwiltsum First Nation

Preliminary interests were shared by Hwiltsum First Nation on October 9, 2013 and focused on:

- adverse impacts of oil spills and increased tanker traffic; and

- employment and business opportunities specifically focused on reducing the chances of spills, increasing the chance for effective clean up and ensuring spiritual, cultural and fish habitat sites are remediated.

1.4.2.3 Esquimalt First Nation

Preliminary interests were shared by Esquimalt Nation on November 19, 2013. Esquimalt Nation has requested confidentiality therefore the list of preliminary interests is not included in this supplemental filing.

1.4.2.4 Scia'new Indian Band

Preliminary interests were shared by Scia'new Indian Band (Beecher Bay) on November 19, 2013. Scia'new Indian Band has requested confidentiality therefore the list of preliminary interests is not included in this supplemental filing.

1.4.2.5 Sunchild First Nation

Preliminary interests were shared by Sunchild First Nation on November 28, 2013 and focused on:

- habitat loss, habitat fragmentation and impediments to wildlife movement which contribute to declining wildlife populations;
- additional noises and/or smells which disturb animals and our members;
- cumulative effects of industrialization and other land uses which are incompatible with treaty rights are not being addressed by the Crown;
- air, water and soil pollution which impacts the health of animals, plants and water; and
- traditional land and resource use.

1.4.2.6 Halalt First Nation

Preliminary interests were shared by Halalt First Nation on November 28, 2013 and focused on:

- effects of an oil spill on fish, shellfish, waterfowl and plants;
- remediation and restoration of fish stocks, herring spawn sites, shellfish and intertidal gathering areas;
- remediation of waterfowl populations;
- restoration of marine and riparian plants;
- impact on fishing, fish spawn collecting areas, shellfish and intertidal gathering areas, waterfowl hunting areas, plant harvesting sites, habitation and processing sites, recreation sites and boundary marker sites; and
- impact on food harvest for individual households.

1.4.3 Traditional Land Use Studies, Traditional Marine Use Studies and Traditional Ecological Knowledge

Included in the Aboriginal Engagement Program are the integration of Traditional Land Use (TLU) studies and Traditional Marine Use (TMU) studies, and Traditional Ecological Knowledge (TEK) into Project

planning and the design of mitigation measures, as appropriate and available. Working in partnership with TERA Environmental Consultants (TERA), during the period of October 1, 2013 to December 31, 2013 the following progress was made:

TABLE 1.4.2

TLU/TMU/TEK ACTIVITY DURING REPORTING PERIOD

Community/Group	Activity	Date
Cowichan Nation Alliance	Receipt of third party report	November 29, 2013
Halalt First Nation	Receipt of third party report.	December 12, 2013
Hwlitsum First Nation	Receipt of third party report.	November 30, 2013
Penelakut First Nation	Receipt of third party report.	December 12, 2013
Stz'uminus First Nation	Receipt of third party report	December 9, 2013

1.4.4 Engagement Summaries: New Communities, Groups, Associations, Councils and Tribes

The following section details the engagement activity conducted with newly added communities, groups, associations, councils and tribes, during the reporting period. For full engagement details see Part 3 Appendix A of this Update.

1.4.4.1 Ditidaht First Nation

Ditidaht First Nation is a marine-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project. Ditidaht First Nation is a member of the Nuu-Chah-Nulth Tribal Council; additional information is included in Section 1.4.1.11 of Part 3 of this Update.

Trans Mountain provided the TERMPOL notification letter to Ditidaht First Nation on November 13, 2013, has continued to share Project information with Ditidaht First Nation and will continue to do so as the Project evolves. Engagement activity with Ditidaht First Nation is detailed in Part 3 Appendix A of this Update.

1.4.4.2 Huu-Ay-Aht First Nation

Huu-Ay-Aht First Nation is a marine-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project. HUU-Ay-Aht First Nation is a member of the Nuu-Chah-Nulth Tribal Council; additional information is included in Section 1.4.1.11 of Part 3 of this Update.

Trans Mountain provided the TERMPOL notification letter to HUU-Ay-Aht First Nation on November 13, 2013, has continued to share Project information with HUU-Ay-Aht First Nation and will continue to do so as the Project evolves. Engagement activity with HUU-Ay-Aht First Nation is detailed in Part 3 Appendix A of this Update.

1.4.4.3 Kelly Lake Cree Nation

Kelly Lake Cree Nation is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain provided a Project notification letter to Kelly Lake Cree Nation on September 30, 2013, has continued to share Project information with Kelly Lake Cree Nation and will continue to do so as the

Project evolves. Engagement activity with Kelly Lake Cree Nation is detailed in Part 3 Appendix A of this Update.

1.4.4.4 Kelly Lake First Nation

Kelly Lake First Nation is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain provided a Project notification letter to Kelly Lake First Nation on September 30, 2013, has continued to share Project information with Kelly Lake First Nation and will continue to do so as the Project evolves. Engagement activity with Kelly Lake First Nation is detailed in Part 3 Appendix A of this Update.

1.4.4.5 Kelly Lake Metis Settlement Society

Kelly Lake Metis Settlement Society is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project. For the purposes of Project engagement, Kelly Lake Metis Settlement Society is associated with the BC Metis Federation.

Trans Mountain provided a Project notification letter to Kelly Lake Metis Settlement Society on September 30, 2013, has continued to share Project information with Kelly Lake Metis Settlement Society and will continue to do so as the Project evolves. Engagement activity with Kelly Lake Metis Settlement Society is detailed in Part 3 Appendix A of this Update.

1.4.4.6 Ktunaxa First Nation

Ktunaxa First Nation is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain provided a Project notification letter to Ktunaxa First Nation on September 30, 2013, has continued to share Project information with Ktunaxa First Nation and will continue to do so as the Project evolves. Engagement activity with Kelly Ktunaxa First Nation is detailed in Part 3 Appendix A of this Update.

1.4.4.7 Llenlley'ten First Nation (High Bar)

Llenlley'ten First Nation is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain provided a Project notification letter to Llenlley'ten First Nation on September 30, 2013, has continued to share Project information with Llenlley'ten First Nation and will continue to do so as the Project evolves. Engagement activity with Llenlley'ten First Nation is detailed in Part 3 Appendix A of this Update.

1.4.4.8 Maa Nulth First Nations

Maa Nulth First Nations is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain provided a Project notification letter to Maa Nulth First Nations on September 30, 2013, has continued to share Project information with Maa Nulth First Nations and will continue to do so as the Project evolves. Engagement activity with Maa Nulth First Nations is detailed in Part 3 Appendix A of this Update.

1.4.4.9 *Metis Nation of Alberta Gunn Metis Local 55*

Metis Nation of Alberta Gunn Metis Local 55 (Gunn Metis Local 55) is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain and Gunn Metis Local 55 held their initial Project meeting on October 31, 2013 to share Project-related information, to determine the community's interest in engagement, and to develop a process for involvement in Project activities. Trans Mountain has continued to share Project information with Gunn Metis Local 55 and will continue to do so as the Project evolves. Engagement activity with Gunn Metis Local 55 is detailed in Part 3 Appendix A of this Update.

1.4.4.10 *Michel First Nation*

Michel First Nation is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain and Michel First Nation held their initial Project meeting on December 9, 2013 to share Project-related information, to determine the community's interest in engagement, and to develop a process for involvement in Project activities. Trans Mountain has continued to share Project information with Michel First Nation and will continue to do so as the Project evolves. Engagement activity with Michel First Nation is detailed in the Application, Volume 3B, Appendix A.

1.4.4.11 *Nuu-Chah-Nulth Tribal Council*

The Nuu-Chah-Nulth is an organization identified by Trans Mountain as an entity that might have an interest in the Project or have Aboriginal interests potentially affected by the Project. Comprised of 14 member-communities, for the purposes of the Project, Trans Mountain is currently engaging with the following member-communities who have indicated an interest in the Project:

- Ditidat; and
- Huu-ay-aht.

Trans Mountain and Nuu-Chah-Nulth Tribal Council held their initial Project meeting on October 25, 2013. Trans Mountain has continued to share Project information with Nuu-Chah-Nulth Tribal Council and will continue to do so as the Project evolves. Engagement activity with Nuu-Chah-Nulth Tribal Council is detailed in Part 3 Appendix A of this Update.

1.4.4.12 *Sencot'en Alliance*

The Sencot'en Alliance is an organization identified by Trans Mountain as an entity that might have an interest in the Project or have Aboriginal interests potentially affected by the Project. Comprised of four member-communities, for the purposes of the Project, Trans Mountain is currently engaging with the following member-communities who have indicated an interest in the Project:

- Tsartlip First Nation;
- Tsawout First Nation;
- Pauquachin First Nation; and
- Semiahmoo First Nation.

Trans Mountain provided a Project notification letter to Sencot'en Alliance on September 30, 2013, has continued to share Project information with Sencot'en Alliance and will continue to do so as the Project evolves. Engagement activity with Sencot'en Alliance is detailed in Part 3 Appendix A of this Update.

1.4.4.13 St'at'imc Chiefs Council

The St'at'imc Chiefs Council is an organization identified by Trans Mountain as an entity that might have an interest in the Project or have Aboriginal interests potentially affected by the Project. The St'at'imc Nation is comprised of 11 member-communities and, for the purposes of the Project, Trans Mountain is currently engaging with Ts'kw'aylacw (Pavillion Indian Band).

Trans Mountain provided a Project notification letter to the St'at'imc Chiefs Council on September 30, 2013, has continued to share Project information with the St'at'imc Chiefs Council and will continue to do so as the Project evolves. Engagement activity with the St'at'imc Chiefs Council is detailed in Part 3 Appendix A of this Update.

1.4.4.14 Stoney Nakoda First Nation

Stoney Nakoda First Nation is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain provided a Project notification letter to Stoney Nakoda First Nation on September 30, 2013, has continued to share Project information with Stoney Nakoda First Nation and will continue to do so as the Project evolves. Engagement activity with Stoney Nakoda First Nation is detailed in Part 3 Appendix A of this Update.

1.4.4.15 Sts'wecem'cXgat'tem (Canoe Creek/Dog Creek)

Sts'wecem'cXgat'tem is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain provided a Project notification letter to Sts'wecem'cXgat'tem on September 30, 2013, has continued to share Project information with Sts'wecem'cXgat'tem and will continue to do so as the Project evolves. Engagement activity with Sts'wecem'cXgat'tem is detailed in Part 3 Appendix A of this Update.

1.4.4.16 T'exelc First Nation (Williams Lake)

T'exelc First Nation is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain provided a Project notification letter to T'exelc First Nation on September 30, 2013, has continued to share Project information with T'exelc First Nation and will continue to do so as the Project evolves. Engagement activity with T'exelc First Nation is detailed in Part 3 Appendix A of this Update.

1.4.4.17 Tsilhoquot'in National Government

Tsilhoquot'in National Government is an organization identified by Trans Mountain as an entity that might have an interest in the Project or have Aboriginal interests potentially affected by the Project.

Trans Mountain provided a Project notification letter to Tsilhoquot'in National Government on September 30, 2013 and has continued to share Project information with Tsilhoquot'in National Government and will continue to do so as the Project evolves. Engagement activity with Tsilhoquot'in National Government is detailed in Part 3 Appendix A of this Update.

1.4.4.18 *Ts'kw'aylaxw (Pavillion Indian Band)*

Ts'kw'aylaxw is a land-based community identified by Trans Mountain as a community that might have an interest in the Project or have Aboriginal interests potentially affected by the Project. Ts'kw'aylaxw is a member of the St'at'imc Chiefs Council; additional information is included in Part 3, Section 1.4.1.13 of this Update.

Trans Mountain provided a Project notification letter to Ts'kw'aylaxw on September 30, 2013, has continued to share Project information with Ts'kw'aylaxw and will continue to do so as the Project evolves. Engagement activity with Ts'kw'aylaxw is detailed in Part 3 Appendix A of this Update.

1.5 Future Aboriginal Engagement Activities

Trans Mountain will continue its engagement with Aboriginal communities, groups, associations, councils and tribes following the submission of this Update to ensure meaningful engagement continues to occur. Trans Mountain is committed to the continuation of an effective Aboriginal Engagement Program.

Trans Mountain will continue engagement through the regulatory process and into Project construction and operation. Future filings with the NEB will include updates regarding the Aboriginal Engagement Program including:

- Aboriginal interests and concerns raised;
- Executed agreements;
- Project benefits provided such as employment, training, procurement and community investments;
- Response and mitigation plans and strategies; and
- TLU/TMU/TEK studies.

APPENDIX A – ENGAGEMENT LOGS

APPENDIX A-1

ABORIGINAL COMMUNITIES LOCATED IN THE
EDMONTON TO ALBERTA/BRITISH COLUMBIA BORDER REGION

A-1-01: Alexander First Nation
A-1-02: Alexis Nakota Sioux Nation
A-1-03: Aseniwuche Winewak Nation of Canada
A-1-04: Enoch Cree Nation
A-1-05: Ermineskin Cree Nation
A-1-06: Foothills Ojibway First Nation
A-1-07: Métis Nation of Alberta Gunn Métis Local 55
A-1-08: Horse Lake First Nation
A-1-09: Louis Bull Tribe
A-1-10: Métis Regional Council Zone IV of the Métis Nation of Alberta
A-1-11: Montana First Nation
A-1-12: Nakcowinewak Nation of Canada
A-1-13: O'Chiese First Nation
A-1-14: Paul First Nation
A-1-15: Saddle Lake Cree
A-1-16: Samson Cree Nation
A-1-17: Sturgeon Lake Cree Nation
A-1-18: Sunchild First Nation

APPENDIX A-1-01
ALEXANDER FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/11/2013	In-Person	Chief Herb Arcand Caroline O'Driscoll (Legal Counsel)	Regan Schlecker (KMC), Jeff Smith (KMC)	<p>MEETING RECORD</p> <p>Team member met with Alexander First Nation (AFN) representatives, including Chief H. Arcand, and C. O'Driscoll. Team member explained why the President of Kinder Morgan Canada could not make it to the meeting today and another team member offered apologies. An alternative date of October 23 was presented for a meeting with the President of Kinder Morgan Canada and the Chief accepted this date.</p> <p>Opening comments by Councillors included:</p> <ul style="list-style-type: none"> -the need for a training hub or facility that could provide ongoing training to Alexander members and also be a local business. -appreciation of the good relationship and the need to build on this relationship. Chief Arcand explained that he would still like to see the elders tour take place. <p>A general discussion took place between team member and C. O'Driscoll regarding the Capacity Funding agreement and a mutual benefits agreement (MBA). Team member suggested that a working group be formed to advance MBA discussions. C. O'Driscoll stated that AFN does not have adequate project information. Team member replied that project information has been presented and hand outs given at many meetings over the past year.</p> <p>It was agreed that the legal counsel will draft the capacity funding agreement. There were also discussions about the status of the Traditional Land Use Study.</p>	None
10/15/2013	Email-Incoming	Dale Arcand (Director of Alexander Youth Career Development Program)	Regan Schlecker (KMC)	<p>D. Arcand emailed team member to invite KMC to attend the 4th annual Alexander First Nation Career Fair 2013 on November 28, 2013. D. Arcand attached an invite letter, registration form and poster.</p> <p>Team member emailed D. Arcand and committed to forwarding the invitation along to HR and the training and employment project team.</p>	None
10/21/2013	Email-Outgoing	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC)	Team member emailed C. Arcand to provide feedback on the draft Workplan.	None
10/24/2013	In-Person	Caroline O'Driscoll (Legal Counsel)	Ian Anderson	Team member met with C. O'Driscoll. C. O'Driscoll asked questions regarding KMC's MBA approach and team member responded with an explanation about KMC's MBA approach and goals with Alexander FN."	None
10/30/2013	Email-Outgoing	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC)	Team member wrote to C. Arcand to see if meeting dates Oct 4, 2013 and Nov 26, 2013 were available. Team member also inquired if C. Arcand and K. Arcand and the AFN economic development staff were available for a meeting the week of Nov 21, 2013.	None
10/31/2013	Email-Incoming	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC)	<p>C. Arcand emailed team member to state that meeting availability would be confirmed with the Chief and the AFN Economic Development staff.</p> <p>Team member emailed C. Arcand to request a map of AFN Traditional Territory.</p>	None
11/4/2013	Email-Incoming	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC)	<p>C. Arcand emailed team member to indicate that a request for an AFN Traditional Territory map had been placed with AFN's GIS department. C. Arcand resolved to confirm Chief Arcand's availability for November 26, 2013 and K. Arcand's availability for November 19, 2013 and November 21, 2013.</p> <p>Team member emailed C. Arcand to indicate that two members of the KMC training team would be attending the AFN job fair on November 28, 2013. Team member suggested a meeting with C. Arcand meet at the job fair to discuss business capabilities, contracting opportunities, training and employment with the KMC training team.</p> <p>C. Arcand emailed team member to confirm attendance of both K. Arcand and C. Arcand at the AFN job fair.</p>	None
11/5/2013	Email-Outgoing	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC)	Team member wrote to inquire if they could change dates for the meeting on Nov. 19, 2013 to Nov 21, 2013.	None
11/6/2013	Email-Incoming	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC)	The November 21, 2013 meeting was confirmed for team member to meet members of the AFN business team as well as the economic development and HRD representatives. C. Arcand provided logistical details for the meeting.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/14/2013	Email-Outgoing	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC)	Team member emailed C. Arcand and stated that KMC training team members would also attend the November 21, 2013 meeting.	None
11/19/2013	Email-Outgoing	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC), Jennifer Hooper (KMC), Martha Matthew (KMC)	Team member emailed C. Arcand and other team members a proposed agenda for an upcoming meeting with AFN on November 21, 2013. The agenda included Project procurement and contracting opportunities, AFN business capabilities and business development, Project training, employment opportunities and programs and AFN training, employment goals, programs and aspirations. C. Arcand emailed team member and approved the meeting agenda.	None
11/21/2013	Email-Incoming	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC)	C. Arcand emailed team member to request logistics details for the meeting scheduled November 27, 2014. Team member emailed C. Arcand and enquired if there were enough outstanding procurement- and training-related matters to warrant a meeting on November 27, 2014. Team member noted that a meeting should be scheduled to discuss community benefits for AFN and to set up a schedule of activities that would contribute to the drafting of an MBA. Team member requested C. Arcand's input on the date and content of the next meeting between KMC and AFN.	None
11/21/2013	In-Person	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC), Jennifer Hooper (KMC)	Team members met with K. Arcand, L. Paul, B. Arcand, M. Arcand, M. Arcand, C. Arcand. Attendees discussed business interests of AFN and members' role in economic development. Team members gave overview of TMEP opportunities and procurement information and stated that there would be two construction spreads in Alberta. M. Arcand stated that other companies had delivered procurement workshops and team member indicated that KMC would offer a workshop in Spring, 2014. K. Arcand asked if there would be a preferred vendor list and B. Arcand asked if there was going to be an announcement about prime contractors. Team member provided an overview of training programs and pipeline construction jobs that the Project would provide. L. Paul provided an overview of work done by AFN with the Calgary Fire Department and reminded team members that this issue had been raised with KMC's President. Team member explained how the MBA would proceed and provide an opportunity to formalize the relationship. Team member provided an overview of KMC's approach to negotiations, while K. Arcand noted that a team would be formed and talks could begin soon. Action items: team members to have a follow-up meeting at AFN to provide more Project information; AFN to provide a date for team members to meet with AFN negotiation team.	None
11/25/2013	Email-Outgoing	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC)	Team member emailed C. Arcand to request L. Paul's email. C. Arcand emailed team member to provide L. Paul's contact information. Team member emailed C. Arcand to enquire about holding an AFN community Open House in early January 2014 stating that the open house would be about two hours and include lunch or dinner. Team member noted that KMC would provide Project information and technical experts to answer questions. Team member enquired about preferred dates for an Open House to be held at AFN. C. Arcand emailed team member to state that dates for an Open House in January 2014 would be verified with K. Arcand.	None
11/27/2013	Email-Incoming	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC)	C. Arcand wrote to team member to follow up on Nov 27/2013 meeting. C. Arcand wrote that community members inquired about details about an upcoming meeting with KMC team members. C. Arcand wanted to confirm that the meeting would be held at River Cree Marriott Team member replied that team members were interested in setting up a short meeting after the AFN job fair to provide updates and information. Team member also wrote that team member was interested in holding a meeting to discuss community benefits and to set a process or schedule for meetings about a MBA draft.	None
11/28/2013	Email-Outgoing	Collette Arcand (Director of Industry Relations), RJ Arcand (GIS Technician)	Paul Anderson (TERA)	Team member email C. Arcand and R.J. Arcand and attached a copy of the 2012/2013 Biophysical Field Program Results Review for AFN. Team member also noted that TLU Results Review data would be reviewed with AFN at a later date.	None
12/5/2013	Email-Outgoing	Collette Arcand (Director of Industry Relations)	Paul Anderson (TERA), Jeff Smith (KMC), Karen Baylis (TERA)	C. Arcand emailed team member to note that C. Arcand had left a voicemail regarding a meeting on December 10, 2013. C. Arcand, K. Arcand, and two team members had agreed to meet at the TERA office in Calgary. Team member emailed C. Arcand to state unavailability to meet, noting that team member could call in for the meeting as an alternative. C. Arcand emailed team member and resolved to let other attendees know that team member would call in for the meeting.	None
12/9/2013	Email-Outgoing	Collette Arcand (Director of Industry Relations)	Jeff Smith (KMC), Karen Baylis (TERA), Maria	Team member emailed C. Arcand, K. Arcand, and team members to arrange a meeting to discuss TLU. Meeting scheduled December 10, 2013.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
		Relations), Ken Arcand (Executive Director)	Hoiss (TERA)		
12/16/2013	Email- Outgoing	Chief Herb Arcand	Regan Schlecker (KMC)	Team member emailed Chief H. Arcand and notified AFN of the Project's filing with the NEB. Team member included the press release of the filing for AFN's records.	None
12/16/2013	Letter - Outgoing	Chief Herb Arcand	Ian Anderson (KMC)	Team member sent a letter to Chief H. Arcand and notified AFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-1-02
ALEXIS NAKOTA SIOUX NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/22/2013	Email- Outgoing	Dwayne Alexis (Economic Development Officer)	Jamie Andrews (KMC)	Team member emailed D. Alexis and requested the address of that day's meeting location. D. Alexis emailed team member and provided directions to the ANSFN office for the meeting.	None
10/22/2013	In-Person	Amy F. Lalji, Chief Clayton Tony Alexis, Councilor Darwin Alexis, Councilor Henry Alexis, Councilor Gloria Potts, Dwayne Alexis (Economic Development Officer), Ryan McQuilter (President/CEO Alexis Group), Councilor Lonnie Letendre, Former Chief Rod Alexis	Jeff Smith (KMC), Jamie Andrews (KMC)	Team members met with ANSFN members to discuss Traditional Land Use (TLU), and status of the Letter of Understanding (LOU): <ul style="list-style-type: none"> • Chief T. Alexis indicated hoping to come to terms and understanding regarding the existing capacity agreement in order to develop a mutual understanding prior to the meeting with KMC's president. • Chief T. Alexis explained a new approach being developed under the new leadership. • Team member provided an update on TMEP. TLU Update <ul style="list-style-type: none"> • Attending ANSFN members indicated having no recollection that there have been any activities associated with the TLU. • Team member to develop a summary of activities to date regarding the TLU. Status of LOU <ul style="list-style-type: none"> • A. Lalji commented that community consultation with ANSFN may be premature. <ul style="list-style-type: none"> • Parties expressed interest in completing the framework. • A. Lalji explained that the funding should provide participation in regulatory processes. • Team member to review and provide summary of deliverables that have been completed in the LOU and what deliverables are still outstanding. And provide this to ANSFN. Other <ul style="list-style-type: none"> • ANSFN member requested that the consultation process be recorded for cultural and historical use. 	None
10/25/2013	Email- Outgoing	Dwayne Alexis (Economic Development Officer)	Jamie Andrews (KMC)	Team member emailed D. Alexis about the information requests regarding the follow up items from their meeting to the appropriate parties. D. Alexis emailed team member and provided an email list of Councillors.	None
10/25/2013	Email- Outgoing	Dwayne Alexis (Economic Development Officer)	Jeff Smith (KMC)	Team member emailed D. Alexis and attached the Alexis LOU. Team member listed the key dates and current status of the ANSFN TLU study: 1. Alexis TLU - Map Review session, over flights and ground recon. Trip - October - November, 2012 - Community interviews (48 people) - May 16-17, 2013 ASFN TEK/Environmental field studies participation: - ASFN members participated in many studies during fall 2013 and spring 2013. 2. Alexis/KMC Capacity Funding LOU 3. Meeting between Chief and Council and KMC president suggested for October 26 or December 4, 2013. 4. Issue that TEK and TLU work stopped at the beginning of summer. Team member requested to be called about this issue the following week to determine a resolution.	None
10/30/2013	Email- Outgoing	Dwayne Alexis (Economic Development Officer)	Jamie Andrews (KMC)	Team member emailed D. Alexis to confirm/determine upcoming dates for meetings between KMC and ANSFN.	None
11/6/2013	Email- Outgoing	Chief Clayton Tony Alexis	Ian Anderson (KMC)	Chief C. Alexis sent a letter via email to team member outlining issues from ANSFN LOU.	None
11/6/2013	Letter - Outgoing	Chief Clayton Tony Alexis	Ian Anderson (KMC)	T. Alexis wrote a letter to team member regarding issues arising from the ANSFN LOU and TLU Study. T. Alexis requested differences to be resolved by the December 4, 2013 meeting.	None
12/15/2013	Email- Incoming	Amy F. Lalji (Partner at Miller Thomson LLP)	Jeff Smith (KMC)	A. Lalji emailed team member regarding an amendment to the LOU. A. Lalji added that ANSFN would still proceed with a meeting the following day (December 17, 2013).	None
12/16/2013	Email- Outgoing	Amy F. Lalji (Partner at Miller Thomson LLP)	Jeff Smith (KMC)	Team member emailed A. Lalji to confirm time to present on the Agenda meeting scheduled for December 17, 2013. Team member noted that the time was changed from 11AM until 2am to 12PM until 2PM.	None
12/16/2013	Letter - Outgoing	Chief Clayton Tony Alexis	Ian Anderson (KMC)	Team member sent a letter to Chief C. Alexis and notified ANSFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-1-03

ASENIWUCHE WINEWAK NATION OF CANADA

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/1/2013	Phone - Attempt	Jaymie Kugler (Consultation Manager)	Angelina Silver (TERA)	Team member called J. Kugler and left a voice mail to follow up on the communities TLU study for TMEP. Team member left contact info and requested a call back if time allowed.	None
10/1/2013	Email- Outgoing	Jaymie Kugler (Consultation Manager)	Angelina Silver (TERA)	Team member emailed J. Kugler and informed of a previously left voice mail. Team member inquired as to an approximate receipt date of the TLU report and offered assistance if needed.	None
10/2/2013	Email- Incoming	Jaymie Kugler (Consultation Manager)	Angelina Silver (TERA)	J. Kugler emailed team member and notified they would be out of office on Monday but hoped to have the TLU Report completed by Friday, Oct. 11, 2013.	None
10/8/2013	Email- Outgoing	Julie Newall (Environmental Biologist)	Angelina Silver (TERA)	Team member emailed J. Newall and noted they were given Stakeholder's contact information and informed that Stakeholder is writing the communities report by J. Kugler. Team member attached the proposed P1/P2 corridor shapefiles within the community's territory which were requested to be sent to Stakeholder. Team member directed Stakeholder to contact other team member with questions	None
10/10/2013	Email- Outgoing	Julie Newall (Environmental Biologist)	Angelina Silver (TERA), Mike Horn (KMC)	Team members exchanged emails with J. Newall and discussed the protocol for updating figures in the Report.	None
10/17/2013	Email- Incoming	Josh McAlpine (Consultation Officer)	Karen Baylis (TERA)	J. McAlpine emailed Team member and attached the Work Agreement containing the Certificate of Insurance. Stakeholder asked if Team Member would like an additional copy mailed to them as well. Team Member emailed Stakeholder and stated that there was no need to mail a copy, but that Team Member would return a signed and fully executed copy to Aseniwuche Winewak Nation. Team Member asked Stakeholder if their Worker's Compensation Board coverage was under the Nation's name or if it was covered by a company. Stakeholder emailed Team Member and stated that the Worker's Compensation Board coverage was under the Nation's name.	None
10/24/2013	Email- Outgoing	Josh McAlpine (Consultation Officer)	Maria Hoiss (TERA)	Team Member emailed Stakeholder and attached an executed copy of the Work Agreement.	None
11/13/2013	Email- Outgoing	Jaymie Kugler (Consultation Manager)	Paul Anderson (TERA), Angelina Silver (TERA), Mike Horn (KMC)	Team member emailed J. Kugler on November 13, 2013 to identify a date when the community report will be completed by AWN.	None
11/18/2013	Phone - Incoming	Jaymie Kugler (Consultation Manager)	Angelina Silver (TERA)	J. Kugler left a voice message for team member indicating the TLU Report was completed. J. Kugler inquired where the report and invoice should be sent.	None
11/18/2013	Phone - Outgoing	Jaymie Kugler (Consultation Manager)	Angelina Silver (TERA)	Team member returned J. Kugler's call indicating where to send the finished TLU Report and invoice.	None
11/18/2013	Email- Outgoing	Jaymie Kugler (Consultation Manager)	Angelina Silver (TERA)	Team member contacted J. Kugler with a link to attach the finished TLU Report to.	None
11/18/2013	Email- Incoming	Jaymie Kugler (Consultation Manager)	Angelina Silver (TERA)	J. Kugler emailed team member to confirm the AWN TLU Report was properly linked to the address provided earlier via email on November 18, 2013. J. Kugler indicated hard copies and discs of the AWN TLU report were sent on courier to team member. Team member confirmed the AWN TLU report was accessible.	None
11/21/2013	Email- Outgoing	Jaymie Kugler (Consultation Manager)	Angelina Silver (TERA)	Team member emailed J. Kugler and confirmed receipt of the TLU report submitted by AWN.	None
11/28/2013	Email- Outgoing	Jaymie Kugler (Consultation Manager)	Paul Anderson (TERA)	Team member emailed J. Kugler and provided a copy of the 2012/2013 Biophysical Field Program Results Review report. Team member also noted that review of the TLU data would be conducted at a later date; this meeting was, as yet, undetermined.	None
12/16/2013	Letter - Outgoing	David McPhee (President)	Ian Anderson (KMC)	Team member sent a letter to Chief D. McPhee and notified <u>Aseniwuche Winewak Nation of Canada</u> (AWN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-1-04
ENOCH CREE NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/11/2013	SMS Message	Leigh Ann Ward (Consultation Lead Manager)	Jeff Smith (KMC)	L. Ward texted team member and mentioned that L. Ward would track down the Letter of Understanding (LOU) and added that the acting Chief will sign and send it on October 12, 2013. Team member texted L. Ward and asked to have the signed LOU sent directly to team member.	None
10/28/2013	Email-Outgoing	Leigh Ann Ward (Consultation Lead Manager)	Angelina Silver (TERA)	Team member emailed L. Ward to schedule a Results Review meeting and proposed November 4, 2013 as a possible meeting date.	None
10/29/2013	In-Person		Michelle Langfeldt (TERA)	TERA facilitators led Elder and community interviews for the Project with Elders. Concerns raised: -proper consultation, respect for land, responsible construction, safety -protection of culture and spirituality -cooperation rather than dictation -impact of leaks, contamination -maintenance of pipes -wildlife/wildlife habitat -reduction of hunting areas -education of youth, traditional knowledge, passing of knowledge to youth -unhealthy game and fish -impact on medicines and harvesting areas, reduction and accessibility of areas -sustainability, contamination and economic development on reserve -protection of water	Environment - Rare Plants and Communities, Marine - Water Quality/Quantity, Terrestrial - Freshwater Fish, Terrestrial - Traditional Land Use, Terrestrial - Vegetation/Ecosystem Mapping, Terrestrial - Land Spills - Environmental Impact
10/30/2013	SMS Message	Leigh Ann Ward (Consultation Lead Manager)	Jeff Smith (KMC)	L. Ward texted team member and asked to update the LOU and send to address provided so it does not get lost. Team member agreed to update and resent the LOU.	None
10/30/2013	SMS Message	Leigh Ann Ward (Consultation Lead Manager)	Jeff Smith (KMC)	Team member texted L. Ward and asked if L. Ward was able to find the LOU that was mailed. L. Ward replied that there was no success in finding the LOU	None
10/31/2013		Community Members	Chris Menzies (TERA) Brad Lapham (TERA)	The TLU and TEK results review meeting was held with ECN on October 31, 2013. The objective of the meeting was to provide a summary of the information shared by community members on TLU and TEK studies and participants on biophysical studies for the project and provide an opportunity for the community to verify the information and concerns shared. Unresolved concerns and requests for follow-up in the field were reviewed during the results review meeting. Concerns: - Use of 4x4 vehicles by hunters and public - Eagle habitat Mitigation measures discussed: - Limiting access to the ROW by decommissioning roads and allowing shrubs to grow back. - Nests will be monitored for disturbance prior to and during construction	Wildlife habitat, access
11/5/2013	Phone - Outgoing	Leigh Ann Ward (Consultation Lead Manager)	Paul Anderson (TERA)	Team member called L. Ward. Left a message requesting an Elders Community meeting.	None
11/19/2013	SMS Message	Leigh Ann Ward (Consultation Lead Manager)	Jeff Smith (KMC)	L. Ward stated that TERA did not allow Enoch to stop at places of interest during the TLU and therefore they would like to go back to places at a later date. Team member relayed that Team member would talk to TERA about the issues put forth.	None
11/21/2013	Email-Outgoing	Leigh Ann Ward (Consultation Lead Manager)	Paul Anderson (TERA)	Team member emailed L. Ward to schedule a TLU results review meeting on November 22, 2013.	None
11/21/2013	SMS Message	Leigh Ann Ward (Consultation Lead Manager)	Jeff Smith (KMC)	L. Ward texted team member and noted that the Enoch Legal department had made changes to the LOU, and asked for the fax number to send it to. Team member texted L. Ward the fax number to send the LOU and forwarded the number to the legal counsel. L. Ward asked the Team member if the legal counsel called the Team member. Team member texted L. Ward and confirmed that no phone call was received.	None
11/28/2013	Email-Outgoing	Leigh Ann Ward (Consultation Lead Manager)	Jeff Smith (KMC)	Team member emailed L. Ward to advise that concerns that were previously outlined have been forwarded to TERA. Also referenced an amendment to the LOU and invited further discussion with Enoch Cree Nation's (ECN) lawyer if any concerns exist.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/28/2013	Email-Outgoing	Leigh Ann Ward (Consultation Lead Manager)	Paul Anderson (TERA)	Team member emailed L. Ward with the results of the biophysical field program in which ECN participated. Results Review memo attached. Referenced the Results Review meeting which will be scheduled at a future date.	None
12/6/2013	SMS Message	Leigh Ann Ward (Consultation Lead Manager)	Jeff Smith (KMC)	L. Ward texted team member and asked if the lawyer had called the Team member. Team member replied to L. Ward and confirmed that no phone call had been received. Team member replied to L. Ward and stated that the team member would talk to TERA and discuss concerns.	None
12/16/2013	Letter - Outgoing	Chief Ronald Morin	Ian Anderson (KMC)	Team member sent a letter to Chief R. Morin and notified ECN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-1-05
ERMINESKIN CREE NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/12/2013	Email- Outgoing	Carol Wildcat (Consultation Coordinator)	Angelina Silver (TERA)	Team Member emailed C. Wildcat and asked for potential dates to set up a Results Review meeting of the TEK and TLU studies.	None
10/15/2013	Email- Incoming	Carol Wildcat (Consultation Coordinator)	Angelina Silver (TERA)	C. Wildcat emailed team member and asked if their monitors would be compensated for the review, as well as if October 31, 2013 worked as a potential meeting date.	None
10/16/2013	Email- Outgoing	Carol Wildcat (Consultation Coordinator)	Jeff Smith (KMC)	Team member emailed C. Wildcat to confirm upcoming meeting on October 29, 2013.	None
10/18/2013	Email- Outgoing	Carol Wildcat (Consultation Coordinator)	Jeff Smith (KMC)	Team member contacted C. Wildcat to change the time of the meeting to later in the day. C. Wildcat confirmed that this would be fine.	None
10/25/2013	Email- Outgoing	Carol Wildcat (Consultation Coordinator)	Paul Anderson (TERA)	Team member emailed C. Wildcat and suggested meeting on October 31, 2013 to confirm TLU Study results from the year prior.	None
10/29/2013	In-Person	Carol Wildcat; (Consultation Coordinator)	Jeff Smith (KMC); Jamie Andrews (KMC)	A meeting was held between Team Members and Ermineskin Cree Nation representatives to discuss the LOU, Tera field studies and possible interest in MBA.	None
10/31/2013	Phone - Attempt	Carol Wildcat (Consultation Coordinator)	Paul Anderson (TERA)	Team member left a message for C. Wildcat to call team member back to confirm a time to discuss TLU Study results.	None
10/31/2013	Phone - Incoming	Carol Wildcat (Consultation Coordinator)	Paul Anderson (TERA)	C. Wildcat phoned team member and confirmed TLU/TEK/Socio Study results would be discussed at 10:30 am on October 31, 2013. Team member confirmed with C. Wildcat that a TLU Study was conducted in 2012.	None
11/21/2013	Phone - Outgoing	Carol Wildcat (Consultation Coordinator)	Jamie Andrews (KMC)	Team member called C. Wildcat and confirmed that "Ermineskin Cree Nation" should be used in the Facility Application not "Ermineskin Tribe".	None
12/16/2013	Letter - Outgoing	Chief Craig Makinaw	Ian Anderson (KMC)	Team member sent a letter sent a letter to Chief C. Makinaw and notified ERCN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-1-06
FOOTHILLS OJIBWAY FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/8/2013	Phone - Attempt	Chief Jimmy O'Chiese	Regan Schlecker (KMC)	Team member left a message for Chief J. O'Chiese to return team member's call.	None
11/8/2013	Email- Outgoing	Chief Jimmy O'Chiese	Regan Schlecker (KMC)	Team member contacted Chief J. O'Chiese by email on November 8, 2013 after leaving a message at the office and trying Chief J. O'Chiese cell phone. Team member provided Chief J. O'Chiese with a phone number to contact the Team member.	None
11/12/2013	Email- Incoming	Cathrine Shandler (Hutchins, Legal Inc)	Jeff Smith (KMC)	C. Shandler emailed team member and inquired about any news about holding the Signing Ceremony on November 17, 2013. C. Shandler stated that Foothills Ojibway Society (FOS) would prefer to hold the ceremony on November 17, 2013. If November 17, 2013 was not possible then FOS would be willing to sign the agreement at a date in the future.	None
11/12/2013	Email- Outgoing	Chief Jimmy O'Chiese	Regan Schlecker (KMC)	Chief J. O'Chiese emailed team member and provided J. O'Chiese's contact information. Team member committed to calling Chief J. O'Chiese on November 13, 2013.	None
11/13/2013	Email- Outgoing	Cathrine Shandler (Hutchins, Legal Inc)	Jeff Smith (KMC)	Team member emailed C. Shandler and mentioned that KMC would not be able to hold the Signing Ceremony on November 17, 2013, as the President of KMC was not available. Team member added that KMC would look at dates for the signing Ceremony and would let C. Shandler know when the agreement would be finalized and sent to C. Shandler. C. Shandler emailed team member and asked to have the Agreement by November 21, 2013 so Chief O'Chiese could sign it.	None
11/13/2013	Phone - Attempt	Chief Jimmy O'Chiese	Regan Schlecker (KMC)	Team member called Chief J. O'Chiese and left a voice message requesting a call back.	None
11/20/2013	Email- Incoming	Cathrine Shandler (Hutchins, Legal Inc), Terri-Lee Oleniuk	Jeff Smith (KMC)	C. Shandler emailed T. Oleniuk and team member and asked if there was any information on the Mutual Benefits Agreement (MBA). C. Shandler also wanted to pass on that the FOS would like to propose December 14, 2013 for the signing ceremony.	None
11/26/2013	Email- Outgoing	Cathrine Shandler (Hutchins, Legal Inc)	Jeff Smith (KMC)	Team member emailed C. Shandler and stated that the MBA had been approved by the KMC legal team and would be presented to the KMC President on December 2, 2013..	None
11/29/2013	Email- Incoming	Cathrine Shandler (Hutchins, Legal Inc)	Jeff Smith (KMC)	C. Shandler emailed team member and confirmed that C. Shandler would pass on to FOS that the Signing Ceremony would be in early January and would get back to the team member with dates. C. Shandler stated that in regards to the MBA that the team member should send two copies to C. Shandler and C. Shandler would coordinate with Chief O'Chiese to get the MBA signed. Team member emailed C. Shandler and stated that December 14, 2013 for the Signing Ceremony was taken under consideration.	None
12/3/2013	Email- Incoming	Cathrine Shandler (Hutchins, Legal Inc)	Jeff Smith (KMC)	C. Shandler emailed team member and asked if there was any information on the MBA. C. Shandler mentioned that Chief J. O'Chiese would like the hard copies sent directly to his home, address to follow.	None
12/5/2013	Email- Outgoing	Cathrine Shandler (Hutchins, Legal Inc)	Jeff Smith (KMC)	Team member emailed C. Shandler and stated that KMC president was to sign the agreement and would keep C. Shandler posted. C. Shandler emailed team member and confirmed that team members would be meeting during the week of December 9, 2013. C. Shandler added that if the President of KMC was available to travel to Hinton on December 14, 2013 that FOS could arrange to have someone sign the agreement for Chief J. O'Chiese. Team member emailed C. Shandler and confirmed that the plan is for the team members to meet on December 6, 2013 and discuss the agreement and that the team member would follow up with the meeting team on December 9, 2013	None
12/16/2013	Letter - Outgoing	Chief Jimmy O'Chiese	Ian Anderson (KMC)	Team member sent a letter sent a letter to Chief J. O'Chiese and notified FOS of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-1-07

MÉTIS NATION OF ALBERTA GUNN MÉTIS LOCAL 55

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/4/2013	Phone - Incoming	Tracey Friedel (Director)	Jeff Smith (KMC)	T. Friedel called team member and discussed the Gunn Métis Local 55 (GML) interest in the Trans Mountain Expansion Project (Project) and how it may impact their community members. Team member discussed providing T. Friedel with additional information and team member stated they would email T. Friedel with possible dates to meet in October.	None
10/7/2013	Email- Outgoing	Tracey Friedel (Director)	Jeff Smith (KMC)	Team member emailed T. Friedel to arrange a meeting in order to discuss the Project and GML interests.	None
10/10/2013	Email- Incoming	Tracey Friedel (Director)	Jeff Smith (KMC)	T. Friedel contacted team member regarding previous contact team member had made. T. Friedel confirmed availability for meeting on Oct 18 or 21, 2013 and requested team member call at earliest convenience to set up date, time and location. Team member responded to T. Friedel and asked if Oct 24 or 31 would work better for a meeting.	None
10/31/2013	In-Person	Tracey Friedel (Director)	Jeff Smith (KMC), Jamie Andrews (KMC)	Team members met with T. Freidel and D. Freidel of GML on October 31, 2013. T. Freidel stated the GML want to better understand the Project and create a proposal to conduct a Traditional Land Use (TLU) study. T. Freidel added that they had recently been to a presentation by the National Energy Board (NEB) on the NEB process and that they now realize that they need to get informed in order to participate in the process. Team member explained that Kinder Morgan Canada (KMC) will require more information about the GML people, who they are and where they are located and what types of land use activities their memberships conduct. Team member also explained that they received a letter from GML in the fall of 2012 requesting to meet with KMC and that the team member tried to contact GML to have that meeting but GML did not respond. GML explained that they had issues with capacity in the fall of 2012 and that now they were in a better position to participate. GML explained that they interviewed 25 elders in the summer of 2013 and are now starting to build information about land use.	None
11/1/2013	Email- Incoming	Tracey Friedel (Director)	Ian Anderson (KMC), Jeff Smith (KMC)	T. Friedel emailed team member on November 1, 2013 to confirm that a letter indicating that GML are a historic and contemporary Metis community. T. Friedel provided contact information for T. Friedel, D. Friedel and GML.	None
11/12/2013	Letter - Incoming	Tracey Friedel (Director)	Jeff Smith (KMC)	T. Friedel provided team member with a draft scope of work for GML TLU Study in relation to the Project. Team member was provided with a list of study objectives, deliverables, work plan, analysis, and final reporting.	None
11/12/2013	Email- Incoming	Tracey Friedel (Director)	Jeff Smith (KMC)	T. Friedel emailed team member on November 12, 2013 with several attachments from GML regarding the Project.	None
11/29/2013	Email- Outgoing	Tracey Friedel (Director)	Jeff Smith (KMC)	Team member emailed T. Friedel to note that a response to GML's earlier correspondences from November 2013 was forthcoming. T. Friedel emailed team member and expressed interest in learning KMC's views on how to proceed.	None
12/3/2013	Letter - Outgoing	Tracey Friedel (Director)	Jeff Smith (KMC)	Team member sent a letter to T. Friedel dated December 3, 2013 via email on December 4, 2013. Team member agreed to clarify how the Métis Regional Council Zone IV conducted outreach to the Métis Locals in the zone. Team member agreed to answer any questions the GML may have about the Project and team member indicated that KMC is reviewing GML proposal for the TLU Study.	None
12/4/2013	Email- Outgoing	Tracey Friedel (Director)	Jeff Smith (KMC)	Team member emailed T. Friedel on December 4, 2013 with a letter attachment in response to T. Friedel letter and proposals from November 2013. Team member committed to calling T. Friedel later in the day on December 4, 2013.	None
12/4/2013	Phone - Incoming	Tracey Friedel (Director)	Jeff Smith (KMC)	T. Friedel called team member on December 4, 2013 and informed team member: -T. Friedel received team member's December 2, 2013 letter. - GML was disappointed by the letter and believe that KMC did not properly engage GML. -T. Friedel stated the GML proposals were reasonable and reflected how other groups were dealt with by KMC. Team member told T. Friedel that at this point KMC would meet with GML but could not accept the GML proposal for a TLU Study but may be able to put on open houses for GML. T. Friedel declined and informed team member that T. Friedel would contact NEB and legal counsel before getting back to KMC.	None
12/12/2013	Email- Outgoing	Tracey Friedel (Director)	Jeff Smith (KMC)	Team member wrote to T. Friedel to say that a response letter had been attached addressing the GML letter and proposals sent to KMC in November, 2013. Team member wrote that team member will call later in the day to discuss.	None

APPENDIX A-1-08
HORSE LAKE FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/11/2013	Email-Incoming	Jenny Geernaert (Horse Lake First Nation Industry Relations Corporation)	Jeff Smith (KMC)	J. Geernaert emailed team member and requested an opportunity to reschedule as there had been unforeseen scheduling conflicts.	None
10/16/2013	Email-Outgoing	Jenny Geernaert (Horse Lake First Nation Industry Relations Corporation)	Jeff Smith (KMC)	Team member emailed J. Geernaert and noted that the KMC office location was in Calgary but the meeting could take place in Edmonton if it was more convenient. Team member enquired what time and location would work for J. Geernaert to meet.	None
12/16/2013	Letter - Outgoing	Chief Richard Horseman	Ian Anderson (KMC)	Team member sent a letter to Chief R. Horseman and notified Horse Lake First Nation (HLFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-1-09

LOUIS BULL TRIBE

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/17/2013	Email- Outgoing	Lorraine White (Consultation Coordinator)	Angelina Silver (TERA)	Team Member emailed L. White and asked for a potential dates for the Results Review meeting to discuss the Traditional Ecological Knowledge (TEK) studies. L. White emailed Team Member and stated that Louis Bull First Nation (LBFN) were available to meet on October 23, 2013. Team member emailed L. White and stated that October 23, 2013 would work for TERA. Team member asked L. White about how many community members would be in attendance and where the event would take place.	None
10/21/2013	Email- Outgoing	Lorraine White (Consultation Coordinator)	Angelina Silver (TERA)	Team member emailed L. White and asked if October 23, 2013 was still a valid day for a Results Review meeting, as well as what time would work best and how many community members would be in attendance. Team member emailed L. White and stated that October 23, 2013 would not work for the LBFN team due to scheduling conflicts and that LBFN would be in touch to discuss alternative options and dates.	None
10/24/2013	Email- Outgoing	Lorraine White (Consultation Coordinator)	Angelina Silver (TERA)	Team member emailed L. White on October 21, 2013 and communicated that due to an unforeseen scheduling conflict, the initial meeting date set for October 23, 2013 was no longer feasible. L. White responded on October 22, 2013 and suggested rescheduling the meeting for October 30, 2013, otherwise the meeting would have to be pushed back until November 2013. Team member responded to L. White on October 24, 2013 and informed L. White that the best possible method of relaying the collected information back to LBFN was currently being evaluated and the team member stated that L. White will be kept posted once a course of action had been decided upon.	None
11/7/2013	Email- Outgoing	Lorraine White (Consultation Coordinator)	Jeff Smith (KMC)	Team member emailed L. White to suggest a Result Review meeting during the week of November 18, 2013. L. White emailed team member and confirmed availability to meet during the week of November 18, 2013.	None
11/7/2013	Phone - Attempt	Lorraine White (Consultation Coordinator)	Jeff Smith (KMC)	Team member phoned L. White and left a voicemail and asked L. White to return phone call to set up a meeting.	None
11/21/2013	Email- Outgoing	Lorraine White (Consultation Coordinator)	Jeff Smith (KMC)	Team member emailed L. White to suggest a meeting on December 3, 2013. Team member enquired about preferred meeting time and location.	None
11/26/2013	Email- Incoming	Lorraine White (Consultation Coordinator)	Jeff Smith (KMC)	L. White emailed team member and confirmed meeting on December 3, 2013. Team member emailed L. White and confirmed logistics for meeting on December 3, 2013.	None
11/28/2013	Email- Outgoing	Lorraine White (Consultation Coordinator)	Paul Anderson (TERA)	Team Member emailed L. White and forwarded an attachment of the results for the Trans Mountain Expansion Project Biophysical Field program.	None
12/2/2013	In-Person	Lorraine White (Consultation Coordinator)	Jeff Smith (KMC), Jamie Andrews (KMC)	Team members met with L. White at LBFN offices on December 2, 2013 to discuss the consultation process and next steps. L. White explained that a new Human Resources Assistant, S. Monterosa, had been hired to assist with economic development. L. White presented gaps identified for employment and training (Environmental Inspectors) and would like to focus training initiatives in this area as well as heavy equipment operation and Class 1 Drivers Licenses. LBFN has partnered with other Nations on training initiatives and recently completed ticket upgrades offer. L. White also expressed an interest in organizing a meeting of the LBFN Elders to inform the Elders of the TMEP. L. White explained that there was a workforce binder that was completed but needed to be approved by council. The binder contained information regarding ISN and CORE certification that can be used by industry. L. White also mentioned that a database was being completed to inventory the skills of the LBFN workforce which would identify training needs and opportunities within the community, S. Monterosa had this database but due to confidentiality it cannot be shared easily. L. White requested that a meeting between the LBFN Inter-agency Committee and TMEP be held in late January to mid-February in order to speak about jobs and exchange Project information. L. White spoke of two LBFN businesses which are successfully operating, a bus company and a catering company, both of which employ many members. L. White informed team members that L. White was unavailable over the Holidays from December 20, 2013 to January 6, 2014. Team member was tasked with arranging a meeting with S. Monterosa in January 2014 as an action item.	None
12/9/2013 12:00 AM	Email- Incoming	Lorraine White (Consultation Coordinator)	Jeff Smith (KMC)	L. White emailed Team member and provided a KMC sponsorship request letter from LBFN.	None
12/16/2013 12:00 AM	Phone - Outgoing	Chief Russell Threefingers	Ian Anderson (KMC)	Team member sent a letter to Chief R. Threefingers and notified LBFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-1-10

MÉTIS REGIONAL COUNCIL ZONE IV OF THE MÉTIS NATION OF ALBERTA

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Cecil Bellrose (President)	Ian Anderson (KMC)	Team member sent a letter to C. Bellrose and notified Métis Regional Counsel – Zone IV of the Métis Nation of Alberta (MRCZ4) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application’s location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB’s website URL for further information on this process.	None
10/28/2013	Phone - Attempt	Melanie Omeniho (Administrator)	Jeff Smith (KMC)	Team member called M. Omeniho, Administrator, MRCZ4 and left a message requesting a call back.	None

APPENDIX A-1-11
MONTANA FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Bradley Rabbit	Ian Anderson (KMC)	Team member sent a letter to Chief B. Rabbit and notified the Montana First Nation (MFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
10/1/2013	Email- Outgoing	Suzanne Life (Consultation and Lands Manager)	Angelina Silver (TERA)	Team member emailed S. Life and requested confirmation on October 17-18, 2013 dates for Traditional Land Use (TLU) Ground Reconnaissance and provided information on study logistics and accommodations.	None
10/7/2013	Email- Incoming	Suzanne Life (Consultation and Lands Manager)	Angelina Silver (TERA)	Team member emailed S. Life and indicated what would happen on an average day and what would be expected of the elders for a TLU study. S. Life asked team member where to send the signed work agreement and attached it on a following email. Team member informed S. Life that a signed copy of the confidentiality agreement was also required. S. Life emailed Team member and attached the signed copy of the requested document. S. Life stated that she would email Team member the number of participants after the Elder's meeting on October 17, 2013.	None
10/18/2013	Email- Outgoing	Suzanne Life (Consultation and Lands Manager)	Angelina Silver (TERA)	Team Member confirmed the October 24-27, 2013 dates.	None
10/28/2013	Email- Outgoing	Suzanne Life (Consultation and Lands Manager)	Angelina Silver (TERA)	Team member emailed S. Life regarding a last-minute cancellation that occurred. Team member advised that they are waiting to hear back from KMC on how to proceed.	None
10/29/2013	In-Person	Suzanne Life (Consultation and Lands Manager)	Jeff Smith (KMC), Jamie Andrews (KMC)	Team members met with S. Life of MAFN to discuss capacity and TLU funding: Tasks: - S. Life to send list of Preliminary Interests - S. Life to confirm date for Elders meeting	None
10/30/2013	Email- Outgoing	Suzanne Life (Consultation and Lands Manager)	Angelina Silver (TERA)	Team member emailed S. Life about the Workplan and revised budget for MFN's TLU study and attached copies of both documents.	None
11/1/2013	Email- Outgoing	Suzanne Life (Consultation and Lands Manager)	Jamie Andrews (KMC)	Team member emailed S. Life to follow-up on meeting with Team members and S. Life on October 28, 2013. Team member requested a list of Preliminary Interests from MAFN addressing TMEP. Team member also requested a traditional territory map.	None
11/28/201	Email- Outgoing	Suzanne Life (Consultation and Lands Manager)	Paul Anderson (TERA)	Team member emailed S. Life about the Traditional Ecological Knowledge (TEK) results of the biophysical field studies in which MFN participated. Team member referenced the upcoming TLU results review meeting which will be scheduled in the future. TEK results review memo was attached.	None

APPENDIX A-1-12
NAKOWINEWAK NATION OF CANADA

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/10/2013	Email- Outgoing	Jean Whitehorse (Consultation Coordinator)	Mika Blundell (TERA)	Team member emailed J. Whitehorse and indicated that there was additional time to complete outstanding Traditional Land Use (TLU) interviews. Team member inquired whether or not Nakcowinewak Nation of Canada (NNC) wanted the same facilitator or a different facilitator to conduct the interviews.	None
10/18/2013	Phone - Outgoing	Jean Whitehorse (Consultation Coordinator)	Michelle Langfeldt (TERA)	Team member called J. Whitehorse and discussed scheduling the remaining Traditional Land Use interviews as early as October 21, 2013. Team member stated TERA would call J. Whitehorse back on October 19, 2013 to discuss arrangements.	None
10/19/2013	Phone - Outgoing	Jean Whitehorse (Consultation Coordinator)	Michelle Langfeldt (TERA)	Team member spoke to J. Whitehorse over the phone to discuss the upcoming schedule for interviews on October 21, 2013 in Edmonton, Alberta.	None
10/20/2013	Phone - Outgoing	Jean Whitehorse (Consultation Coordinator)	Michelle Langfeldt (TERA)	Team member spoke to J. Whitehorse over the phone to confirm the Elder interviews scheduled for October 21, 2013 in Edmonton, Alberta.	None
10/21/2013	Email- Outgoing	Jean Whitehorse (Consultation Coordinator)	Clare Peacock (TERA)	Team member emailed J. Whitehorse to inform them the dates of the next shift for the Archaeology Impact Assessment study and asked about the participants that would be sent out on this study.	None
10/21/2013	In-Person	Jean Whitehorse (Consultation Coordinator)	Michelle Langfeldt (TERA)	Team member held Elder Interviews for NNC TLU on October 21 and 22, 2013.	None
10/22/2013	In-Person	Jean Whitehorse (Consultation Coordinator)	Michelle Langfeldt (TERA)	Team member conducted Elder Interviews for NNC TLU on October 21 and 22, 2013.	None
10/28/2013	Email- Outgoing	Jean Whitehorse (Consultation Coordinator)	Michelle Langfeldt (TERA)	Team member forwarded the attendance form from the Elder/Community interviews held in Edmonton, Alberta on October 21 and 22, 2013 to J. Whitehorse.	None
10/28/2013	Email- Incoming	Jean Whitehorse (Consultation Coordinator), Jean Whitehorse (Consultation Coordinator)	Jeff Smith (KMC)	P. Baier emailed Team member and J. Whitehorse and requested that the initial Update Status sent on October 25, 2013 be ignored. P. Baier provided an updated Status Update which incorporated the meeting notes from the Community Meeting of October 10, 2013.	None
10/29/2013	Email- Outgoing	Jean Whitehorse (Consultation Coordinator)	Michelle Langfeldt (TERA)	Team member suggested November 5, 2013 as a potential date for a TLU site visit. Team member also suggested a meeting with J. Whitehorse and some additional NNC Elders on November 6, 2013.	None
10/29/2013	Email- Outgoing	Perdita Baier (Fund and Program Developer Consultant)	Jamie Andrews (KMC)	Team member emailed P. Baier and requested that NNC bring a traditional territory map to an upcoming meeting on November 25, 2013 as it is required for the engagement process.	None
10/31/2013	Phone - Incoming	Jean Whitehorse (Consultation Coordinator)	Brian Bruzzese (TERA)	J. Whitehorse phoned Team member to follow up on an email from a different Team member on October 29, 2013, with regards to possible dates for a TLU site visit. J. Whitehorse confirmed that the November 5 and 6, 2013 works to schedule the TLU site visit and Elder Interviews in Hinton. Team member informed J. Whitehorse that the message would be passed on to the original Team member who organized the TLU site visit and that that team member would be in touch to confirm. J. Whitehorse expressed a preference for two specific Team members to facilitate the TLU site visit.	None
11/1/2013	Phone - Outgoing	Jean Whitehorse (Consultation Coordinator)	Michelle Langfeldt (TERA)	Team member returned J. Whitehorse's phone call from October 31, 2013 and confirmed the TLU site visits in Edmonton, Alberta on November 5, 2013, and Elder Interviews in Hinton, Alberta on November 16, 2013.	None
11/1/2013	Email- Incoming	Jean Whitehorse (Consultation Coordinator), Perdita Baier (Fund and Program Developer)	Jeff Smith (KMC), Jamie Andrews (KMC)	P. Baier wrote to follow up on the day prior's meeting and that P. Baier had updated the Status Update report to include outcomes of the meeting	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
		Consultant)			
11/4/2013	Phone - Incoming	Community Members	Michelle Langfeldt (TERA)	Community member phoned Team Member regarding the TLU site visit. Team member and community member scheduled pick-up in Edmonton, Alberta on November 5, 2013 at 9:00 am for community member and community Elder.	None
11/4/2013	Phone - Outgoing	Jean Whitehorse (Consultation Coordinator), Lavinia Strawberry (Consultation Assistant)	Michelle Langfeldt (TERA)	Team member phoned the NNC Office in Hinton, Alberta and spoke to L. Strawberry. Team member was trying to get a hold of a participant to arrange a pick-up time for the November 5, 2013 TLU site visit. Team member requested a call back from J. Whitehorse. Team member called J. Whitehorse and left a voicemail to call the Team Member back to arrange details regarding the November 5, 2013 TLU site visit.	None
11/5/2013	Email- Incoming	Jean Whitehorse (Consultation Coordinator), Lavinia Strawberry, Perdita Baier (Fund and Program Developer Consultant), Robin Caird	Jeff Smith (KMC), Jamie Andrews (KMC)	P. Baier wrote that P. Baier had attached the revised Funding Proposal based on discussions with KMC team members. P. Baier inquired if there is anything else that could be done to move the application forward and said P. Baier was unavailable the upcoming November 6, 2013, but would respond to emails that November 7, 2013. Team member wrote to ask that J. Baier let team member know as soon as another Team member had commented on the received proposal. Proposal received.	None
11/11/2013	Email- Outgoing	Jean Whitehorse (Consultation Coordinator)	Michelle Langfeldt (TERA)	Team member emailed J. Whitehorse to confirm if November 25, 2013, was still a feasible date for the TMEP TEK Results Review Meeting.	None
11/19/2013	Phone - Outgoing	Jean Whitehorse (Consultation Coordinator)	Brian Bruzzese (TERA)	Team Member called J. Whitehorse from NNC to confirm the TLU Results Review on November 25, 2013. J. Whitehorse informed the team member that 10:00 am on November 25, 2013 would work best. Team member confirmed time and date.	None
11/25/2013	In-Person	Community Members	Michelle Langfeldt (TERA) Brian Bruzzese (TERA)	The TLU and TEK results review meeting was held with Nakcowinewak Nation of Canada on November 25, 2013. The objective of the meeting was to provide a summary of the information shared by community members on TLU and TEK studies and participants on biophysical studies for the project and provide an opportunity for the community to verify the information and concerns shared. Unresolved concerns and requests for follow-up in the field were reviewed during the results review meeting. Concerns: - employment opportunities for those without high school diplomas and/or non-English speaking Requests for follow up: - digitized community maps and photos - translation challenges and request for more translators - employment opportunities for adults who have not graduated from high school - job specific training and education - monitors from Nakcowinewak Nation of Canada to be present during construction - inform community of all watercourse crossing methods within territory and provide photos and diagrams of these methods - KMC return to community to explain in more detail construction practices and pipeline integrity methods -review process timelines and assistance.	Traditional Land Use, Spills, Employment, Watercourse Crossings, Water Quality, Construction Monitoring
11/27/2013	Email- Outgoing	Robin Caird (Government of Alberta)	Jeff Smith (KMC)	Team member emailed R. Caird to discuss the NNC Training Proposal and to inform R. Caird that KMC will provide a letter of support for the proposal once it is ready for approval.	
11/28/2013	Email- Outgoing	Jean Whitehorse (Consultation Coordinator), Perdita Baier (Fund and Program Developer Consultant)	Jeff Smith (KMC)	Team member wrote to inquire if team member, J. Whitehorse and P. Baier could meet in the next weeks and inquired if J. Whitehorse would be in Edmonton. P. Baier replied that P. Baier would discuss with J. Whitehorse to set up a meeting.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/28/2013	Email- Outgoing	Perdita Baier (Fund and Program Developer Consultant)	Jeff Smith (KMC), Jamie Andrews (KMC)	Team member wrote to inquire if a meeting was possible the following week and if J. Whitehorse would be in Edmonton. Team member wrote that team member would like to have a meeting regarding f the MBA. t P. Baier wrote that P. Baier would talk to J. Whitehorse about a meeting that coming week.	None
12/2/2013	Email- Incoming	Robin Caird (Government of Alberta)	Jeff Smith (KMC)	R. Caird emailed Team Member and explained the details required for the support letter for Proposal of Training.	None
12/4/2013	Email- Outgoing	Jean Whitehorse (Consultation Coordinator), Perdita Baier (Fund and Program Developer Consultant)	Jeff Smith (KMC), Margery Knorr (KMC), Martha Matthew (KMC)	Team member emailed P. Baier to connect P. Baier with the KMC team member, training lead. P. Baier emailed team member and stated that P. Baier would try to connect with said KMC team member.	None
12/4/2013	Email- Outgoing	Perdita Baier (Fund and Program Developer Consultant)	Jeff Smith (KMC)	Team member emailed P. Baier to forward on the contact information for the team member who was the Training Lead for KMC so that P. Baier and the team member could discuss the NNC training proposal.	None
12/4/2013	Email- Outgoing	Perdita Baier (Fund and Program Developer Consultant)	Margery Knorr (KMC)	Team Member emailed P. Baier to set up a phone call to discuss the NNC Training Proposal. Team member informed P. Baier that team member would be in meetings all morning on December 5, 2013, but would be available at 1:30 pm.	None
12/4/2013	Email- Outgoing	Robin Caird (Government of Alberta)	Jeff Smith (KMC), Margery Knorr (KMC)	Team Member emailed R. Caird to introduce the KMC Training Lead for the Project.	None
12/5/2013	Email- Incoming		Margery Knorr (KMC)	P. Baier emailed team member with a draft Letter of Support attached entitled "Kinder Morgan Support Letter Human Services Funding Proposal". Team Member replied to the email to confirm receiving it.	None
12/5/2013	Email- Incoming	Perdita Baier (Fund and Program Developer Consultant)	Margery Knorr (KMC)	P. Baier emailed team member to confirm the 1:30 PM phone call on December 5, 2013. P. Baier also asked Team member which phone number (work or cell) would be best to call. Team member replied with the best phone number for P. Baier to call and suggested that if easier the team member could call P. Baier at 1:30 and asked P. Baier to send the Team member the phone number to call. P. Baier responded with the appropriate phone number.	None
12/6/2013	Email- Incoming	Perdita Baier (Fund and Program Developer Consultant)	Margery Knorr (KMC)	P. Baier emailed Team member to inquire about making a change to the Training Proposal Support letter.	None
12/10/2013	Email- Incoming	Perdita Baier (Fund and Program Developer Consultant)	Margery Knorr (KMC)	P. Baier emailed R. Caird and team member to inform that P. Baier would be away from December 11 to 18, 2013. P. Baier provided the team members contact info for R. Caird and advised the team member that the team member was working on the support letter for the training proposal. P. Baier also asked that the team member cc'd R. Caird when the letter was complete. Team member replied to P. Baier and mentioned that the letter had been submitted for review but that the application was in the final stages of review before submission.	None
12/12/2013	Email- Incoming	Byron Whitehorse (Traditional Use Assistant)	Brian Bruzzese (TERA)	B. Whitehorse emailed team member and requested an attendance list from the November 25, 2013 meeting in Hinton, Alberta. Team member replied with attendance list.	None
12/16/2013	Letter - Outgoing	Chief Bill Whitehorse	Ian Anderson (KMC)	Team member sent a letter sent a letter to Chief B. Whitehorse and notified NNC of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	
12/18/2013	Email-Outgoing	Perdita Baier (Fund and Program Developer Consultant)	Margery Knorr (KMC)	Team member emailed P. Baier and communicated that the Letter of Support would be signed by December 18, 2013.	None
12/23/2013	Email-Incoming	Perdita Baier (Fund and Program Developer Consultant)	Jeff Smith (KMC)	<p>P. Baier emailed Team member to say that P. Baier had spoken with J. Whitehorse, who had a meeting with J. Whitehorse's lawyer on Jan 20, 2014, which was the earliest date P. Baier and J. Whitehorse could arrange a meeting. P. Baier wrote that NNC will need time to consult members and Elders for further direction.</p> <p>P. Baier wrote that P. Baier is unsure of team member's schedule and would like to know what could be done to keep the process on track.</p>	None

APPENDIX A-1-13
O'CHIESE FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/2/2013	Email-Incoming	Mariah Strawberry (Reception)	Jeff Smith (KMC)	M. Strawberry emailed team member and inquired about the status of the deliverables that were outlined in the draft LOU sent to C. Tuharsky on April 14, 2013.	None
10/3/2013	Email-Outgoing	Mariah Strawberry (Reception)	Jeff Smith (KMC)	Team member emailed M. Strawberry and provided an update on deliverables in KMC and OCFN agreement. Team member proposed meeting logistics to discuss LOU. A community meeting was suggested for late October.	None
11/8/2013	Email-Outgoing	Connie Tuharsky (In House Counsel)	Jeff Smith (KMC)	Team member emailed C. Tuharsky and indicated availability for a meeting the week of November 18, 2013 or November 25, 2013. C. Tuharsky responded and requested to meet on November 20, 2013 in Calgary. Team member responded and confirmed the November 20, 2013 date and requested the meeting time and location. C. Tuharsky responded and indicated the meeting time of 9:30am to 1:30pm at the OCFN office in Calgary. Team member responded and requested an agenda for the meeting.	None
11/20/2013	In-Person	Andrew Scott (Consultation Officer), Crystal Daychief (Data Entry Clerk), Phyllis Whitford (Land Claims Coordinator), Firman Latimer (O'Chiese Safety Services), Tracy Campbell (Calliou Group, Principal)	Jeff Smith (KMC)	Team member met with P. Whitford, C. Tuharsky, A. Scott, F. Latimer, T. Campbell. Group discussed the Letter of Understanding (LOU). T.Campbell indicated concern that timeframe for TLUS was not sufficient. Team member indicated that O'Chiese First Nation's (OCFN) Traditional Land Use Study (TLUS) report was sufficient and was being included in KMC's application. Team member indicated that further opportunities to participate would be possible with supplemental fillings. Team member indicated that KMC was interested in negotiating an MBA with OCFN. OCFN indicated that further funding was required in order to participate in the NEB process. Team member indicated that KMC does not fund these activities and encouraged OCFN to apply for funding directly from the NEB. Group discussed the possibility of an MBA and Team member indicated that KMC was prepared to meet with OCFN in order to negotiate the MBA.	None
12/5/2013	Email-Outgoing	Andrew Scott (Consultation Officer), Connie Tuharsky (In House Counsel)	Jeff Smith (KMC), Jamie Andrews (KMC)	Team member emailed A. Scott and C. Tuharsky to reschedule the December 13, 2013 meeting.	None
12/10/2013	Email-Outgoing	Andrew Scott (Consultation Officer), Connie Tuharsky (In House Counsel)	Jamie Andrews (KMC)	Team member emailed C. Tuharsky and A. Scott and proposed January 8, 2013 and January 9, 2013 as possible dates to meet.	None
12/16/2013	Letter - Outgoing	Chief Darren Whitford	Ian Anderson (KMC)	Team member sent a letter to Chief D. Whitford and notified OCFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Email-Outgoing	Connie Tuharsky (In House Counsel), Phyllis Whitford (Land Claims Coordinator)	Jamie Andrews (KMC)	Team member emailed C. Tuharsky to reschedule the proposed January 8, 2014 meeting. Team member and C. Tuharsky agreed to meet on January 9, 2014 in Edmonton, AB.	None

APPENDIX A-1-14
PAUL FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/18/2013	Email- Outgoing		Angelina Silver (TERA)	Team member emailed Stakeholders and stated that they had tried to leave a phone message earlier in the day. Team member also asked Stakeholders if scheduling the Results Review meeting until after the KMC Open House on October 22, 2013 was possible. Stakeholder emailed Team Member and stated that scheduling the Results Review meeting for October 22 2013 would work for them. Team Member emailed Stakeholder and acknowledged their email.	None
10/22/2013	In-Person		Paul Anderson (TERA), Jeff Smith (KMC), Chris Menzies (TERA), Jamie Andrews (KMC)	Team members met with Paul First Nation (PFN) community members to discuss TMEP. Questions were addressed regarding the following topics: <ul style="list-style-type: none"> - Degree of FN involvement in TMEP? - Water quality - Project costs - Shipping of gas and oil - Job readiness and job types - FN community benefits from the Project (short and long-term) - Demand - Community meetings - CEA - Project construction time - Repercussions of protesting - Distrust of other companies regarding MBA follow up - Train transportation of petroleum - Pipeline resilience to natural disasters - Leak response - Pipeline - Type of FN involvement - Duration of involvement with PFN - Percentage of FN hired for Project jobs 	None
12/16/2013	Letter - Outgoing	Chief Casey Bird	Ian Anderson (KMC)	Team member sent a letter sent a letter to Chief C. Bird and notified PFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/19/2013	In-Person	Chief Casey Bird, Dennis Paul (Special Advisor)	Jeff Smith (KMC), Jamie Andrews (KMC)	Team members met with C. Bird, V., R. Burnstick and D. Paul of PFN on December 19, 2013. D. Paul discussed the PFN Pipeline Press Release. There was a discussion about funds from the Amended LOU Team member requested a tour of the proposed industrial site. A. New (Modular homes) is supplying homes to PFN and is becoming involved with community development. An assessment was completed of issues in PFN and PFN intends to use the Services of Transformations to address these issues. MBA discussions followed. Actions items: 1. D. Paul to send a map of the lay-down site to team member. 2. Team member will forward a term sheet to PFN.	None
10/12/2013	Email- Outgoing	Dennis Paul (Special Advisor), Glenna House (Office Coordinator)	Angelina Silver (TERA)	Team Member emailed Stakeholders and asked for potential dates to schedule a results review of the Traditional Land Use and Traditional Ecological Knowledge studies.	None
10/15/2013	Email- Outgoing	Glenna House (Office Coordinator)	Angelina Silver (TERA)	Team Member emailed Stakeholder and asked if they had the chance to speak with another Stakeholder regarding potential dates for a Results Review meeting.	None
10/16/2013	Email- Incoming	Glenna House (Office Coordinator)	Angelina Silver (TERA)	Stakeholder emailed Team Member and stated that booking the Results Review for October 21 2013 would work.	None
10/17/2013	Email- Outgoing	Glenna House (Office Coordinator)	Angelina Silver (TERA)	Team Member emailed Stakeholder and stated that scheduling the Results Review for 21 October 2013 would work for their team. Team Member asked where Stakeholder planned on holding the Results Review.	None
10/30/2013	Email- Outgoing	Glenna House (Office Coordinator)	Angelina Silver (TERA)	Team member emailed G. House of PFN on October 30, 2013 to request a date for the Results Review.	None
10/31/2013	Email- Incoming	Glenna House (Office Coordinator)	Angelina Silver (TERA)	G. House of PFN emailed team member on October 31, 2013 in response to the Team member's email of October 30, 2013.. She said that D. Paul is busy this week, so she suggested possibly November 6 or 7, 2013. She would confirm with D. Paul and get back to the team member on November 1, 2013. Team member replied on October 31, 2013 that November 6 and 7, 2013 is open for the TERA team and requested that G. House confirm with D. Paul and let her know what day	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				and time works best for the PFN team.	
11/4/2013	Email- Outgoing	Glenna House (Office Coordinator)	Angelina Silver (TERA)	Team member emailed G. House of PFN on November 4, 2013 to say that she had attempted to phone G. House today without success. The Team member wanted to speak with D. Paul regarding a Results Review for the Project for some time the week of November 4-10, 2013. Team member requested a date, start time and number of attendees that will be taking part in the Results Review.	None
11/4/2013	Phone - Attempt	Glenna House (Office Coordinator)	Angelina Silver (TERA)	Team member attempted to call G. House of PFN at 3:55 pm on November 4, 2013. Team member attempted to call G. House again at 4:15 pm but the PFN office was closed and the voicemail option was full. Team member then sent an email to indicate that she had tried to call with no success.	None
11/5/2013	Phone - Attempt	Glenna House (Office Coordinator)	Angelina Silver (TERA)	Team member attempted to call G. House of PFN at 1:20 pm on November 5, 2013. G. House's inbox was full and so she was not able to leave a message. Team member attempted to call again at 1:34 pm. Reception informed her that G. House was not in the office. Team member left a message to have G. House call her back.	None
11/7/2013	Email- Incoming	Glenna House (Office Coordinator)	Angelina Silver (TERA)	G. House of PFN emailed team member on November 7, 2013 to confirm that the Results Review meeting is scheduled for November 8, 2013 at 10 am. Team member responded to confirm the team would arrive at about 9:30 am on November 8, 2013. Team member asked if five people were still scheduled to attend the meeting.	None
11/8/2013	In-Person	Community Members	Chris Menzies (TERA) Brad Lapham (TERA)	The TLU and TEK results review meeting was held with PFN on November 8, 2013. The objective of the meeting was to provide a summary of the information shared by community members on TLU and TEK studies and participants on biophysical studies for the project and provide an opportunity for the community to verify the information and concerns shared. Unresolved concerns and requests for follow-up in the field were reviewed during the results review meeting. Requests for follow up: - would like to review a community report since they would like to make sure all of the important information is included. - would like monitors present during construction activities. Response: - TERA representatives stated that will happen and the community will be able review and provide comment.	Construction monitoring
12/2/2013	Email- Incoming	Shane Pospisil (Co- Manager)	Jeff Smith (KMC)	S. Pospisil emailed team member. S. Pospisil attached a letter from Chief C. Bird to the Team member. Chief C. Bird sent the letter to identify key concerns with regards to Grizzco and PFN negotiations and clarify PFN-KMC ongoing Benefits Agreement Negotiations. C. Bird assured KMC that a resolution is forth coming.	None

APPENDIX A-1-15
SADDLE LAKE CREE

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/9/2013	Email- Outgoing	Frank Cardinal (TLU and Consultation)	Wanda Lewis (TERA), Angelina Silver (TERA), Karen Baylis (TERA), Maria Hoiss (TERA)	Team member emailed F. Cardinal the Confidentiality Agreement for review to protect community information and requested a community budget to get the TLU study started. Official approvals and contracts would be sorted out. Team member confirmed the agreement that TERA would be study lead participating in all steps of the project.	None
11/5/2013	Phone - Outgoing	Frank Cardinal (TLU and Consultation)	Jeff Smith (KMC)	Team member phoned F. Cardinal regarding the TUS study and Community Open House. F. Cardinal was concerned that the SLCN budget was not yet approved and suggested KMC deliver an Open house in SLCN. Team member agreed to provide F. Cardinal with dates to meet in Edmonton to discuss these topics.	None
11/5/2013	Email- Outgoing	Frank Cardinal (TLU and Consultation)	Jeff Smith (KMC)	Team member emailed F. Cardinal and provided a date to meet in Edmonton, as well as potential dates for an Open House	None
11/21/2013	In-Person	Frank Cardinal (TLU and Consultation)	Jeff Smith (KMC), Jennifer Hooper (Consultant), Martha Matthew (KMC)	Team members met with F. Cardinal in Edmonton on November 21, 2013 to discuss a Community Open House and TLU study. Team member agreed that after the Open House, TMEP will formally respond to SLCN request for TLU funding.	None
11/28/2013	Email- Outgoing	Frank Cardinal (TLU and Consultation)	Paul Anderson (TERA)	Team member emailed F. Cardinal and attached of the results of the TMEP biophysical field program that SLCN participated in from August 2012 to September 2013. Team member encouraged F. Cardinal to review the document and ensure its accuracy.	None
12/16/2013	Letter - Outgoing	Chief Leonard Jackson	Ian Anderson (KMC)	Team member sent a letter to Chief L. Jackson and notified SDLCN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Email- Outgoing	Frank Cardinal (TLU and Consultation)	Jeff Smith (KMC)	Team member emailed F. Cardinal to provide contact information and requested a phone call to discuss the December 16, 2013 Facilities Application.	None
12/19/2013	Email- Outgoing	Frank Cardinal (TLU and Consultation)	Jeff Smith (KMC)	Team member emailed F. Cardinal and proposed December 20, 2013 or December 23, 2013 to discuss the December 16, 2013 Facilities Application.	None
12/20/2013	Phone - Incoming	Frank Cardinal (TLU and Consultation)	Jeff Smith (KMC),	, F. Cardinal phoned Team member and noted the filed TMEP application was not well received by the SLCN. Team member was informed by F. Cardinal that if a TLU study was not delivered the project would be opposed and legal action taken. Funding of the TLU was discussed by the Team member and F. Cardinal. Team member stated F. Cardinal would be contacted the first week in January with an answer regarding the TLU funding.	None

APPENDIX A-1-16
SAMSON CREE NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/15/2013	Email-Outgoing	Kaylyn Buffalo (Consultation Assistant), Norine Saddleback (Consultation Coordinator)	Angelina Silver (TERA)	Team Member emailed Stakeholders and discussed logistics around scheduling a two day First Aid Course for participants at the Band Office. Team member asked Stakeholders for potential dates for the course.	None
10/16/2013	Email-Incoming	Kaylyn Buffalo (Consultation Assistant)	Angelina Silver (TERA)	Stakeholder emailed Team Member and stated that they were considering dates in November for the Results Review meeting and that they had a board room large enough to accommodate all of the participants. Team Member emailed Stakeholder and asked for a date as soon as they got their schedule sorted out.	None
11/4/2013	Email-Incoming	Kaylyn Buffalo (Consultation Assistant)	Angelina Silver (TERA)	K. Buffalo emailed team member and advised that they are available the week of November 19, 2013 for first aid training. K. Buffalo inquired about the amount of space required for the training and advised that they have a boardroom that could be used.	None
11/7/2013	Email-Outgoing	Kaylyn Buffalo (Consultation Assistant)	Angelina Silver (TERA)	Team member emailed K. Buffalo to advise that first aid training has been scheduled for 8 people on November 18 and November 19, 2013 from 10:00 am to 5:00 pm. Team member confirmed that the boardroom discussed by K. Buffalo in the email of November 6, 2013 will be sufficient for training.	None
11/8/2013	Email-Incoming	Kaylyn Buffalo (Consultation Assistant)	Angelina Silver (TERA)	K. Buffalo emailed team member to request that first aid training be moved from November 18 and 19, 2013 to November 19 and 20, 2013. Also requested that the start time be moved from 10:00 am to 9:00 am as the SCN offices close at 4:00 pm.	None
11/12/2013	Email-Outgoing	Kaylyn Buffalo (Consultation Assistant)	Angelina Silver (TERA)	Team member emailed K. Buffalo to confirm the new proposed times for first aid training on November 19 and 20, 2013 from 9:00 am to 4:00 pm.	None
11/12/2013	Email-Outgoing	Kaylyn Buffalo (Consultation Assistant), Norine Saddleback (Consultation Coordinator)	Angelina Silver (TERA)	Team member called and emailed N. Saddleback and K. Buffalo requesting possible dates and times to schedule the results review of the SCN TEK and TLU studies.	None
11/13/2013	Email-Incoming	Kaylyn Buffalo (Consultation Assistant)	Angelina Silver (TERA)	K. Buffalo emailed team member to advise that the Results Review can tentatively be scheduled for December 4 and 5, 2013. K. Buffalo also requested that the dates for first aid training be moved back one day from November 19 and 20, 2013 to November 20 and 21, 2013. Team member replied to K. Buffalo and inquired whether a morning or afternoon session is preferable for the Results Review. Also confirmed that the first aid training has been rescheduled for November 20 and 21, 2013.	None
11/13/2013	Email-Incoming	Norine Saddleback (Consultation Coordinator)	Jeff Smith (KMC)	N. Saddleback emailed team member to and invited team members to Strategic Planning session December 12-13, 2013. N. Saddleback also requested release of funding for the 2013-14 Capacity Funding for the Samson Cree Nation as per agreement.	None
11/21/2013	Email-Outgoing	Kaylyn Buffalo (Consultation Assistant), Norine Saddleback (Consultation Coordinator)	Angelina Silver (TERA)	Team member emailed K. Buffalo and N. Saddleback to follow-up on specifics of the Results Review scheduled for December 4, 2013. Team member requested a time and location for the Results Review and advised that TERA could provide light snacks for a morning session.	None
11/26/2013	Email-Incoming	Norine Saddleback (Consultation Coordinator)	Wanda Lewis (TERA)	N. Saddleback emailed team member to thank her for the contribution and to invite her to the SCN Christmas Celebration on December 6, 2013.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/28/2013	Email-Outgoing	Kaylyn Buffalo (Consultation Assistant), Norine Saddleback (Consultation Coordinator)	Paul Anderson (TERA)	Team member emailed K. Buffalo and N. Saddleback with the results of the biophysical field program in which SCN participated. Attached Results Review memo and referenced an upcoming Results Review meeting to be confirmed in the near future.	None
12/1/2013	Email-Outgoing	Kaylyn Buffalo (Consultation Assistant), Norine Saddleback (Consultation Coordinator)	Angelina Silver (TERA)	Team member emailed N. Saddleback and K. Buffalo to request two tickets to the SCN Christmas Celebration on December 6, 2013. Also requested confirmation of the time for the Results Review meeting scheduled for December 4, 2013.	None
12/4/2013	Email-Outgoing	Norine Saddleback (Consultation Coordinator)	Jeff Smith (KMC)	Team member emailed N. Saddleback in response to November 13, 2013 email to indicate that a donation cheque for SCN's Christmas events had been sent. Team member asked for the date of the SCN staff celebration event.	None
12/11/2013	Email-Outgoing	Kaylyn Buffalo (Consultation Assistant), Norine Saddleback (Consultation Coordinator)	Angelina Silver (TERA)	Team member emailed K. Buffalo and N. Saddleback to confirm the time of the Results Review meeting scheduled for December 18, 2013.	None
12/12/2013	Email-Incoming	Kaylyn Buffalo (Consultation Assistant)	Mika Blundell (TERA)	K. Buffalo emailed team member confirming the 10:00 am start time for the Results Review scheduled for December 18, 2013. Also requested a list of the individuals who participated in TEK and TLU studies with TERA. Team member replied with a list of participants.	None
12/12/2013	Email-Incoming	Norine Saddleback (Consultation Coordinator)	Angelina Silver (TERA)	N. Saddleback emailed team member regarding the Results Review scheduled for December 18, 2013 and proposed 9:00 am as the start time. Team member replied and suggested a 10:00 am start as TERA representatives are driving up from Calgary in the morning. Team member advised that Results Review will be from 10:00 am to 12:30 pm with time for questions after.	None
12/12/2013	SMS Message	Norine Saddleback (Consultation Coordinator)	Jeff Smith (KMC)	N. Saddleback sent text message to team member requesting donation to SCN Christmas hampers and inviting team member and guest to Christmas event. Team member responded indicating that team member was unable to attend event, but that KMC would be providing a donation. N. Saddleback responded and requested to meet with team member in Calgary on December 16, 2013. Team member indicated that team member was unavailable but could meet in early January. N. Saddleback indicated that meeting would be possible on January 6 or 7, 2014. Team member responded that January 7, 2014 would work and requested that N. Saddleback confirm availability.	None
12/12/2013	Email-Outgoing	Norine Saddleback (Consultation Coordinator)	Jeff Smith (KMC)	Team member emailed N. Saddleback in response to email sent to NEB on December 9, 2013. Team member indicated that team member was not familiar with the concerns raised in the December 9, 2013 email, but team member had passed on the email to other team members who would be able to respond to N. Saddleback directly.	None
12/16/2013	Email-Outgoing	Kaylyn Buffalo (Consultation Assistant)	Mika Blundell (TERA)	Team member emailed K. Buffalo regarding the number of people who are expected to attend the Results Review meeting on December 18, 2013. Also requested whether a projector is required and provided the names of the TERA representatives who will be attending. K. Buffalo replied to team member advising that she has made call-outs to participants this morning.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Marvin Yellowbird	Ian Anderson (KMC)	Team member sent a letter sent a letter to Chief M. Yellowbird and notified SCN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/18/2013	In-Person	Community Members, Harvey Buffalo (Field Technician), Norine Saddleback (Consultation Coordinator)	Angelina Silver (TERA), Chris Menzies (TERA), Brad Lapham (TERA)	<p>The TLU and TEK results review meeting was held with Samson Cree Nation on December 18, 2013. The objective of the meeting was to provide a summary of the information shared by community members on TLU and TEK studies and participants on biophysical studies for the project and provide an opportunity for the community to verify the information and concerns shared. Unresolved concerns and requests for follow-up in the field were reviewed during the results review meeting.</p> <p>Concern:</p> <ul style="list-style-type: none"> - distrust of use of information - need for stronger wording to protect burial site than "avoidance, " community members would prefer "protect" - watercourse crossings and ability to prevent spills - adherence to mitigation measures - lack of disaster plan for leaks. -any environmental disturbance should not happen but if it is going to happen it needs to be done correctly (engagement, planning and review) <p>Response:</p> <ul style="list-style-type: none"> - block valves and stop valves installed at major watercourse crossings -safety standards that must be met during construction and operation - EPP includes disaster plan and NEB site is a useful source of information <p>Requests for follow up:</p> <ul style="list-style-type: none"> - copy of the result review presentation - number of monitors that would be part of construction and post construction activity. Request for minimum of two monitors present. - community participation in reclamation activities 	Monitors; Training; Engagement; Spills

APPENDIX A-1-17
STURGEON LAKE CREE NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Richard Kappo	Ian Anderson (KMC)	Team member sent a letter to Chief R. Kappo and notified Sturgeon Lake Cree Nation (SLCN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-1-18
SUNCHILD FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/22/2013	Email- Outgoing	Byron Daychief (Consultation/ Economic Development Director)	Jamie Andrews (KMC)	Team member emailed B. Daychief a copy of the Letter of Understanding (LOU), signed June 13, 2013.	None
11/22/2013	Phone - Incoming	Byron Daychief (Consultation/ Economic Development Director)	Jamie Andrews (KMC)	B. Daychief phoned Team member to request assistance from Team member in locating the correct contact person at TERA. Team member discussed outstanding deliverables and capacity funding. B. Daychief resolved to send an email outlining Traditional Ecological Knowledge (TEK) field study issues to team member for forwarding to TERA.	None
11/28/2013	Email- Outgoing	Byron Daychief (Consultation/ Economic Development Director)	Paul Anderson (TERA)	Team member emailed B. Daychief and attached the results review memo detailing the Project's biophysical field program that Sunchild First Nation (SCFN) participated in. Team member requested SCFN review the attached report to ensure its accuracy and confidentiality.	None
11/29/2013	Phone - Incoming	Byron Daychief (Consultation/ Economic Development Director)	Jamie Andrews (KMC)	B. Daychief Called team member to discuss the LOU and discuss outstanding deliverables. Team member explained the deliverables and the agreement.	None
11/29/2013	Phone - Incoming	Byron Daychief (Consultation/ Economic Development Director)	Jamie Andrews (KMC)	B. Daychief phoned team member to discuss the LOU and submission of deliverables.	None
12/2/2013	Email- Outgoing	Byron Daychief (Consultation/ Economic Development Director)	Jamie Andrews (KMC)	Team member emailed B. Daychief and acknowledged receipt of the SCFN Interests Report.	None
12/2/2013	Letter - Incoming	Byron Daychief (Consultation/ Economic Development Director)	Jamie Andrews (KMC)	B. Daychief sent team member a letter stating SCFN's interests on the Project. SCFN expressed concerns that the Project will impact SCFN's treaty and traditional rights. SCFN also expressed concerns regarding the cumulative effects of industrialization, habitat loss, habitat fragmentation, impediments to wildlife movement, air, water and soil pollution and noise and odor disturbances.	None
12/4/2013	Letter - Outgoing	Byron Daychief (Consultation/ Economic Development Director)	Gary Youngman (KMC)	Team member sent a letter to Chief J. Frencheater dated December 4, 2013 acknowledging receipt of SCFN's Aboriginal preliminary interests related to the Project. KMC was currently reviewing the interests identified by SCFN and will provide a response to the issues once the process is complete. Team member noted that the interests identified by SCFN will be summarized in the Application and placed on the public record as part of the NEB's regulatory process. However, KMC will indicate in the Application that the interests were provided pursuant to a confidential LOU.	None
12/6/2013	Phone - Incoming	Byron Daychief (Consultation/ Economic Development Director)	Jamie Andrews (KMC)	B. Daychief phoned team member to acknowledge team member's efforts in assisting SCFN with the LOU process.	None
12/16/2013 12:00 AM	Letter - Outgoing	Chief Jonathon Frencheater	Ian Anderson (KMC)	Team member sent a letter sent a letter to Chief J. Frencheater and notified SCFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-2

ABORIGINAL COMMUNITIES LOCATED IN THE
ALBERTA/BRITISH COLUMBIA BORDER TO KAMLOOPS REGION

A-2-01: Adams Lake Indian Band
A-2-02: Ashcroft Indian Band
A-2-03: Canim Lake Band
A-2-04: Stswecem'c Xgat'tem (Canoe Creek/Dog Creek Indian Band)
A-2-05: Kelly Lake Cree Nation
A-2-06: Kelly Lake First Nation
A-2-07: Kelly Lake Métis Settlement Society
A-2-08: Ktunaxa Nation
A-2-09: Little Shuswap Indian Band
A-2-10: Lheidli T'enneh First Nation
A-2-11: Lhtako Dene Nation
A-2-12: Neskonlith Indian Band
A-2-13: Oregon Jack Creek Band
A-2-14: Shuswap Indian Band
A-2-15: Simpcw First Nation
A-2-16: Skeetchestn First Nation
A-2-17: Splotsin First Nation
A-2-18: Stoney Nakoda First Nation
A-2-19: Tk'emlups te Secwepemc
A-2-20: Toosey Indian Band
A-2-21: T'exelc First Nation (Williams Lake)
A-2-22: Xat'sull First Nation (Soda Creek)

APPENDIX A-2-01
ADAMS LAKE INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	Email- Outgoing	Valerie Michel (Natural Resource Office Manager)	Sondra Baker (TERA)	Team member emailed Adams Lake Indian Band and attached a notification letter for Archeological Geotechnical Borehole Drilling (Permit No. 2013-0165) for the following schedule: - October 15 - 23, 2013 - October 25 - 30, 2013 - October 19 - 27, 2013 - October 29 - November 3, 2013	None
10/15/2013	Email- Outgoing	Valerie Michel (Natural Resource Office Manager)	Sondra Baker (TERA)	Team Member emailed Stakeholder and provided new confirmed dates for upcoming Trans Mountain Expansion Project Archaeology Work.	None
10/16/2013	Email- Incoming	Valerie Michel (Natural Resource Office Manager)	Clare Peacock (TERA)	Stakeholder emailed Team Member and asked for the Project's spatial data so that a proper office review could be completed.	None
10/16/2013	Email- Incoming	Valerie Michel (Natural Resource Office Manager)	Sondra Baker (TERA)	Stakeholder emailed Team Member and asked exactly what the schedule was detailing and if Adam's Lake Indian Band was supposed to have a field technician for this work.	None
10/16/2013	Email- Outgoing	Valerie Michel (Natural Resource Office Manager)	Sondra Baker (TERA)	Team Member emailed Stakeholder and explained that the chart previously forwarded on to Adam;s Lake Indian Band (ALIB) contains the new fieldwork days for the Archaeology Studies and stated that a participant from Adam's Lake Indian Band would be welcome for the duration of the work.	None
10/17/2013	Email- Incoming	Valerie Michel (Natural Resource Office Manager)	Sondra Baker (TERA)	Stakeholder emailed Team Member and stated that they would like to have a participant involved in upcoming studies in addition to discussing logistics for the participants in the upcoming studies.	None
10/17/2013	Email- Outgoing	Valerie Michel (Natural Resource Office Manager)	Sondra Baker (TERA)	Team member emailed Stakeholder and stated that she would look in to providing the spatial data for the Project.	None
10/17/2013	Email- Outgoing	Valerie Michel (Natural Resource Office Manager)	Sondra Baker (TERA)	Team Member emailed Stakeholder and stated they would respond to them in the morning after they talked with logistics about participants from Adam's Lake Indian Band joining the upcoming Archaeology Study.	None
10/18/2013	Email- Incoming	Valerie Michel (Natural Resource Office Manager)	Maria Hoiss (TERA)	Team Member emailed Stakeholder and attached the TERA Work Agreement and asked for a copy of the signed agreement.	None
10/18/2013	Email- Outgoing	Valerie Michel (Natural Resource Office Manager)	Sondra Baker (TERA)	Team Member emailed Stakeholder and discussed logistics for the participant in the upcoming archaeology study as well as asking for the participants contact information. Team Member provided the contact information for the participants facilitator	None
10/21/2013	In-Person		Tess Espey (TERA)	One Adams Lake Indian Band crew member participated in Geotechnical Borehole Drilling on October 21, 2013.	Terrestrial - Terrain Geotechnical
10/22/2013	Email- Outgoing	Valerie Michel (Natural Resource Office Manager)	Sondra Baker (TERA)	Team Member emailed Stakeholder and notified them that the archaeological assessment had been completed. Team Member stated that the participant had been involved in many types of work and that there would be another monitoring opportunity occurring in the future.	None
10/23/2013	Email- Outgoing	Valerie Michel (Natural Resource Office Manager)	Clare Peacock (TERA)	Team Member emailed Stakeholder and stated that the North Thompson 6 Borehole site would be monitored the following day. Team Member asked Stakeholder if they wanted to send a participant to be present for the monitoring.	None
11/6/2013	In-Person		Aaron Curtis (TERA)	One Adams Lake Indian Band crew member participated in an Archaeological Impact Assessment from November 6-9, 2013.	Socio-Econ. Terrestrial - Heritage Resources - Archaeology
12/16/2013	Letter - Outgoing	Chief Nelson Leon	Ian Anderson (KMC)	Team member sent a letter to Chief N. Leon and notified ALIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-2-02
ASHCROFT INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Greg Blain	Ian Anderson (KMC)	Team member sent a letter to Chief G. Blain and notified Ashcroft Indian Band (AIB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-2-03
CANIM LAKE BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/1/2013	Phone - Attempt	Pam Theodore (Lands Coordinator)	Mika Blundell (TERA)	Team member attempted to call P. Theodore who was not available and would be back the next day.	None
10/1/2013	Email- Outgoing	Pam Theodore (Lands Coordinator)	Mika Blundell (TERA)	Team member emailed P. Theodore to follow up regarding scheduled TLU round reconnaissance for CLIB and noted that a few questions needed to be answered regarding the number of participants, transportation and logistics.	None
10/2/2013	Phone - Outgoing	Donald Dixon (Councillor and Natural Resources Manager) Pam Theodore (Lands Coordinator)	Mika Blundell (TERA)	Team member called P. Theodore and D. Dixon and confirmed plans for the October 9-10, 2013 Traditional Land Use (TLU), helicopter, hotels and sites to visit. Team member committed to follow up with an email providing answers to questions.	None
10/2/2013	Email- Outgoing	Donald Dixon (Councillor and Natural Resources Manager), Pam Theodore (Lands Coordinator)	Mika Blundell (TERA)	Team member emailed P. Theodore and D. Dixon and followed up to questions asked during an earlier phone call: - Three TERA facilitators would join participants on the study and names were provided. - The map referenced in the phone call would be brought and the socio-economic report will be ready for the results review process. - CN training will be conducted before orientation on October 9, 2013. - Requested exact numbers of participants and names for hotel rooms. - Helicopter has been booked on October 9, 2013 which would also be a good day to conduct individual interviews that were requested. October 10, 2013 would be spent locating identified sites.	None
10/3/2013	Phone - Outgoing	Donald Dixon (Councillor and Natural Resources Manager)	Brian Bruzzese (TERA)	Team member called D. Dixon regarding logistics for the upcoming Canim Lake Indian Band (CLIB) TLU over-flight and ground reconnaissance. Team member inquired about the number of confirmed participants. D. Dixon notified that 14 were confirmed but there could be up to 18. D Dixon noted that 8 people would take part in the overflight and up to 18 for the ground reconnaissance. D. Dixon committed to confirm participant names and numbers with P. Theodore. Team member noted there would be numerous copies of the TLU map and would attempt to acquire the previous meeting minutes. D. Dixon noted that another update would be provided on October 4, 2013.	None
10/3/2013	Phone - Attempt	Pam Theodore (Lands Coordinator)	Mika Blundell (TERA)	P. Theodore called team member and left a voicemail and indicated that 16-18 participants would take part in the TLU overflight and ground reconnaissance for October 9-10, 2013.	None
10/7/2013	Phone - Incoming	Pam Theodore (Lands Coordinator)	Brian Bruzzese (TERA)	P. Theodore called Team member and confirmed logistics for the Traditional Land Use Study Ground Reconnaissance and Overflight (interviews October, 9, 2013). P. Theodore and team member also discussed the remaining interviews to be conducted on October 9, 2013 with 5 people. Team member mentioned that TERA would provide the necessary orientations, maps, vehicles and Personal Protective Equipment. P. Theodore said CLIB would email team member a list of community member names.	
10/7/2013	Phone - Outgoing	Pam Theodore (Lands Coordinator)	Brian Bruzzese (TERA)	Team member phoned P. Theodore and left a message with CLIB secretary asking P. Theodore to return the call in order to discuss the Traditional Land Use Overflight and Ground Reconnaissance.	None
10/8/2013	Phone - Attempt	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	Team member called P. Theodore and left message on voice mail to remind P. Theodore of an upcoming meeting. Team member also notified P. Theodore of the following outstanding matters which would be discussed at the meeting: - Capacity for MBA negotiations - Offer sheet template - CLIB company profiles for Project work	None
10/8/2013	Phone - Incoming	Pam Theodore (Lands Coordinator)	Mika Blundell (TERA)	P. Theodore called team member regarding contact information and to discuss hotel logistics.	None
10/8/2013	Email- Incoming	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	P. Theodore emailed team member and provided a list of CLIB participants for the TERA Field Community Ground Reconnaissance to Clearwater. P. Theodore summarized the logistics required for these participants and noted that several participants were are interested in the helicopter overflight.	None
10/11/2013	In-Person	Donald Dixon (Councillor and Natural Resources Manager), Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	N. Marcy met with D. Dixon, Councillor and Natural Resources Manager, P. Theodore, Lands Manager, and J. Archie, Councillor and Employment Coordinator, to discuss: Capacity Funding for MBA phase, MBA Negotiation Process and Planning, MBA components, TLUS proposal and funding. Capacity Funding for MBA phase	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
		Coordinator)			
10/24/2013	Email- Outgoing	Donald Dixon (Councillor and Natural Resources Manager), Pam Theodore (Lands Coordinator)	Mika Blundell (TERA)	P. Theodore emailed team member and D. Dixon to arrange a meeting to review the TLU results data. Team member suggested November 5, 2013 as a potential meeting date. P. Theodore notified team member that this date was previously scheduled for the community's Annual General Meeting, but that the results review presentation could take place that evening. Team member agreed to the November 5, 2013 at 5:30PM date requested.	None
10/25/2013	Email- Outgoing	Donald Dixon (Councillor and Natural Resources Manager), Pam Theodore (Lands Coordinator)	Mika Blundell (TERA)	Team Member emailed D. Dixon and P. Theodore and asked for potential dates to set up a results review meeting based on the recent Traditional Land Use study.	None
10/30/2013	Phone - Outgoing	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	Team member called P. Theodore and confirmed an upcoming meeting. P. Theodore informed of working on the information needed by KMC for MBA discussions.	None
11/4/2013	Email- Incoming	Pam Theodore (Lands Coordinator)	Brian Bruzzese (TERA), Mika Blundell (TERA)	P. Theodore confirmed that Team Members presentation is scheduled for 6:00 PM on November 5, 2013 during the CLIB Annual General Meeting. P. Theodore stated that a computer and overhead would be present for the presentation and asked if the Team Members would require any additional equipment for the presentation. Team Member requested the address of the venue where the meeting will take place.	None
11/5/2013	In-Person	Community Members	Brian Bruzzese (TERA) Ian Swan (TERA)	The TLU/socio-economic results review meeting was held with CLFN on Nov 5, 2013. The objective of the meeting was to provide a summary of the information shared by community members on TLU studies for the Project and provide an opportunity for the community to verify the information and concerns shared. Unresolved concerns and requests for follow-up in the field were reviewed during the results review meeting. No further requests of site-specific mitigation or additional follow-up were made.	
11/13/2013	Email- Outgoing	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	Team member emailed P. Theodore and confirmed meeting at CLIB offices on November 18, 2013. Team member attached a draft outline of a Term Sheet to guide discussions for the meeting. Team member invited additional information in advance of the meeting and requested P. Theodore fill out the Term Sheet prior to meeting on November 18, 2013.	None
11/21/2013	Email- Outgoing	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	Team member informed P. Theodore that KMC had the LOU and had sent it back for Chief M. Archie to sign.	None
11/21/2013	Email- Outgoing	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	Team member requested that P. Theodore send the MBA report to the team member by email so that the team member can provide a response.	None
11/25/2013	Email- Incoming	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	P. Theodore emailed Team member and attached a MBA document	None
11/28/2013	Email- Outgoing	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	Team member emailed P. Theodore and would like to connect and discuss the LOU Amendment. Team Member also mentioned that the Team Member looked forward to discussing the LOU amendment further over the phone in the next week or so.	None
11/29/2013	Email- Outgoing	Pam Theodore (Lands Coordinator)	Brian Bruzzese (TERA)	Team member emailed P. Theodore and notified CLIB that unanswered questions that arose during the results review presentation (November 5, 2013) had been forwarded to KMC for follow-up. Team member also noted that shapefile data could be provided once a formal request to the GIS team had been received. Team member also requested a copy of the Results Review attendance list and stated a copy of the presentation was forthcoming.	None
12/5/2013	Email- Outgoing	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	Team member emailed P. Theodore to inquire as to whether or not Chief M. Archie had signed the Agreement and asked that P. Theodore send the signed agreement to the KMC Calgary office once this was completed.	None
12/16/2013	Letter - Outgoing	Chief Michael Archie	Ian Anderson (KMC)	Team member sent a letter to Chief M. Archie and notified CLIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None
12/17/2013	Phone -	Pam Theodore	Norman Marcy	Team member called P. Theodore on December 17, 2013 and left a message stating that the Team member was eager to continue MBA negotiations and to	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
	Attempt	(Lands Coordinator)	(KMC)	receive any additional information from CLIB soon. Team Member informed P. Theodore that the Facilities Application had been filed with the NEB and that it was available on the Trans Mountain website (transmountain.com). Team member invited a follow-up phone call for any questions or further discussion regarding the facilities application.	
12/20/2013	Email- Outgoing	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	Team member sent the fully executed LOU Amendment agreement to P. Theodore as an attachment.	None
12/20/2013	Phone - Incoming	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	P. Theodore called and indicated an understanding that KMC had filed the Facilities Application with the NEB. P. Theodore mentioned that CBC Radio had called Chief M. Archie for comment which Chief M. Archie refused to provide Theodore indicated that the community has someone preparing business profiles and that that work should be prepared for early January 2014. Team Member indicated and P. Theodore agreed that quick progress on the MBA should be an early goal of 2014.	None
12/30/2013	Phone - Attempt	Pam Theodore (Lands Coordinator)	Norman Marcy (KMC)	Team member phoned and left a voicemail for P. Theodore and indicated that a possible approach for Canim may be for CLIB to provide priorities to the Team member for consideration and inclusion in MBA Draft that Chief and council could consider. Team member mentioned being booked for February and away from February 17, 2014 to March 3, 2014. Team member added that completion of Canim Company profiles would be helpful and can be submitted at any time.	None

APPENDIX A-2-04

STSWECEM'C XGAT'TEM (CANOE CREEK/DOG CREEK INDIAN BAND)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
09/30/2013	Letter - Outgoing	David Archie	Howard Heffler (KMC)	Team member sent a letter to D. Archie which described the Trans Mountain Expansion Project, provided links to additional information about the Project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that the Canoe Creek Band (Stswecem'c Xgat'tem) may have about the Project.	None

APPENDIX A-2-05
KELLY LAKE CREE NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/6/2013	In-Person	Robert Diaz (Director, DM Cultural Services, Ltd.)	Norman Marcy (KMC)	Team member met with R. Diaz, who tabled a proposal for contribution to participation of KLCN in review of the Project proposal. Team member indicated that it would be helpful if Kelly Lake Cree Nation (KLCN) were to provide a map of traditional territory and to respond to letter that KMC had sent on September 30, 2013. Team member indicated a more stepwise approach to engagement was more desirable and indicated willingness to meet with KLCN representatives.	None
12/10/2013	Email-Outgoing	Robert Diaz (Director, DM Cultural Services, Ltd.)	Norman Marcy (KMC)	Team member emailed R. Diaz to follow-up on the KLCN discussion at the December 6, 2013 meeting. Team member requested that KLCN respond to a correspondence letter sent on September 30, 2013 to indicate that KLCN would like to begin engagement on the Project. Team member also requested a map of KLCN territorial interests as a GIS-compatible format.	None
12/12/2013	Email-Outgoing	Robert Diaz (Director, DM Cultural Services, Ltd.)	Mike Horn (KMC), Norman Marcy (KMC), Theresa Lane (KMC), Dmitry Ozerny (KMC)	Team member emailed R. Diaz to confirm that KMC would re-send a letter to KLCN that had previously been sent on September 30, 2013. Team member clarified that the letter was a result of the NEB identifying additional aboriginal groups not identified in earlier efforts. R. Diaz confirmed that shape files of traditional territory had been requested by KMC. R. Diaz requested a record of consultation in conjunction with the letter that was being sent to KLCN.	None
12/15/2013	Email-Incoming	Robert Diaz (Director, DM Cultural Services, Ltd.)	Mike Horn (KMC), Norman Marcy (KMC), Dmitry Ozerny (KMC)	R. Diaz emailed Team member to share previously requested shape files of KLCN territory. Team member had requested the shape files be used by KMC to prepare a map of KLCN territory and proposed Project routes.	None
12/19/2013	Email-Outgoing	Robert Diaz (Director, DM Cultural Services, Ltd.)	Norman Marcy (KMC), Dmitry Ozerny (KMC)	<p>Team member emailed R. Diaz to enquire which shape files KLCN would require.</p> <p>R. Diaz emailed team member confirmed that KLCN would need shape files for the Project throughout KLCN territory and for all auxiliary activities occurring within this area.</p> <p>Team member emailed R. Diaz and confirmed that KMC would be able to share this information, with the exception of roads, camp locations, and staging areas which were still being planned.</p>	None

APPENDIX A-2-06
KELLY LAKE FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/13/2013	Letter - Outgoing	Chief Claire Gauthier	Gary Youngman (KMC), Howard Heffler (KMC)	Team member sent a letter to Chief C. Gauthier of Kelly Lake First Nation (KLFN) on December 13, 2013. Team member provided the letter to KLFN as a follow up to the letter sent to KLFN from the NEB on August 13, 2013. Team member provided Chief C. Gauthier with details regarding the scope of the TMEP, team member contact information for questions, and web links to the project website and NEB website.	None

APPENDIX A-2-07
KELLY LAKE MÉTIS SETTLEMENT SOCIETY

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/9/2013	Email- Outgoing	Cynthia Kolada (Policy Analyst), Keith Henry (President)	Norman Marcy (KMC)	Team member emailed C. Kolada requesting a map of Kelly Lake Métis Settlement Society (KLMSS) asserted area. C. Kolada emailed K. Henry requesting that maps be sent toTeam member. K. Henry emailed team member and attached two maps: one including the British Columbia portion of the traditional territory of KLMSS, and the other depicting KLMSS traditional territory in Alberta.	None
12/10/2013	Email- Outgoing	Keith Henry (President)	Norman Marcy (KMC)	Team member emailed K. Henry acknowledged receipt of KLMSS territorial territory maps, requesting that the maps be re-sent in shapefile or other GIS-compatible format.	None

APPENDIX A-2-08

KTUNAXA NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
09/30/2013	Letter Outgoing -	Kathryn Teneese (Chair of the Ktunaxa Nation Council)	Howard Heffler (KMC)	Team member mailed a letter to K. Teneese which described the Trans Mountain Expansion Project, provided links to additional information about the Project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that Ktunaxa Nation may have about the Project.	None

APPENDIX A-2-09
LITTLE SHUSWAP INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	Email- Outgoing	Chief Felix Arnouse	Sondra Baker (TERA)	Team member emailed Chief F. Arnouse and provided a notification letter for Archeological Geotechnical Borehole Drilling fieldwork (Permit No. 2013-0165) on: - October 15 - 23, 2013 - October 25 - 30, 2013 - October 19 - 27, 2013 - October 29 - November 3, 2013	None
12/16/2013	Letter - Outgoing	Chief Felix Arnouse	Ian Anderson (KMC)	Team member sent a letter to Chief F. Arnouse and notified Little Shuswap Lake Indian Band (LSLIB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-2-10
LHEIDLI T'ENNEH FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/4/2013	Email- Outgoing	Keith Henry (Economic Development Manager)	Carrie Dunn (TERA), Clare Peacock (TERA), Derek Sorkilmo (TERA)	K. Henry emailed team members and notified TERA that a community meeting on October 18, 2013 would not be feasible at this time. K. Henry requested to arrange an alternative date to review the TEK Results for the 2012/2013 field season for October 15, 2013.	None
10/7/2013	Email- Outgoing	Keith Henry (Economic Development Manager)	Carrie Dunn (TERA)	Team member emailed K. Henry and notified LTB that the TEK Results Report for the 2012/2013 field season was not yet complete.	None
10/8/2013	Phone - Attempt	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member attempted to call K. Henry and left a message requesting call back and suggesting discussions on Mutual Benefits. Team member also indicated he would follow-up with M. Stevenson.	None
10/9/2013	Email- Outgoing	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	Team member and M. Stevenson exchanged emails to determine upcoming meeting scheduled for October 16, 2013 to discuss the proposal and KMC response.	None
10/9/2013	Email- Outgoing	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	Team member emailed K. Henry and informed that the meeting in Victoria on October 5, 2013 was well attended and noted that another Team member was in attendance to answer many of the marine focused questions. K. Henry emailed team member and noted that good questions and comments had been brought up for follow up.	None
10/10/2013	Email- Outgoing	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	Team member and M. Stevenson exchanged emails to arrange a meeting time (October 16, 2013).	None
10/16/2013	Email- Incoming	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	M. Stevenson emailed team member and suggested a meeting time and location (October 16, 2013 at 12pm). Team member emailed M. Stevenson and confirmed the meeting logistics.	None
10/16/2013	In-Person	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	Team member met with M. Stevenson on October 16, 2013 to discuss the Proposed LLT MBA.	None
10/17/2013	Phone - Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member called K. Henry and left a voice message with the following: - KMC is looking for conclusion of some outstanding engagement activities agreed to in the Memorandum of Agreement - KMC is awaiting the results of the TLUS work undertaken by LLT with K. Sturmanis - Team member met with M. Stevenson (lawyer for LLT) and continued dialogue on MBA and anticipated follow up discussions in November, 2013.	None
10/19/2013	Email- Incoming	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	K. Henry emailed team member and notified KMC that Chief D. Frederick was available December 11, 2013 to meet with KMC President. Team member confirmed through November 13, 2013 correspondence.	None
10/30/2013	Phone - Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member called K. Henry and left a voice message inquiring about the completion of Capacity Agreement engagement activities and Chief and Council considerations of the TLUS results as prepared by LLT consultant, K. Surmanis. Team member requested call back.	None
10/30/2013	Email- Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed K. Henry to follow up on an earlier call to discuss next steps and understanding the expected scheduling and delivery on the matters of engagement capacity and TLUS completion. Team member noted availability to participate in another community meeting, whenever convenient, or to discuss with K. Henry and Chief and Council any matters pertaining to TMEP proposal. Team member informed of potential benefits agreement discussions with M. Stevenson at the end of November, 2013. K. Henry emailed team member and inquired about availability for a call on December 6, 2013. Team member emailed K. Henry to confirm availability on December 6, 2013 and inquire as to the time of the call.	None
11/5/2013	Email- Outgoing	Jackie Brown (Forestry Coordinator), Keith Henry(Economic Development Manager)	Norman Marcy (KMC)	Team member emailed K. Henry and J. Brown and outlined the Work Plan agreement components pertaining to community engagement, as well as associated deliverables. Team member also stated that the TLU results report was required to be sent to TERA.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/13/2013	Email-Incoming	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	K. Henry emailed team member and notified KMC that a response to team member's November 5, 2013 email was forthcoming. K. Henry also requested further information regarding the content or dialogue of future community meetings, as well as a list of Project documents that are available for review.	None
11/13/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed K. Henry and notified LLT that KMC's President was interested in meeting Chief D. Frederick on December 11, 2013. K. Henry committed to following-up on Chief D. Frederick's availability.	None
11/14/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Karen Baylis (TERA)	K. Henry emailed team member and notified TERA that LLT would be sending a TLU study report. Team member confirmed and noted TERA's anticipation for the documents.	None
11/14/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed K. Henry and stated that meeting details could be discussed at LTB's earliest convenience.	None
11/20/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Karen Baylis (TERA)	K. Henry emailed team member and attached a copy of LLT's TLU study report. Team member confirmed receipt of this document.	None
11/20/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed K. Henry and confirmed details for the December 11, 2013 meeting with Chief D. Frederick and KMC's President. Team member also asked to be advised of future Chief and Council, community or staff meetings that LLT wished to have KMC utilize for meaningful engagement opportunities.	None
11/20/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed K. Henry to provide the information requested in K. Henry's November 13, 2013 email. Team member stated that Chief and Council meetings could include: <ul style="list-style-type: none"> • Addressing community questions • Further development and understanding of the Project components timing engagement processes • Direct answers with appropriate KMC staff to address any matters that may be raised. • further relationship development, explanation and dialogue concerning potential MBA Team member also listed all the documents shared with LLT since engagement began. Team member noted that given the information provided to LLT thus far, in both the documentation as well as addressing questions and concerns of the community, it was KMC's hope that LLT would be well-positioned to provide a recounting of the community's interests with regards to the Project.	None
11/20/2013 12:00 AM	Email-Incoming	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	M. Stevenson emailed team member and requested a follow-up to team member's September 19, 2013 email in which team member committed to providing the safety and security component of the Pipeline contracts. M. Stevenson also requested to be advised of the road building components. Further follow-up regarding Benefit Agreement proposals was requested.	None
11/23/2013	Email-Outgoing	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	Team member emailed M. Stevenson in response to M. Stevenson's email of November 20, 2013. Team member noted that, with regards to the safety and security, as well as clearing and road building concerns, these components were largely dependent upon the engineering design and determination of construction requirements. Team member also noted keen interest in the progression of an MBA with LLT. Team member also noted that a meeting had been organized between KMC's President and Chief D. Frederick for December 11, 2013. Team member demonstrated interest in pursuing further engagement matters at this time as well. K. Henry to advise at a later date. Team member stated that engagement with LLT staff and community members would need to be pursued further in order to provide an opportunity to address LLT questions and concerns that have arisen from TLU study work. Team member committed to attending these sessions and addressing concerns directly whenever they can be arranged.	None
11/26/2013	Email-Incoming	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	M. Stevenson emailed team member and notified of LLT's concerns with regards to MBA discussions.	None
11/28/2013	Email-Outgoing	Chief Dominic Frederick	Paul Anderson (TERA)	Team member emailed Chief D. Frederick and attached a copy of the 2012/2013 Biophysical field program Results Review Report. Team member stated that TERA was dedicated to accurately and responsibly collecting and reporting the findings of these field studies and requested that LLT review the attached report and ensure its accuracy and confidentiality.	None
11/28/2013	Email-Outgoing	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	Team member emailed M. Stevenson and stated KMC was interested in understanding LLT land, resource and territorial interests and uses, as well as possible mitigative measures that can be incorporated into the Project. Team member stated it was suspected that LLT staff, leadership and community members still had questions and concerns with regards to the Project. Team member committed to being available for meetings wherein KMC would have an opportunity to address the concerns and questions of the community. Team member also committed to further engagement with leadership and the	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				community.	
12/3/2013	Phone - Outgoing	Jackie Brown (Forestry Coordinator),	Norman Marcy (KMC)	Team member called J. Brown and confirmed contracting capacity for LLT Forestry, in order to determine possible opportunities under MBA. J. Brown also noted that the December 11, 2013 meeting would likely include J. Brown, Chief D. Frederick, K. Henry, K. Sturmanis and possibly other LLT council members.	None
12/3/2013	Email-Incoming	Jackie Brown (Forestry Coordinator), Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	K. Henry emailed team member and J. Brown, and confirmed logistical details for the December 11, 2013 meeting. K. Henry also confirmed attendance for K. Henry, J. Brown, Chief D. Frederick and noted that J. Morgan may attend, if scheduling permitted.	None
12/3/2013	Email-Outgoing	Jackie Brown (Forestry Coordinator), Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed K. Henry and J. Brown and confirmed meeting details for December 11, 2013 with Chief D. Frederick and KMC's President. Team member also requested a chance to meet with K. Henry and J. Brown in advance of the meeting with KMC's President.	None
12/3/2013	Email-Incoming	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	K. Henry emailed team member and attached a copy of a letter outlining LLT concerns regarding MBA negotiations, as well as key components identified by LLT for future engagement opportunities. K. Henry also provided follow-up questions to the August 9, 2013 response provided by team member.	None
12/3/2013	Letter - Incoming	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	K. Henry sent a letter to team member and notified KMC that LLT had prepared a report regarding land and traditional land uses, and had submitted the report to TERA. K. Henry noted that LLT interests, as determined in the report, pertain largely to the pipeline-operation with specific focus on pipeline safety and security. K. Henry identified specific concerns LLT held with regards to the negative impacts of a spill occurring along the Fraser River system, as there had been two incidents reported in June 2013 that informed LLT community members' opinions. K. Henry noted that, in addition to the information sessions LLT requested, LLT also requested: <ul style="list-style-type: none"> • spill response simulation • options and considerations around the Fraser River crossing near Rearguard • review of all field studies conducted by KMC. K. Henry also stated that follow-up questions to team members response on August 9, 2013 were forthcoming. It was noted that the response further detail was required to provide a better understanding of structures and procedures with regards to: <ul style="list-style-type: none"> • pipeline safety • operation • monitoring • maintenance • spill response K. Henry noted that a meeting had been scheduled for December 11, 2013 wherein Chief D. Frederick and KMC's President would have an opportunity to meet and discuss LLT interests and concerns.	None
12/3/2013	Phone - Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member called K. Henry and provided a response to K. Henry's letter of December 3, 2013. Topics discussed: <ul style="list-style-type: none"> • It was predicted that KMC would not have a formal response to specific questions prior to meeting December 11, 2013 • KMC committed to continuing the process of familiarizing LLT community members with the Project and answering questions posed by staff, council and community members • Team member offered to attend a series of meetings with LLT and relevant KMC staff in 2014 address all LLT questions, comments and concerns. • K. Henry indicated that much of the information shared with LLT by KMC had been displaced due to staff changes and losing G. Haines, who had been a key contact with the Project. 	None
12/9/2013	Email-Incoming	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	M. Stevenson emailed team member regarding company partnerships.	None
12/11/2013	Letter - Outgoing	Keith Henry (Economic Development Manager)	Ian Anderson (KMC), Regan Schlecker (KMC), Norman Marcy (KMC)	Chief D. Frederick produced a meeting agenda for team members and LLT representatives attending the December 12, 2013 meeting at the Lheidli T'enneh Economic Development Office. The agenda included: <ul style="list-style-type: none"> - Introductions - Opening remarks by Chief D. Frederick - MOU information requirements - Outstanding issues for the MOU 	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				<p>- Follow-up on additional information requested.</p> <p>Chief D. Frederick wrote a Briefing Note for team members prior to the December 12, 2013 meeting to outline the following:</p> <ul style="list-style-type: none"> - Purpose: engage in MBA negotiations that encompass the Trans Mountain Pipeline and Trans Mountain Expansion Project - Issue: build on the MOU framework by negotiating on issues of importance to both LLT and KMC and begin MBA discussions - Background: outline of the Project and TLU/TEK studies to date 	
12/12/2013	In-Person	Chief Dominic Frederick, Gord Haines (GIS Technician), Keith Henry (Economic Development Manager), Mark Stevenson (Chief Negotiator), Karl Sturmanis (Treaty Negotiator)	Ian Anderson (KMC), Regan Schlecker (KMC), Norman Marcy (KMC)	<p>Team members met with Chief D. Frederick, K. Henry, K. Sturmanis, M. Stevenson and G. Haines at the Lheidli T'enneh Economic Development Office on December 12, 2013. Team member begun discussion of MOU requirements by describing KMC's approach to engagement and negotiation of benefits to LLT. M.</p> <p>Chief D. Frederick and M. Stevenson recognized the lack of consultation on the TMX Anchor Loop Project but stated that the goal was to move forward. Team member stated that KMC's benefits approaches differ based on each First Nation;</p> <p>Team member noted that KMC does not provide NEB participation funding but that KMC looked forward to building a long-term, mutually beneficial agreement with LLT.</p> <p>LLT provided an agenda and Briefing Note (dated December 11, 2013) for the meeting.</p> <p>Next steps include: extend MOA; follow-up on TEK Biophysical studies; workshop in January 2014 on spill response and integrity issues; target for MBA discussions; and possible future meeting between KMC Procurement staff and LLT representatives with partners.</p>	None
12/12/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	<p>Team member emailed K. Henry and notified LLT that the Biophysical Results Review report would be sent to K. Henry by TERA. Materials were originally sent on November 28, 2013. Team member stated that it was TERA's typical practice to review the results of the field programs as part of TERA engagement procedures on TLU studies. Since LLT decided to pursue TLU through a 3rd-party contractor, it was team member's suggestion to find an alternative method in which to discuss these matters. Team member also requested that K. Henry respond with potential meeting dates for January 2014. Team member noted that a team was being constructed for MBA discussions, to take place at the end of January 2014.</p>	None
12/16/2013	Email-Incoming	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	<p>K. Henry emailed team member and notified KMC that potential meeting dates, with regards to MBA negotiations, were being discussed internally, namely January 21, 22 and 23, 2014 or January 28 and January 29, 2014, and Lheidli T'enneh Band (LLT) would notify KMC once decided. K. Henry also requested to be advised on next steps with regards to MOU extension. Team member confirmed receipt of proposed dates and requested to know what LLT wished the nature of these meetings to include. Team member also noted that, in regards to MOU extension, KMC would need finalized deliverables from the existing MOU. Team member stated that an extension could be achieved.</p>	None
12/16/2013	Letter - Outgoing	Chief Dominic Frederick	Ian Anderson (KMC)	<p>Team member sent a letter to Chief D. Frederick and notified LLT of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.</p>	None
12/16/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	<p>M. Stevenson emailed team member and notified of preference to meet January 29, 2014; however, M. Stevenson noted that LLT required a substantive response in writing to LLT's proposal prior to confirming this date to meet.</p>	None
12/16/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	<p>Team member emailed K. Henry and requested potential meeting dates for MBA negotiations from January 27 - 31, 2014. Team member noted that legal counsel would be present for the negotiations.</p>	None
12/16/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	<p>Team member emailed K. Henry and requested the outstanding community and LLT staff questions, as KMC would like to arrange a workshop and address the outstanding questions. Team member also requested a date for early January 2014 to hold a meeting, as well as what format the meeting should take with regards to community and/or staff involvement.</p>	None
12/16/2013	Email-Incoming	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	<p>M. Stevenson emailed team member and requested January 20, 2014 as date to meet and negotiate MBA. Team member stated that January 20, 2014 and January 29, 2014 were both available, but would make every effort to be available for January 20, 2014.</p>	None
12/17/2013	Phone - Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	<p>Team member called K. Henry and informed LLT that the Facilities Application has been filed with the NEB, and has been made available on the Project's website. Team member invited any questions and further discussion regarding the application.</p>	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
		Development Manager)			
12/17/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed K. Henry on December 17, 2013 acknowledging receipt of the proposed dates for a workshop. Team member inquired what activities were anticipated for the workshop - staff session, community session, Chief and Council session, etc.	None
12/18/2013	Email-Incoming	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	It was stated at the December 11, 2013 meeting between KMC President and Chief D. Fredericks that significant interest lay on both sides to further pursue engagement opportunities.	None
12/19/2013	Email-Outgoing	Keith Henry (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed K. Henry and demonstrated a desire to develop some structure with regards to moving forward with the engagement. Team member stated that KMC had a better understanding of LLT interests and that this knowledge would inform MBA discussions,. Team member concluded that the received community profiles and the meetings/discussions held by Chief D. Frederick and KMC's President have enhanced KMC's appreciation and commitment to the developing relationship.	None
12/19/2013	Email-Outgoing	Mark Stevenson (Chief Negotiator)	Norman Marcy (KMC)	Team member emailed M. Stevenson and provided potential meeting dates of January 28 and January 30, 2014. Team member stated there had been scheduling conflicts in relation to January 20, 2014. M. Stevenson provided January 3, January 20 and February 17, 2014 as LLT's availability. Team member stated that February 17, 2014 was available, but would notify LLT if dates in January became available. Team member requested to be informed if LLT's schedule in January opened up.	None

APPENDIX A-2-11
LHTAKO DENE NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/30/2013	Phone - Outgoing	Allan Okabe (Band Administrator), Frank Boucher (Council Member)	Norman Marcy (KMC)	Team member called F. Boucher and A. Okabe and explained that the Traditional Land Use Study (TLUS) was being considered but no decision had been made yet. F. Boucher and A. Okabe indicated that it was getting too late in the season for land tour and that Lhtako Dene Nation (LDN) representatives were anxious to get on with the TLUS. Team member committed to seeking clarity from KMC and would advise of new information.	None
12/4/2013	Letter - Outgoing	Chief Clifford Lebrun	Gary Youngman (KMC)	Team member sent a letter to Chief C. LeBrun dated December 4, 2013 acknowledging receipt of LDN's Aboriginal preliminary interests related to the Project. KMC is reviewing the interests identified by LDN and will provide a response to the issues when this process is complete. Team member noted that the interests identified by LDN will be summarized in the Application and placed on the public record as part of the NEB's regulatory process. However, KMC will indicate in the Application that the interests were provided pursuant to a confidential LOU.	None
12/16/2013	Letter - Outgoing	Chief Clifford Lebrun	Ian Anderson (KMC)	Team member sent a letter to Chief C. LeBrun and notified LDN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None
10/17/2013	Phone - Attempt	Frank Boucher (Council Member)	Norman Marcy (KMC)	Team member called F. Boucher and left a voice message to discuss TLUS and engagement activities.	None
12/17/2013	Phone - Outgoing	Frank Boucher (Council Member)	Norman Marcy (KMC)	F. Boucher inquired about the progress of the Project. Team member conveyed that the Facilities Application had been filed with the NEB and that it is available on the Trans Mountain website (transmountain.com). Team member invited F. Boucher to call with any further questions or discussion regarding the Facilities Application.	None

APPENDIX A-2-12
NESKONLITH INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	Fax	Ruth Thomas (Referral Specialist)	Margaret Mears (KMC)	R. Thomas faxed a letter to Team member containing the Investigative Use Permit #9638556 regarding the Geotech Borehole Investigation Program within Unit 74 and 75 of Block C, Group 82-M-14. The Investigative Use Permit requested that an Archaeological Impact Assessment and a Neskonalith Indian Band Heritage Investigation Permit be completed. The letter was sent from R. Thomas of the Neskonalith Indian Band to S. O'Flaherty, the First Nations Liaison Assistant for the BC Oil & Gas Commission.	None
10/3/2013	Email-Incoming	Michelle Carlin (Executive Assistant)	Georgia Dixon (KMC)	M. Carlin emailed Team member and informed of an annual report to be sent to KMC outlining what Neskonalith Indian Band (NIB) does and is currently working on. M. Carlin informed that NIB does arch Monitoring and Cultural Monitoring and noted that many monitors would likely be needed on TMEP. M. Carlin proposed the training of band members to gain experience to help out and inquired as to the process of undertaking this type of training.	None
10/4/2013	Email-Outgoing	Michelle Carlin (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed M. Carlin and responded to the request for capacity for aboriginal community members. Team member indicated that more information was needed from M. Carlin before proceeding.	None
10/4/2013	Email-Outgoing	Ruth Thomas (Referral Specialist)	Sondra Baker (TERA)	Team member emailed NIB and provided a notification letter for archeological Geotechnical Borehole Drilling fieldwork (Permit No. 2013-26) between: - October 15 - 23, 2013 at north Thompson River area 6 - October 24 - 30, 2013 at north Thompson River area 6 - October 19 - 27, 2013 at north Thompson River area 7 - October 29 - November 3, 2013 at north Thompson River area 7	None
10/8/2013	Phone - attempt	Michelle Carlin (Executive Assistant)	Georgia Dixon (KMC)	Team member left a telephone message for M. Carlin, NIB Manager, in response to a training request. Team member requested a call back.	None
10/8/2013	Email-Outgoing	Michelle Carlin (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed M. Carlin and indicated that they had been unsuccessful in attempts to reach Stakeholder by telephone.	None
10/11/2013	Email-Outgoing	Michelle Carlin (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed M. Carlin to reschedule phone call to discuss training request. M. Carlin proposed to speak on the phone sometime during the week of October 14-18, 2013.	None
10/22/2013	Phone - attempt	Michelle Carlin (Executive Assistant)	Georgia Dixon (KMC)	Team member left a message for M. Carlin to follow up on NIB capacity request made by M. Carlin on October 3, 2013.	None
10/22/2013	Email-Incoming	Michelle Carlin (Executive Assistant)	Georgia Dixon (KMC)	M. Carlin emailed team member to determine a time to discuss capacity funding. Team member indicated that team member would contact M. Carlin by phone on October 22, 2013.	None
10/22/2013	Email-Incoming	Michelle Carlin (Executive Assistant)	Georgia Dixon (KMC)	M. Carlin provided team member with the Resource information Standards Committee (RISC) course "Archaeological and CMT inventory Training for Crew Members" via email on October 22, 2013. Provided information included what the course entails; instructor information; course fees and materials; facility, classroom and field requirements; course objectives, participant evaluation; course/instructor evaluation, course updates and setting up a course.	None
11/1/2013	Phone - outgoing	R. Hutton (Project Consultant)	Georgia Dixon (KMC)	Team member called R. Hutton to discuss the following: - letters received from NIB regarding interest in engaging with the Oil and Gas Commission (OGC) and KMC - NIB requesting capacity funds regarding the project - Team member committed to bringing request back to aET Lead for another review - Team member committed to follow up on November 5, 2013	None
11/4/2013	Email-Outgoing	Michelle Carlin (Executive Assistant)	Margery Knorr (KMC), Martha Matthew (KMC), Georgia Dixon (KMC)	Team member M. Carlin and indicated the RISC course information will be forwarded to M. Matthew and M. Knorr.	None
11/12/2013	Email-Incoming	Michelle Carlin (Executive Assistant)	Clare Peacock (TERA)	M. Carlin emailed Team member and notified that NIB can provide NIB participant for field work. Team member responded to M. Carlin and noted current workload within the NIB and that the team member will contact the NIB when the aIA Study resumes after winter to discuss further details.	None
11/21/2013	Email-Outgoing	Michelle Carlin (Executive Assistant)	Regan Schlecker (KMC), Martha Matthew (KMC), Georgia Dixon (KMC)	Team member emailed M. Carlin and invited M. Carlin to a KMC presentation on November 22, 2013 in Merritt, BC to discuss local economic benefits the TMEP. Team member provided M. Carlin with the presentation details and M. Carlin accepted the invitation.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/24/2013	Phone - outgoing	Michelle Carlin (Executive Assistant)	Georgia Dixon (KMC)	Team member called M. Carlin on November 24, 2013. Team member and M. Carlin discussed: overview of the procurement opportunities and training program to date, overview of timing of detailed information about procurement opportunities, and commitment to follow up monthly with any new updates.	None
12/16/2013	Letter - outgoing	Chief Judy Ann Wilson	Ian Anderson (KMC)	Team member sent a letter to Chief J. Wilson and notified NIB of the Facilities application Filing with the NEB on December 16, 2013. Team member provided a URL to the application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/16/2013	Email- Outgoing	Michelle Carlin (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed M. Carlin on December 16, 2013 to share the TMEP media release for the filing of the Facilities application with the NEB.	None

APPENDIX A-2-13
OREGON JACK CREEK BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	Email- Outgoing	Chief Robert Pasco	Sondra Baker (TERA)	Team member emailed Oregon Jack Creek Band (OJCB) and provided a notification letter for Archeological Geotechnical Borehole Drilling fieldwork (Permit No. 2013-26) from October 14 - 22, 2013 at Thompson River.	None
12/16/2013	Letter - Outgoing	Chief Robert Pasco	Ian Anderson (KMC)	Team member sent a letter to Chief R. Pasco and notified OJCB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-2-14
SHUSWAP INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Email- Outgoing	Greg Oja (representative of Shuswap Indian Band)	Georgia Dixon (KMC)	Team member emailed G. Oja and notified Shuswap Indian Band (SPIB) of the Project's filing with the NEB. Team member included the press release (dated December 16, 2013) of the filing for SPIB records.	None
12/16/2013	Letter - Outgoing	Chief Paul Sam	Ian Anderson (KMC)	Team member sent a letter to Chief P. Sam and notified SPIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-2-15
SIMPCW FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/2/2013	Email-Outgoing	Kellen Smith, Kerri Jo Fortier, Sarin Warman	Trish Wiegele (TERA)	Team member emailed S. Warman and attached a map of Finn Creek. Team member provided an answer about average drilling rate during geotechnical borehole drilling based on a question asked at the September 30, 2013 meeting.	None
10/3/2013	In-Person		Aaron Curtis (TERA)	Four Simpcw Nation Archaeological assistants participated in an Archaeological Impact Assessment from October 3-12, 2013.	Socio-Econ. Terrestrial - Heritage Resources - Archaeology
10/3/2013	Email-Outgoing	Kevin Twohig, Sarah Stanton	Clare Peacock (TERA)	Team Member emailed K. Twohig and S. Stanton notification of the two Geotech sites planned to be surveyed on October 8, 2013. Team member requested confirmation of SN participation in order to arrange logistics.	None
10/4/2013	Email-Outgoing	James Foster	Trish Wiegele (TERA)	Team member emailed J. Foster and attached Fiber Utilization forms from Simpcw Resources for the geotechnical borehole investigation program. J. Foster emailed team member and attached a corrected Fiber Utilization document. Team member emailed J. Foster and resolved to send the updated form to BCOGC.	None
10/5/2013	Email-Incoming	Steven Patterson	Clare Peacock (TERA)	S. Patterson emailed team member to state that the referral received by fax was illegible and requested that, going forward, all referrals and notifications were sent digitally via email and were accompanied by a PDF map and source spatial data, such as shapefiles, indicating the Project's extents and location. Team member emailed S. Patterson and indicated that a hard copy and email would arrive on October 5, 2013.	None
10/5/2013	Email-Outgoing	Kerri Jo Fortier	Clare Peacock (TERA)	Team member emailed K. Fortier to notify SN of two upcoming Geotechnical Borehole Surveys taking place within SN's Traditional Territory: - North Thompson 6 scheduled October 16, 2013 and October 26, 2013, - North Thompson 7 scheduled October 20, 2013 and October 30, 2013. Team member requested confirmation of one SN participant for each assessment so that logistics arrangements could be made.	None
10/7/2013	Email-Outgoing	Kerri Jo Fortier, Steven Patterson	Clare Peacock (TERA)	S. Patterson emailed team member and provided and Simpcw Nation (SN) Archaeology assistant for Geotechnical Borehole Survey (Thompson Chapple) on October 8, 2013. S. Patterson also indicated the availability of other SN assistants for future Archaeology work. Team member emailed K. Fortier and S. Patterson to provide SN participant logistics for Geotechnical Borehole Drilling assessment on October 8, 2013. Team member resolved to provide further logistical details when available.	None
10/8/2013	In-Person		Tess Espey	One SN crew member participated in Geotechnical Borehole Survey on October 8, 2013.	Terrestrial - Terrain Geotechnical
10/9/2013	Email-Incoming	Tina Donald	Clare Peacock (TERA)	T. Donald emailed team member and requested confirmation of when and for how many days the next Archaeology crew with SN assistants would be going into the field.	None
10/9/2013	Email-Outgoing	Brian Matthew	Jeff Smith (KMC)	Team member emailed B. Matthew and noted that B. Matthew's requests for a training and employment meeting had been forwarded by another team member due to a conflict of interest. Team member suggested potential meeting dates. B. Matthew emailed team member to make enquiries and suggestions about meeting logistics. Team member emailed B. Matthew and confirmed meeting logistics, noting that the meeting would be used to discuss SN's current capacity and training priorities.	None
10/15/2013	Email-Outgoing	Kerri Jo Fortier, Steve Patterson	Sondra Baker (TERA)	Team member emailed K. Fortier and S. Patterson to notify SN that the North Thompson Chapple Geotechnical Borehole Survey would be scheduled for fieldwork October 18, 2013 – October 21, 2013. Team member emailed K. Fortier and S. Patterson, attaching a table detailing the revised dates for Project Archaeology work in North Thompson River 6 and 7 locations. S. Patterson emailed team member and requested that team member clarify fieldwork dates and explain what was meant by "RK". S. Patterson indicated dates	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				were SN assistants were available for Archaeological work.	
10/16/2013	Email-Incoming	Steve Patterson	Sondra Baker (TERA)	<p>Team member emailed S. Patterson to confirm fieldwork dates, noting that the most recently-provided dates were correct, and to explain the RK and KP system.</p> <p>S. Patterson emailed team member enquired about dates for North Thompson Chapple Geotechnical Borehole Survey and for Archaeology Crew 3 (Shift 3), originally scheduled October 19, 2013 – October 28, 2013.</p> <p>Team member emailed S. Patterson and enquired if SN assistants could participate on Archaeology Crew 3 (Shift 4) from October 20, 2013 – October 28 2013.</p> <p>Team member emailed S. Patterson noting that team member would look into the Archaeology Crew 3 query on October 17, 2013.</p> <p>Team member emailed S. Patterson and enquired about SN assistant logistics.</p> <p>S. Patterson emailed team member and stated that an SN assistant was only available October 21, 2013 – October 22, 2013 but could participate in later Archaeology work.</p> <p>Team member emailed S. Patterson and noted that Archaeology Crew 3 would conduct fieldwork October 19, 2013 – October 28, 2013.</p> <p>S. Patterson emailed team member and noted that because North Thompson 6 and North Thompson 7 Geotechnical Borehole Surveys overlapped in area that SN only had one assistant available.</p>	None
10/17/2013	Email-Outgoing	Steve Patterson	Sondra Baker (TERA)	Team member emailed S. Patterson and enquired exactly which days an SN assistant would be participating and at exactly which sites. Team member enquired about SN assistant's logistics.	None
10/18/2013	Email-Outgoing	Steve Patterson	Sondra Baker (TERA)	<p>Team member emailed S. Patterson and enquired about participant logistics for Archaeology Crew 3 (Shift 4) scheduled October 20, 2013 – October 28, 2013.</p> <p>Team member enquired about SN assistant logistics for the North Thompson Chapple Geotechnical Borehole Survey.</p> <p>Team member emailed S. Patterson and provided participant logistics for the North Thompson Chapple Geotechnical Borehole Survey.</p> <p>S. Patterson emailed team member and indicated logistics preferences for SN assistants on future Archaeology fieldwork.</p> <p>Team member emailed S. Patterson and acknowledged receipt of SN's preferences.</p> <p>S. Patterson emailed team member and enquired if fieldwork could be coordinated in a calendar-based format.</p>	None
10/19/2013	In-Person		Aaron Curtis (TERA)	Four SN Archaeological assistants participated in an Archaeological Impact Assessment from October 19-28, 2013.	Socio-Econ. Terrestrial - Heritage Resources - Archaeology
10/21/2013	In-Person		Tess Espey (TERA)	One Simpcw Nation crew member participated in Geotechnical Borehole Drilling on October 21, 2013.	Terrestrial - Terrain Geotechnical
10/21/2013	Email-Outgoing	Kerri Jo Fortier, Steve Patterson	Clare Peacock (TERA)	<p>Team member emailed K. Fortier and S. Patterson to indicate that Adams Lake Indian Band (ALIB) would be included in the Archaeological Impact Assessment along with the SN crew members at the North Thompson 6 Chapple Borehole Site on October 21, 2013. Team member noted that the overlap in consultative boundaries was at RK 594 according to the BC Archaeology Branch.</p> <p>S. Patterson emailed team member and requested that the fieldwork schedule be confirmed, noting that an SN participant had been double-booked.</p> <p>Team member emailed S. Patterson and K. Fortier to note that no double-booking had occurred because the crew assessing North Thompson 7 had been put on hold. Team member noted that drill monitoring would occur on October 24, 2013 for North Thompson 6 and requested confirmation that an SN participant would not be available.</p>	None
10/21/2013	In-Person	Kellen Smith, Sarin Warman, Steve Patterson	Margaret Mears (KMC), Trish Wiegele (TERA)	Team members met with S. Patterson, S. Warman and K. Smith from SN for a weekly conference call. S. Warman noted that the Finn Creek geotechnical program was complete and the artesian spring had been plugged up so that there was no more seepage. Team member inquired if an environmental monitor was necessary on site at North Thompson Chappel during drilling. S. Warman indicated that there were no environmental concerns on the west side of the station. S. Patterson requested that an online calendar be set up by TERA to more clearly provide updated scheduling information. Team member committed to discussing this online calendar with another team member. Action item: Daily field reports to be provided to team members.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/21/2013	Email-Incoming	Kevin Twohig, Steve Patterson	Trish Wiegele (TERA)	S. Patterson emailed team member to indicate unavailability of S. Patterson and K. Fortier to participate in an upcoming conference on October 21, 2013. Team member emailed S. Patterson and K. Twohig and stated that the upcoming conference call would be canceled since S. Patterson and K. Fortier would not be able to attend. Team member enquired if any items required urgent attention, otherwise everyone would reconvene the next week.	None
10/22/2013	Email-Outgoing	Kerri Jo Fortier	Trish Wiegele (TERA)	K. Fortier emailed team member to provide meeting minutes for the conference call between team members, S. Patterson and Estsek representatives that occurred on October 21, 2013.	None
10/22/2013	Email-Outgoing	Kerri Jo Fortier, Steve Patterson	Clare Peacock (TERA)	Team member emailed K. Fortier and S. Patterson to provide an updated schedule for Archaeology Crew 3 (Shift 4), noting that south of RK 591 a participant from ALIB would be joining the crew.	None
10/22/2013	Email-Outgoing	Steven Patterson	Clare Peacock (TERA)	Team member updated S. Patterson with Archaeology Crew 3 dates, noting that Shift 4 was scheduled October 19, 2013 – October 28, 2013 (RKP 526-596) and Cycle 5 was scheduled November 4, 2013 – November 13, 2013 (RKP 596-630).	None
10/23/2013	In-Person	Ken Rich, Grant Pauls	Jeff Smith (KMC), Jamie Andrews (KMC)	Team members met with K. Rich and G. Pauls on October 23, 2013 and discussed capacity funding	None
10/28/2013	Email-Outgoing	Kellen Smith, Kerri Jo Fortier, Sam Phillips, Sarin Warman, Steven Patterson	Margaret Mears (KMC), Trish Wiegele (TERA)	Team member emailed K. Smith, K. Fortier, S. Phillips, S. Warman, S. Patterson and another team member to provide the Estsek schedule for the week of October 28, 2013 Because an Estsek representative had indicated Estsek's inability to attend the meeting scheduled for October 28, 2013. Team member stated that no participants would be on the conference call. S. Patterson emailed team member to indicate that S. Patterson and K. Fortier would be on the conference call either.	None
10/30/2013	Email-Outgoing	Steve Patterson	Clare Peacock (TERA)	Team member emailed S. Patterson to indicate that all artifacts found by archeologists on study would be stored in a secure place for analysis. Once analyzed and catalogued, artifacts found in SN territory would be deposited with the Secwepemc Museum in Kamloops as per request and approved amendment to permit. Team member indicated that most TMEP artifacts were stored in Royal BC Museum in Victoria and needed to be housed in an approved facility under the supervision of a professional curator. Team member detailed that artifacts could be transferred to another facility of SN's choice if all facility requirements were approved, including proper protection from theft and fire and care of a professional curator, and pending no overlapping claims by other groups.	None
10/30/2013	In-Person	Steven Patterson	Clare Peacock (TERA), Trish Wiegele (TERA)	Team members met with S. Patterson for the TMEP Simpcw Weekly Archaeology Meeting on October 30, 2013. K. Fortier had passed the Land Resource role to S. Patterson and K. Fortier was been removed from weekly meeting list. SN expressed concern with RK 591, where ALIB would be joining Archaeology Crew 3. S. Patterson stated that ALIB involvement in this area was not through TERA but a decision made at Government level. There were no concerns over current field work other than overlapping FN involvement. Action Items: S. Patterson to draft a letter to BC Archaeology Branch with SN's concerns over their consultative boundary database. Team members to look into online calendar system for next field season scheduling as per SN's request.	None
10/30/2013	Email-Outgoing	Kerri Jo Fortier, Kevin Twohig, Steve Patterson	Trish Wiegele (TERA)	Team member emailed K. Fortier, S. Patterson and K. Twohig and provided the field schedule in SN territory for the next two weeks: - Aquatics Study Crew 43 scheduled October 28, 2013 – November 1, 2013 - Archaeology Crew 3 (Shift 5) scheduled November 3, 2013 – November 14, 2013. Team member also noted that Archaeology Crew 3 (Shift 4) had de-mobilized on October 29, 2013.	None
10/31/2013	Email-Incoming	Steven Patterson	Clare Peacock (TERA)	S. Patterson emailed team member and enquired about the exact location of RK594, as mentioned in previous correspondence, and requested a map and reference kilometer post. Team member emailed S. Patterson and responded by providing exact coordinates.	None
10/31/2013	Email-Outgoing	Steven Patterson	Clare Peacock (TERA)	Team member emailed S. Patterson provided logistical details for Archaeology Crew 3 (Shift 5) scheduled November 4, 2013 - November 13, 2013, indicating that ALIB was invited to send crew members as the crew reached and moved south of RK 594 on November 6, 2013.	None
11/4/2013	In-Person		Aaron Curtis (TERA)	Four Simpcw Nation archaeological assistants participated in an Archaeological Impact Assessment from November 4-13, 2013.	Socio-Econ. Terrestrial - Heritage Resources - Archaeology
11/4/2013	Letter - Incoming	Rita Matthew	Ian Anderson (KMC)	R. Matthew mailed team member a letter regarding concerns around neighbouring FN working in SN territory. SN requested to be notified when and where other First Nations were scheduled to participate in work. Letter outlines prima facie claim.	None
11/5/2013	Email-Incoming	Kerri Jo Fortier	Margaret Mears (KMC), Trish Wiegele	K. Fortier emailed team member a letter of support from SN to proceed with the Archaeology studies within Finn Creek and North Thompson Provincial Parks.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
			(TERA)		
11/5/2013	Email-Outgoing	Grant Pauls	Jeff Smith (KMC)	Team member emailed G. Pauls and requested an update on the status of the TLU Study and enquired whether an interim or final report would be forthcoming. Team member also requested an update on the Community Project Office. Team member indicating expressed interest in putting together a Mutual Benefits Agreement (MBA). Team member requested potential meeting dates from G. Pauls.	None
11/6/2013	Email-Outgoing	Kerri Jo Fortier, Sam Phillips, Steven Patterson	Margaret Mears (KMC), Trish Wiegele (TERA), Kevin Twohig (TERA)	Team member emailed K. Fortier, S. Phillips, S. Patterson and other team members to provide an update on progress of Archaeology Crew 3 (Shift 5). Team member had no outstanding comments on the study thus far. Team member emailed team member to indicate that SN had reviewed the field schedule, there were no concerns at present and snow would likely halt Archaeology work by mid-November.	None
11/6/2013	Email-Outgoing	Rita Matthew, Sam Phillips	Regan Schlecker (KMC)	Team member emailed R. Matthew and S. Phillips notification that KMC would be presenting at Kamloops Chamber of Commerce on November 8, 2013 and again within SN's Traditional Territory on November 18, 2013 and November 21, 2013. Economic opportunities associated with the Project would be discussed.	None
11/6/2013	Email-Outgoing	Steven Patterson	Trish Wiegele (TERA)	Team member emailed S. Patterson the Archaeology field program schedule for Archaeology Crew 3, scheduled November 3, 2013 - November 14, 2013; November 19, 2013 - November 30, 2013; and December 5, 2013 - December 16, 2013.	None
11/12/2013	Email-Outgoing	Martyn Glassman	Jeff Smith (KMC), Annie Korver (KMC)	Team member emailed M. Glassman to address questions regarding pipe size, type of drills and drill locations. Team member also introduced a new KMC contact.	None
11/12/2013	Email-Outgoing	Steven Patterson	Clare Peacock (TERA)	Team member emailed S. Patterson to provide an update for Archeology Crew 3 scheduling. Team member indicated that Shift 5, scheduled November 4, 2013 - November 13, 2013 (RKP 561-610), was cancelled due to weather and indicated that last day of work would fall on November 9, 2013. Team member provided logistics for Shift 6, scheduled November 20, 2013 - November 29, 2013 (RKP 769-740).	None
11/12/2013	Email-Incoming	Grant Pauls	Jeff Smith (KMC)	G. Pauls emailed team member and indicated availability to meet November 15, 2013 in Vancouver. Team member emailed G. Pauls and requested to meet on November 22, 2013. G. Pauls emailed team member to confirm the meeting date of November 22, 2013, requesting a complete set of shape files for the Project route (including approximate 70 kilometers of new right-of-way). Team member emailed G. Pauls to acknowledge confirmation of the November 22, 2013 meeting date and to resolve to provide the requested shapefiles.	None
11/13/2013	Email-Outgoing	Rita Matthew, Sam Phillips	Regan Schlecker (KMC)	Team member emailed R. Matthew and S. Phillips with information regarding the upcoming Project presentation by KMC on November 18, 2013.	None
11/14/2013	Email-Outgoing	Kerri Jo Fortier	Regan Schlecker (KMC)	Team member emailed K. Fortier to follow up on a call attempt. Team member expressed interest in discussing and resolving issues regarding Finn Creek and recreational snowmobilers on ROW that had been raised by Councilor D. Matthew the week prior.	None
11/14/2013	Email-Outgoing	Martyn Glassman	Jason Smith (TERA)	Team member emailed M. Glassman in response to a request for more information around regulatory review process to date and the field studies SN had been engaged in. Team member attached document which included a Summary of the Proposed Approach to the Environmental and Socio-Economic Assessment as well as URL for the Project website for more information. Team member further summarized engagement and involvement of SN and associated businesses in various studies since May 2012. Team member indicated that SN was undertaking an individual conducting its own TLU study to be submitted as part of the NEB application. Team member indicated that SN representatives had been meeting with team members on a weekly basis.	None
11/14/2013	Email-Outgoing	Steven Patterson	Clare Peacock (TERA)	Team member informed S. Patterson that due to weather conditions, remaining Archaeology fieldwork in SN Traditional Territory would be put on hold until Spring 2014.	None
11/15/2013	Email-Outgoing	Brian Matthew, Sam Phillips	Jeff Smith (KMC), Margery Knorr (KMC), Jennifer Hooper (Consultant)	Team member emailed B. Matthews and S. Phillips to respond to an enquiry about plans to deactivate the Albreda station and plans for potential powerline work. Team member indicated that a reliability review would be conducted in 2018 on Albreda, Whalech, Hope, and Stump Stations, at which time KMC would determine if any stations should be deactivated. Team member indicated that the above named stations were being used as potential backup at that time.	None
11/15/2013	Email-Outgoing	Rita Matthew, Sam Phillips	Regan Schlecker (KMC)	Team member emailed S. Phillips and R. Matthew to provide information about the upcoming Blue River and Valemout Chamber of Commerce presentation by KMC on November 21, 2013.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/18/2013	In-Person	Brian Matthew	Margery Knorr (KMC), Martha Matthew (KMC)	Team members met with B. Matthew, S. Ross (Thompson Rivers University), S. Culver (Sun Country Community Futures) and Connie Falk (Work Search Centre) to discuss the proposal to prepare Needs Assessment to encompass the communities of Barriere, Clearwater, Chase, Blue River, and potentially Valemount and Merritt. Attendees indicated the need to understand communities to prepare contractors and potential workers and determined which parties needed to be included in the proposal. KMC indicated interest in participating as an industry participant and in promoting other industry companies to get involved in planning.	None
11/18/2013	Email-Incoming	Grant Pauls	Jeff Smith (KMC)	G. Pauls emailed team member and enquired if team member was available to meet on November 21, 2013 in Calgary instead of meeting November 22, 2013 in Vancouver. Team member emailed G. Pauls and enquired about availability on November 21, 2013.	None
11/20/2013	Email-Outgoing	Martyn Glassman	Jason Smith (TERA)	Team member emailed M. Glassman in response to an earlier voice message in which M. Glassman enquired about a figure included on the Summary of Proposed Approach to the ESA, which was sent to SN on November 14, 2013. Team member explained the figure and guided provided additional information for M. Glassman.	None
11/22/2013	Email-Outgoing	Sam Phillips	Jeff Smith (KMC), Margery Knorr (KMC), Jennifer Hooper (Consultant)	Team member emailed S. Phillips and other team members to further summarize, beyond information provided on November 15, 2013, plans around four affected pump stations in North Thompson region. Team member provided a link to the Project Description where S. Phillips could find more detailed and concise information.	None
11/22/2013	In-Person	Ken Rich, Grant Pauls	Jeff Smith (KMC),	Team member met with K. Rich and G. Pauls to discuss next steps in the MBA process. Team member suggested a follow-up meeting at which KMC could provide routing information. Team member further suggested that a Community Open House be held by KMC soon.	None
11/25/2013	Email-Outgoing	Grant Pauls	Jeff Smith (KMC)	Team member emailed G. Pauls to follow up on the meeting held November 22, 2013. Team member proposed dates between December 3, 2013 and December 6, 2013 for a routing meeting. Team member proposed early January 2014 for a Community Open House at SN. Team member requested information about the Capacity Agreement budget as well as the timelines for the TLU Study Interim and Final reports. G. Pauls emailed team member to indicate a preference for a routing meeting on December 6, 2013 and enquired if the meeting would be held in Kamloops. Team member emailed G. Pauls with proposed meeting logistics. G. Pauls emailed team member and confirmed meeting logistics, providing a suggestion for a meeting location. Team member emailed G. Paul and expressed interest in meeting with G. Paul earlier to privately discuss matters other than routing.	None
11/29/2013	Email-Outgoing	Shelly Loring	Regan Schlecker (KMC)	Team member emailed S. Loring in response to request for a letter of support from KMC to include in SN's environmental monitoring training proposal to BC's Capacities Initiative. Team member requested more details about the proposal and requested a deadline for the submission of written support. S. Loring emailed team member and responded with intention and detail of SN's proposal and requested written support from KMC.	None
12/3/2013	Phone - Incoming	Steven Patterson	Regan Schlecker (KMC)	S. Patterson called team member to discuss an enquiry made by BC MOE Water Stewardship. S. Patterson acknowledged that KMC was not responsible for resolving the snowmobile issue and expressed concern with the BC MOE not fulfilling duties under the management plan agreement with SN. Team member indicated that although KMC's role in the situation (when approached by MOE) was to provide technical response in relation to pipeline safety, KMC was aware of SN concerns and was willing to facilitate a discussion.	None
12/4/2013	Email-Outgoing	Steven Patterson	Margaret Mears (KMC), Jason Smith (TERA), Gary Youngman (KMC), Trish Wiegele (TERA)	Team member emailed S. Patterson requesting an update on the SN TLU report for TMEP. S. Patterson emailed team members and indicated that the working draft was in place and that P. Harrison (project manager) was in the process of finishing up details. Team member emailed S. Patterson and requested an estimated date of completion, enquiring if KMC could review the working draft. S. Patterson emailed team member and responded that the document was not available for review, but its anticipated completion date was December 16, 2013. Team member emailed S. Patterson and requested that the TLU to be sent to a designated list of KMC team members.	None
12/4/2013	Email-Outgoing	Grant Pauls	Jeff Smith (KMC)	Team member emailed G. Pauls and R. Scott and provided time and location for Routing Meeting.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/5/2013	In-Person	Grant Pauls	Jeff Smith (KMC), Jamie Andrews (KMC), Rob Scott (KMC)	A meeting was held to present routing information to G. Pauls. Questions were answered about the existing operations; the pump station facilities; the re-route options; water-crossings and study corridors. Other Simpcw members were supposed to attend, and G. Pauls explained that he would forward the information to those unable to attend. R. Scott gave G. Pauls information for distribution to Simpcw members.	None
12/10/2013	Email-Outgoing	Grant Pauls	Jennifer Hooper (KMC)	Team member emailed G. Paul	None
12/11/2013	Email-Outgoing	Grant Pauls	Jennifer Hooper (KMC)	Team member emailed G. Pauls and advised that as additional information became available, G. Pauls would be kept informed. Team member requested that G. Pauls forward on team members' December 10, 2013 email to J. Rich (SN's other negotiator) and to SN Council members, as necessary. Team member also requested that G. Pauls advise team member of the key contacts within SN for future information and communications.	None
12/11/2013	Phone - Incoming	Grant Pauls	Jennifer Hooper (KMC)	Team member also advised that KMC was planning to file the Facilities Application with the NEB on December 16, 2013. Team member advised that more information would be available in 2014 after KMC had hired a Project procurement lead.	None
12/13/2013	Email-Incoming	Grant Pauls	Jeff Smith (KMC)	G. Pauls emailed team member and stated that a copy of the Term Sheet had been sent to SN Chief and Council for review. G. Pauls would forward any changes to team member. Team member emailed G. Pauls and responded that once the changes were confirmed, negotiations on the agreement could begin.	None
12/16/2013	Email-Outgoing	Kerri Jo Fortier, Rita Matthew, Sam Phillips	Regan Schlecker (KMC), Jeff Smith (KMC)	Team member emailed Chief R. Matthew, K. Fortier and S. Phillips to share a copy of the media release for December 16, 2013 that described submission of the Project's Facilities Application to the NEB.	None
12/16/2013	Letter - Outgoing	Rita Matthew	Ian Anderson (KMC)	Team member sent a letter to Chief R. Matthew and notified SN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Email-Outgoing	Grant Pauls, Kerri Jo Fortier	Jeff Smith (KMC)	Team member emailed G. Pauls and K. Fortier to request an update on TLU Study results. Team member indicated that a final report was required by the end of February 2014 in order to file it as supplemental to the Facilities Application.	None
12/20/2013	Email-Outgoing	Grant Pauls	Jeff Smith (KMC)	Team member emailed G. Pauls and enquired if G. Pauls had received the draft Term Sheet for SN. Team member indicated availability on December 23, 2013 if G. Pauls did not receive the document.	None
12/27/2013	Email-Incoming		Jeff Smith (KMC)	G. Pauls emailed team member and indicated that K. Fortier was interested in signing a new Capacity Agreement.	None

APPENDIX A-2-16
SKEETCHESTN FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	Email- Outgoing		Sondra Baker (TERA)	Team member sent notification of fieldwork to Skeetchestn Indian Band (SNIB) for TMEP geotechnical borehole drilling tentatively scheduled October 14, 2013 – October 22, 2013.	None
10/28/2013	Email- Outgoing	Mike Anderson	Margaret Mears (KMC), Jason Smith (TERA), Stephanie Snider (KMC), Russ Thompson, Integrated Pipeline Projects (IPP), Brian Wikeem (TERA)	Team member thanked SNIB for attending the recent field tour of the Lac du Bois Protected Area. Team member further attached the minutes taken at the event as well as the electronic copies of the documents that were distributed at the tour, and requested them to review and inform her of any corrections or additions. Team member noted that KMC was notified that BC Parks had approved the Stage 1 Boundary Adjustment application for five parks, including the Lac du Bois Protected Area. KMC was now proceeding with the detailed studies and consultations required by the Stage 2 application to assess the full impact of the proposed project.	Routing - Existing Pipelines, Routing - Forestry Rights, Routing - Future Land Use, Routing - Other, Socio-Econ. Terrestrial - Economic Benefit/Impact, Socio-Econ. Terrestrial - Infrastructure and Services, Terrestrial - Invasive Species, Terrestrial - Soils, Terrestrial - Species at Risk/of Concern, Safety - Pipeline Integrity
10/29/2013	Email- Outgoing	Mike Anderson	Kate Stebbings (Consultant), Margaret Mears (KMC), Jason Smith (TERA), Stephanie Snider (KMC), Russ Thompson (IPP)	Team member emailed M. Anderson and resent the files from the October 28, 2013 email including minutes from the tour of Lac du Bois Protected Area and documents distributed at the tour	None
12/16/2013	Letter - Outgoing	Ron Ignace	Ian Anderson (KMC)	Team member sent a letter to Chief R. Ignace and notified SNIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-2-17
SPLATSIN FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Wayne Christian	Ian Anderson (KMC)	Team member sent a letter to Chief W. Christian and notified Splatsin First Nation (SFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-2-18
STONEY NAKODA FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
09/30/2013	Letter - Outgoing	Heather Carnahan (Tribal Administrator) Nina Valentine (Acting Chief Operating Officer)	Howard Heffler (KMC)	Team member sent a letter to N. Valentine which described the Trans Mountain Expansion Project, provided links to additional information about the project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that Stoney Nakoda First Nation may have about the Project.	None

APPENDIX A-2-19
TK'EMLUPS TE SECWPEPMC

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/28/2013	Email- Outgoing	Carrie Dan (Natural Resources - Senior Archaeologist), Jim McGrath (Natural Resources – Manager)	Clare Peacock (TERA)	Team member emailed C. Dan and J. McGrath a notice for an upcoming Commencement of the Geotechnical Borehole Program; this program commenced July 3, 2013 within TTS's consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013 and was scheduled: November 7, 2013.	None
11/6/2013	Email- Outgoing	Carrie Dan (Natural Resources - Senior Archaeologist)	Clare Peacock (TERA)	<p>Team member emailed C. Dan to provide a reminder about the Thompson River Borehole testing going on this week (original notification sent October 28, 2013) and requested confirmation that C. Dan had received the notification. Team member enquired if Tk'emlups Secwepemc (TTS) was interested in being included in the process.</p> <p>C. Dan emailed team member and requested to know when a TTS representative would be needed on-site during the Thompson River Borehole testing November 7, 2013.</p> <p>Team member emailed C. Dan to provide logistics for the Thompson River Borehole testing scheduled November 7, 2013. Team member requested one TTS participant.</p> <p>C. Dan emailed team member to confirm logistics for the TTS participant on the Thompson River Borehole testing crew scheduled November 7, 2013.</p> <p>Team member emailed C. Dan to provide finalized logistics for the TTS participant on the Thompson River Borehole testing crew scheduled November 7, 2013.</p>	None
11/7/2013	In-Person		Tess Espey (TERA)	One TTS Archaeology assistant participated in Geotechnical Borehole Drilling from November 7, 2013 - November 8, 2013.	Terrestrial - Terrain Geotechnical
11/7/2013	Email- Outgoing	Carrie Dan (Natural Resources - Senior Archaeologist)	Clare Peacock (TERA)	<p>Team member emailed C. Dan to provide training information for TTS Archaeology assistant on the Thompson River Borehole testing crew scheduled November 7, 2013.</p> <p>C. Dan emailed Team member to confirm training completion for TSS Archaeology assistant on the Thompson River Borehole testing crew scheduled November 7, 2013.</p>	None
11/7/2013	Phone - Incoming	Chief Shane Gottfriedson	Regan Schlecker (KMC)	Chief S. Gottfriedson phoned team member to state that TTS would take the lead on Project engagement in TTS territory and wished to re-engage with KMC, entering into an MOU for moving forward. Chief S. Gottfriedson stated that SSN negotiator would not be acting on behalf of TTS and requested that team member resend KMC's proposal regarding funds for environmental and cultural studies so it could be discussed with TTS Council.	None
11/8/2013	Email- Outgoing	Chief Shane Gottfriedson	Regan Schlecker (KMC)	Team member emailed Chief S. Gottfriedson and forwarded draft proposals as requested. Team member requested an update on how TTS would like to proceed once Chief S. Gottfriedson has discussed the matter with Council.	None
11/12/2013	Email- Incoming	Jim McGrath (Natural Resources – Manager)	Regan Schlecker (KMC)	J. McGrath emailed team member and inquired about which KMC Team member would be able to sign a Memorandum of Understanding (MOU) with TTS for the Project.	None
11/13/2013	Email- Outgoing	Jim McGrath (Natural Resources – Manager)	Regan Schlecker (KMC)	Team member emailed J. McGrath and noted which KMC team members were authorized to lead development of an MOU and sign the document. Team member provided contact information to facilitate moving forward with an MOU.	None
12/4/2013	Email- Incoming	Freda Jules (Manager Land, Leasing and Taxation)	Regan Schlecker (KMC)	F. Jules emailed Team member and requested a Project update, specifically with regards to the scope of the Project.	None
12/4/2013	Phone - Outgoing	Freda Jules (Manager Land, Leasing and Taxation)	Regan Schlecker (KMC)	<p>Team member phoned F. Jules to discuss the Project and its proposed scope:</p> <ul style="list-style-type: none"> - F. Jules attended meeting with NEB to receive information on TMEP and wanted to know if KMC had new plans regarding twinning of the line - Team member provided overview of TMEP engagement directly with Tk'emlups Chief and Council. Tk'emlups Negotiations Committee and in coordination with Stk'emlupsemc te Secwepemc Nation (SSN) Joint Chiefs Negotiations Committee. 	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				<ul style="list-style-type: none"> - Team member noted that staff such as J. McGrath and C. Dan were involved in discussions especially related to TMEP environmental field programs. - Team member indicated that team member was contacted by TTS Chief S. Gottfriedson in early November with request to resend TMEP proposal and informing that a TTS planned to take the lead on engagement (not SSN). - Team member noted that groups varied in approaches - Team member encouraged F. Jules to talk with Chief and Council about next steps and offered to assist F. Jules as necessary with information. 	
12/13/2013	InfoEmail-Incoming	Carrie Dan (Natural Resources - Senior Archaeologist)	Regan Schlecker (KMC)	C. Dan emailed the Project InfoLine to inquire why C. Dan had not been contacted about archaeological studies in the TTS Traditional territory.	None
12/16/2013	Email-Outgoing	Chief Shane Gottfriedson	Regan Schlecker (KMC)	Team member emailed Chief S. Gottfriedson and notified TTS of the Project's filing with the NEB. Team member included the press release (dated December 16, 2013) of the filing for KIB records.	None
12/16/2013	Letter - Outgoing	Chief Shane Gottfriedson	Ian Anderson (KMC)	Team member sent a letter to Chief S. Gottfriedson and notified KIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-2-20
TOOSEY INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Francis Laceese	Ian Anderson (KMC)	Team member sent a letter to Chief F. Laceese and notified Toosey Indian Band (TIB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-2-21

T'EXELC FIRST NATION (WILLIAMS LAKE)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
09/30/2013	Letter - Outgoing	Chief Ann Louie	Howard Heffler (KMC)	Team member sent a letter to Chief A. Louie which described the Trans Mountain Expansion Project, provided links to additional information about the Project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that Williams Lake Band may have about the Project.	None

APPENDIX A-2-22
XAT'SULL FIRST NATION (SODA CREEK)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Bev Sellars	Ian Anderson (KMC)	Team member sent a letter to Chief B. Sellars and notified SCB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3**ABORIGINAL COMMUNITIES LOCATED IN THE KAMLOOPS TO HOPE REGION**

A-3-01: Boothroyd Band
A-3-02: Boston Bar Band
A-3-03: Coldwater Indian Bar
A-3-04: Cook's Ferry Indian Band
A-3-05: Llenlley'ten First Nation (High Bar)
A-3-06: Kanaka Bar
A-3-07: Lower Similkameen Indian Band
A-3-08: Lytton First Nation
A-3-09: Nicomen Indian Band
A-3-10: Nooaitch Indian Band
A-3-11: Penticton Indian Band
A-3-12: Shackan Indian Band
A-3-13: Siska Indian Band
A-3-14: Skuppah Indian Band
A-3-15: Spuzzum First Nation
A-3-16: St'uxwtews (Bonaparte Indian Band)
A-3-17: Upper Similkameen Indian Band

APPENDIX A-3-01
BOOTHROYD BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Phillip Campbell	Ian Anderson (KMC)	Team member sent a letter to Chief P. Campbell and notified Boothroyd Band (BRB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-02
BOSTON BAR BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Dolores O'Donaghey	Ian Anderson (KMC)	Team member sent a letter to Chief D. O'Donaghey and notified Boston Bar Indian Band (BBIB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-03
COLDWATER INDIAN BAR

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	Email- Outgoing	Chief Harold Aljam	Sondra Baker (TERA)	Team member emailed Chief H. Aljam and attached a revised notification letter for Archaeological Geotechnical Borehole Drilling from October 14, 2013 - October 22, 2013 (Permit No. 2013-0165).	None
12/16/2013	Letter - Outgoing	Chief Harold Aljam	Ian Anderson (KMC)	Team member sent a letter to Chief H. Aljam and notified CIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-04
COOK'S FERRY INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	Email- Outgoing		Sondra Baker (TERA)	Team member emailed Cook's Ferry Indian Band (CFIB) and attached a notification letter for Archeological Geotechnical Borehole Drilling from October 14 - 22, 2013 (Permit No. 2013-0165).	None
12/16/2013	Letter - Outgoing	Chief David Walkem	Ian Anderson (KMC)	Team member sent a letter to Chief D. Walkem and notified CFIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-05

LLENLLEYEN'TEN FIRST NATION (HIGH BAR)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
09/30/2013	Letter - Outgoing	Chief Larry Fletcher	Howard Heffler (KMC)	Team member sent a letter to Chief L. Fletcher which described the Trans Mountain Expansion Project, provided links to additional information about the Project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that High Bar First Nation may have about the Project.	None

APPENDIX A-3-06

KANAKA BAR

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief James Frank	Ian Anderson (KMC)	Team member sent a letter to Chief J. Frank and notified Kanaka Bar Indian Band (KBIB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-07

LOWER SIMILKAMEEN INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief James Frank	Ian Anderson (KMC)	Team member sent a letter to Chief J. Frank and notified Kanaka Bar Indian Band (KBIB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-08
LYTTON FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	Email- Outgoing		Sondra Baker (TERA)	Team member emailed Lytton First Nation (LTFN) and provided a notification letter for Archeological Geotechnical Borehole Drilling fieldwork (Permit No. 2013-0165) from October 14 - 22, 2013.	None
12/16/2013	Letter - Outgoing	Chief Janet Webster	Ian Anderson (KMC)	Team member sent a letter to Chief J. Webster and notified LFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-09
NICOMEN INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/8/2013	In-Person		Rob Scott (KMC), Jeff Smith (KMC), Steve Kasstan (TERA), Jamie Andrews (KMC)	<p>Team members met with community members of NHIB, SHIB and NNIB to discuss the TMEP project</p> <p>Team members presented the TMEP project and the operation side of it.</p> <p>Community members asked questions which were answered by team members regarding the following:</p> <ul style="list-style-type: none"> - pipeline operation and specifications - how to fix a leak <p>Another team member presented the field studies that TERA is involved in and community members asked questions on:</p> <ul style="list-style-type: none"> - how much oil would be spilled with a major leak - how much oil was spilled in Burnaby - what would happen if there were an earthquake - what happens to the habitat trees - compensation for bands -income from participating in field studies 	None
12/16/2013	Letter - Outgoing	Chief Donna Gallinger	Ian Anderson (KMC)	<p>Team member sent a letter to Chief D. Gallinger and notified NNIB of the Facilities Application Filing with the NEB on December 16, 2013.</p> <p>Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.</p>	None

APPENDIX A-3-10
NOOAITCH INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/1/2013	Email-Incoming	David Lawrence (Lands Manager)	Jeff Smith (KMC)	D. Lawrence emailed team member and suggested a meeting location and proposed scheduling the meeting for an earlier time. D. Lawrence noted that the meeting would solely involve technical information sharing and would not be considered consultation. Team member emailed D. Lawrence and inquired about the meeting time.	None
10/3/2013	Email-Incoming	David Lawrence (Lands Manager)	Jeff Smith (KMC)	D. Lawrence emailed team member and requested a summary of consultation with NHIB from May 29, 2012 to May 2013. D. Lawrence also requested clarification of the regulatory process, plain language summary, technical summary and answers to several questions. D. Lawrence also notified of NHIB's concerns regarding content of the project description.	None
10/4/2013	Phone - Incoming	David Lawrence (Lands Manager)	Jeff Smith (KMC)	D. Lawrence phoned team member and explained role as technical contact for NHIB. D. Lawrence canceled meeting on October 9, 2013. Team member explained the nature of the Capacity Funding agreement with the Nicola Tribal Council (NTA) and how the Nooaitch FN provided a Band Council Resolution granting authority to the NTA to conduct consultation and a TLU study.	None
10/4/2013	Email-Incoming	David Lawrence (Lands Manager)	Jeff Smith (KMC)	D. Lawrence emailed team member and notified cancellation of the meeting on October 9, 2013. D. Lawrence expressed displeasure in hearing that team member requested a meeting with Chief J. Sam without communicating this information to D. Lawrence. Team member emailed D. Lawrence and noted they were not aware that D. Lawrence was the official contact for NHIB for all matters. Team member inquired as to whether this meeting should have been set up through D. Lawrence. D. Lawrence emailed team member and noted there was no reason to meet at the technical level and wondered why a meeting with Chief S. Joyce had been requested. D. Lawrence notified their requirement to advise chief and council on matters of referrals and consultation. D. Lawrence suggested the need to discuss how NHIB engages.	None
10/4/2013	Phone call-Outgoing	David Lawrence (Lands Manager)	Jeff Smith (KMC)	J. Smith called D. Lawrence and explained that he was trying to contact the Chief S. Joyce to discuss other matters than to do with the technical nature of the Project. D. Lawrence explained that he would still like to be in the loop when the Chief is contacted.	None
10/8/2013	In-Person		Rob Scott (KMC), Jeff Smith (KMC), Steve Kasstan (TERA), Jamie Andrews (KMC)	Team members met with community members of NHIB, SHIB and NNIB to discuss the TMEP project Team members presented the TMEP project and the operation side of it. Community members asked questions which were answered by team members regarding the following: - pipeline operation and specifications - how to fix a leak Another team member presented the field studies that TERA is involved in and community members asked questions on: - how much oil would be spilled with a major leak - how much oil was spilled in Burnaby - what would happen if there were an earthquake - what happens to the habitat trees - compensation for bands -income from participating in field studies	None
12/16/2013	Letter - Outgoing	Chief Ko'waintco Michel	Ian Anderson (KMC)	Team member sent a letter to Chief K. Michel and notified NHIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-11
PENTICTON INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Jonathan Kruger	Ian Anderson (KMC)	Team member sent a letter to Chief J. Kruger and notified Penticton Indian Band (PIB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-12
SHACKAN INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/8/2013	In-Person		Rob Scott (KMC), Jeff Smith (KMC), Steve Kasstan (TERA), Jamie Andrews (KMC)	<p>Team members met with community members of Nicomen Indian Band, Shackan Indian Band and Nooaitch Indian Band to discuss the TMEP project. Team members presented the TMEP project and the operation side of it. Community members asked questions which were answered by team members regarding the following:</p> <ul style="list-style-type: none"> - pipeline operation and specifications - how to fix a leak <p>Another team member presented the field studies that TERA is involved in and community members asked questions on:</p> <ul style="list-style-type: none"> - how much oil would be spilled with a major leak - how much oil was spilled in Burnaby - what would happen if there were an earthquake - what happens to the habitat trees - compensation for bands -income from participating in field studies 	None
10/9/2013	In-Person		Rob Scott (KMC), Jeff Smith (KMC), Steve Kasstan (TERA), Jamie Andrews (KMC)	<p>Team members participated in a SHIB community meeting to explain TMEP. Team members presented the TMEP Project and the operation side of the Project. SHIB community members asked questions answered by team members regarding various topics:</p> <ul style="list-style-type: none"> - Duration of pipeline use - Discussion of backside access restricted by KMC - ERP coordination with FN communities along existing TMPL <p>Another team member presented the environmental studies TERA is involved and community members asked questions regarding this topic:</p> <ul style="list-style-type: none"> - Length of time given to complete Traditional Land Use Study (TLUS) - Importance of TERA's views - Application to NEB - Liability insurance - Timing of year when spill could be more detrimental - Community benefits for young people in within the communities 	None
12/16/2013	Letter - Outgoing	Chief Percy Joe	Ian Anderson (KMC)	<p>Team member sent a letter to Chief P. Joe and notified SHIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.</p>	None

APPENDIX A-3-13
SISKA INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	Email- Outgoing		Sondra Baker (TERA)	Team member sent notification to Siska Indian Band (SIB) regarding fieldwork for the TMEP Geotechnical Borehole Drilling and attached the following document: 7894slb_SAIB_Geotech_ThompsonRiver_031013_NL.pdf.	None
12/16/2013	Letter - Outgoing	Chief Fred Sampson	Ian Anderson (KMC)	Team member sent a letter to Chief F. Sampson and notified SIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-14
SKUPPAH INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Douglas McIntyre	Ian Anderson (KMC)	Team member sent a letter to Chief D. McIntyre and notified Skuppah Indian Band (SKIB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-15
SPUZZUM FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief James Hobart	Ian Anderson (KMC)	Team member sent a letter to Chief J. Hobart and notified Spuzzum First Nation (SFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-16

ST'UXWTEWS (BONAPARTE INDIAN BAND)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Terry Porter	Ian Anderson (KMC)	Team member sent a letter to Chief T. Porter and notified St'uxwetews (Bonaparte) (SB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-3-17

UPPER SIMILKAMEEN INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter-Outgoing	Charlotte Mitchell	Ian Anderson (KMC)	Team member sent a letter to Chief C. Mitchell and notified Upper Similkameen Indian Band (USIB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-4

ABORIGINAL COMMUNITIES LOCATED IN THE
HOPE TO BURNABY TERMINAL/BURRARD INLET REGION

A-4-01: Aitchelitz First Nation
A-4-02: Chawathil First Nation
A-4-03: Cheam First Nation
A-4-04: Katzie First Nation
A-4-05: Kwantlen First Nation
A-4-06: Kwaw-kwaw-aplit First Nation
A-4-07: Kwikwetlem First Nation
A-4-08: Leg'a:mel First Nation
A-4-09: Musqueam Indian Band
A-4-10: Peters Band
A-4-11: Popkum First Nation
A-4-12: Qayqayt First Nation (New Westminster)
A-4-13: Scowlitz First Nation
A-4-14: Seabird Island Band
A-4-15: Semiahmoo First Nation
A-4-17: Shxw'ow'hamel First Nation
A-4-18: Shxwha:y Village
A-4-19: Skawahlook First Nation
A-4-20: Skowkale First Nation
A-4-21: Skwah First Nation
A-4-22: Soowahlie Indian Band
A-4-23: Squamish Nation
A-4-24: Squiala First Nation
A-4-25: Sts'ailes Band (Chehalis Indian Band)
A-4-26: Sumas First Nation
A-4-27: Tsawwassen First Nation
A-4-28: Ts'kwylaxw (Pavillion Indian Band)
A-4-29: Tsleil-Waututh Nation
A-4-30: Tzeachten First Nation
A-4-31: Union Bar First Nations
A-4-32: Yakwekwioose Band
A-4-33: Yale First Nation

APPENDIX A-4-01
AITCHELITZ FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing		Ian Anderson (KMC)	AZB were copied in a letter sent by Team member to Chief W. Hall notifying TTML of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-4-02
CHAWATHIL FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/10/2013	Email- Outgoing	Rose Peters (Band Manager)	Sondra Baker (TERA)	Team member emailed. Peters and notified Chawathil First Nation (CWFN) of a date change for the Archaeology Crew 5 Shift 4.	None
10/11/2013	Phone - Outgoing	Rose Peters (Band Manager)	Norman Marcy (KMC)	Team member called R. Peters and noted it was unfortunate that neither the Chief nor Vice Chief were able to attend the meeting with other Sto:lo Tribal Council (STC) Chiefs on October 9, 2013. Team member and R. Peters discussed the Traditional Land Use Study (TLUS). Team member indicated that they or another team member would be able to provide assistance with the TLUS. Parties discussed a potential Mutual Benefits Agreement (MBA). R. Peters noted that team member would be notified once a spot on the CWFN Chief and Council Agenda was available.	None
11/12/2013	Email- Outgoing	Rose Peters (Band Manager)	Clare Peacock (TERA)	Team member emailed R. Peters and notified CWFN of an Archaeology study scheduled November 20 - November 29, 2013, along RK range 1057 - 1079. One crew member was requested.	None
11/13/2013	Phone - Attempt	Norman Florence (Vice Chief)	Norman Marcy (KMC)	Team member called N. Florence and left a message requesting a call back.	None
11/25/2013	Email- Outgoing	Norman Florence (Vice Chief)	Norman Marcy (KMC)	N. Florence emailed team member to discuss the conclusion and completion of engagement activities by KMC. N. Florence requested details on the outstanding deliverables and an update on the timing of items committed to in the LOU. N. Florence also stated CWFN's interest in discussing a MBA. N. Florence requested follow-up to coordinate meetings to discuss these topics.	None
11/27/2013	Phone - Outgoing	Norman Florence (Vice Chief)	Norman Marcy (KMC)	Team member called N. Florence and requested an opportunity to meet with Chief and Council or the community in December, 2013 or January, 2014. N. Florence committed to following up on availability from Chief and Council members, but also noted a further meeting with community members would be arranged.	None
11/28/2013	Phone - Incoming	Norman Florence (Vice Chief)	Norman Marcy (KMC)	N. Florence called team member and requested availability to meet and discuss engagement.	None
11/28/2013	Email- Outgoing	Rose Peters (Band Manager)	Paul Anderson (TERA)	Team member emailed Chief R. Peters and provided a copy of the Biophysical Field Program Results Review report. Team member also noted that the TLU results data would be reviewed with the community at a later date; date, as yet, unconfirmed.	None
11/29/2013	Email- Outgoing	Rose Peters (Band Manager)	Clare Peacock (TERA)	Team member emailed Chief R. Peters and notified CWFN of an upcoming Archaeology study, scheduled December 5 - December 12, 2013, in the RK range of 1057 - 1025. One crew member from CWFN was requested. Chief R. Peters requested further information on participant logistics; team member provided requested information.	None
12/2/2013	Email- Outgoing	Rose Peters (Band Manager)	Clare Peacock (TERA)	Chief R. Peters emailed team member and confirmed crew member for Archaeology study Crew 5 scheduled December 5 - December 12, 2013.	None
12/5/2013	In-Person		Brandy Mayes (TERA), Tess Espey (TERA)	One Chawathil First Nation crew member participated in an Archaeological Impact Assessment from December 5-13, 2013.	Socio-Econ. Terrestrial - Heritage Resources - Archaeology
12/12/2013	Email- Outgoing	Norman Florence (Vice Chief)	Norman Marcy (KMC)	N. Florence emailed team member to notify of a Council meeting scheduled December 18, 2013. N. Florence enquired whether team member would be able to attend the meeting. Team member committed to attending the council meeting. N. Florence requested details on agenda items team member wished to put forward at the council meeting. Team member stated that discussions would include: • MBA questions and concerns • LOU deliverables completion planning • MBA negotiations and expectations	None
12/16/2013	Letter - Outgoing	Chief Rhoa Peters	Ian Anderson (KMC)	Team member sent a letter to Chief R. Peters and notified CWFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Email- Incoming	Norman Florence (Vice Chief)	Norman Marcy (KMC)	N. Florence emailed team member and requested an opportunity to meet with team member and Chief R. Peters on December 18, 2013, prior to the scheduled council meeting. Team member stated that a teleconference was possible.	None
12/17/2013	Phone - Attempt	Norman Florence (Vice Chief)	Norman Marcy (KMC)	Team member called N. Florence and left a message notifying CWFN of the Project's filing of the Facilities Application with the NEB; team member invited a follow-up call should CWFN have questions or concerns regarding the filing. Team member also committed to contacting N. Florence and Chief R. Peters prior to the council meeting, as requested by N. Florence.	None
12/18/2013	In-Person	Norman Florence (Vice Chief), Rosemarie Peters (Band Manager),	Norman Marcy (KMC)	Team member met with R. Peters and N. Florence to discuss the TLU study deliverables. Meeting participants also discussed the components and process of an MBA negotiation/agreement.	Terrestrial - Traditional Land Use
12/18/2013	Email- Incoming	Rosemarie Peters (Band Manager)	Norman Marcy (KMC), Maria Hoiss (TERA)	R. Peters of CWFN emailed team members on December 18, 2013. Team member responded to this email on the same day acknowledging receipt of the email and indicating that the team member will update the electronic file.	None

APPENDIX A-4-03
CHEAM FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/7/2013	Email-Incoming	Eric Alex (Councillor)	Norman Marcy (KMC), Max Nock (KMC)	<p>E. Alex emailed team members and notified that Chief Douglas and S. Douglas had been informed of an oil spill in Popkum or Rosedale and had been trying to identify the whereabouts or risk on reserve lands. E. Alex noted that verification would be provided if KMC has issued an alert or reported an incident. E. Alex requested an update on the protocols used by KMC for environmental incidents and emergency response pertaining to pipelines within Cheam territory and adjacent land.</p> <p>Team member emailed E. Alex and informed that routine maintenance is being carried out near Bridal Falls and no incidents have been recorded by KMC. Team member requested additional information and noted that KMC will provide a response regarding emergency response procedures.</p> <p>E. Alex emailed team member and notified that the source of the report is unclear. E. Alex noted the importance of knowing the relevant KMC protocols.</p> <p>Team member emailed E. Alex and noted that some time was required to put the information together for Cheam First Nation (CMFN) and assured that the information would be relevant for the existing and proposed pipeline.</p> <p>Other team member emailed E. Alex and clarified that the pipeline maintenance being undertaken in the Bridal Vale Falls area on the Popkum No. 2 with full knowledge and approval from Popkum First Nation</p>	None
11/28/2013	Email-Outgoing	Eric Alex (Councillor)	Paul Anderson (TERA)	Team member emailed E. Alex and provided a copy of the 2012/2013 Biophysical Field Program Results Review report. Team member also noted that the review of Traditional Land Use (TLU) results data would be held with the community at a later date.	None
12/16/2013	Letter - Outgoing	Chief Lincoln Douglas	Ian Anderson (KMC)	Team member sent a letter to Chief L. Douglas CMFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-4-04
KATZIE FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/4/2013	Email-Outgoing	Debbie Miller (Chief Negotiator and Treaty Rep.)	Sondra Baker (TERA)	D. Miller emailed team member and noted concerns about the Archaeological Impact Assessment for the Project. These concerns include: -including a surveying methodology for alternative construction footprints - considering all archaeological sites significant - changing the repository for archives found in Katzie First Nation (KAFN) territory - submitting a draft of the final report to KAFN - appending the KAFN Ancestral Remains Protocol to the report - changing the wording concerning potential for wet sites - additional provisions for radiocarbon dates - requesting that KAFN assistant be present during the field work.	None
10/4/2013	Email-Outgoing		Sondra Baker (TERA)	Team Member emailed KAFN Treaty Office and attached a notice for an upcoming Archaeology Impact Assessment; this assessment commenced October 16, 2013 within KAFN's consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013.	None
10/10/2013	Email-Outgoing	Debbie Miller (Chief Negotiator and Treaty Rep.)	Sondra Baker (TERA)	Team member emailed the KAFN Treaty Office to indicate that upcoming Archaeology Crew 6 (Shift 2) fieldwork would be delayed until further notice. Team member would provide an update on crew scheduled when available.	None
11/25/2013	Letter - Outgoing	Debbie Miller (Chief Negotiator and Treaty Rep.)	Gary Youngman (KMC)	Team member sent a letter to Chief S. Miller of KFN dated November 25, 2013 outlining the engagement process that KMC had been undertaking with Transport Canada regarding the Project (TERMPOL Process). Team member explained that TERMPOL was a voluntary, extensive review process, led by Transport Canada that focused on the marine transportation components of the Project. KFN was invited to review and comment on the technical studies. The team member requested confirmation by November 30, 2012 if KFN was interested in receiving the studies and providing comments.	None
10/9/2013	Email-Outgoing	Debbie Miller (Chief Negotiator and Treaty Rep.)	Sondra Baker (TERA)	Team member emailed D. Miller in response to KAFN's concerns about the Archaeology Impact Assessment permit. Team member deferred some concerns to the Archaeology Branch, Ministry of Forests, Lands and Natural Resources Operations (MFLNRO), to which D. Miller's concerns had been forwarded, but noted that TERA could assist with coordinating KAFN participation in associated fieldwork.	None
10/22/2013	Email-Outgoing	Debbie Miller (Chief Negotiator and Treaty Rep.)	Clare Peacock (TERA)	Team member emailed the D. Miller to indicate that upcoming Archaeology Crew 6 (Shift 2) fieldwork would be delayed until further notice due to ongoing contract negotiations. Team member would provide an update on crew scheduled when available.	None
11/12/2013	Email-Outgoing	Debbie Miller (Chief Negotiator and Treaty Rep.)	Clare Peacock (TERA)	Team member emailed D. Miller and noted that the Project's Archaeological Impact Assessment work would resume west of Hope, BC on November 20, 2013 and asked if KAFN was still interested in sending a crew member.	None
11/29/2013	Email-Outgoing	Debbie Miller (Chief Negotiator and Treaty Rep.)	Max Nock (KMC)	Team member emailed D. Miller of KAFN on November 29, 2013. Team member indicated that message voicemail message had been left on D. Miller's cell phone on November 29, 2013 requesting confirmation that KMC and KAFN discuss the subject letter. Team member also intended to discuss how long KAFN might need to consider receiving copies of the TERMPOL studies and whether D. Miller would provide comments on the studies. Team member indicated that KMC would work with KAFN through any questions regarding the studies and KMC would also consider providing capacity funding to assist in the study review and preparation of comments.	None
12/18/2013	Phone - Outgoing	Chief Susan Miller	Max Nock (KMC)	Team member called Chief S. Miller and Chief Negotiator D. Miller on December 18, 2013. S. Miller recognized KMC's facilities application filing with the NEB. S. Miller advised that KAFN would contact the team member in early 2014 to set up meetings to discuss engagement, next steps and TERMPOL studies. Team member resolved to wait for communication from S. Miller or D. Miller and would follow-up in mid January 2014.	None
12/9/2013	Email-Outgoing	Chief Susan Miller	Max Nock (KMC)	Team member emailed Chief S. Miller and resolved to call Chief S. Miller on December 10, 2013 to discuss the TERMPOL studies further. Chief S. Miller emailed team member with a request to reschedule the phone call to December 11, 2013. Team member emailed Chief S. Miller to confirm a phone conversation on December 11, 2013. Team member confirmed availability.	None
12/9/2013	Phone - Attempt	Chief Susan Miller	Max Nock (KMC)	Team member attempted to call Chief S. Miller of KAFN on December 9, 2013 regarding the TERMPOL studies letter sent S. Miller by email. Team member left a voicemail message stating that team member would call back on December 10, 2013.	None
12/9/2013	Phone - Outgoing	Chief Susan Miller	Max Nock (KMC)	Team member called Chief S. Miller of KAFN on December 9, 2013. S. Miller advised team member that D. Miller was away and requested that the team member send S. Miller the information for review. Team member subsequently emailed S.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				Miller a copy of a letter requesting confirmation that KAFN wished to receive and comment on the subject TERMPOL studies.	
12/11/2013	Phone - Outgoing	Chief Susan Miller	Max Nock (KMC)	Team member phoned Chief S. Miller regarding TERMPOL studies and Project engagement. S. Miller had reviewed the November 25, 2013 letter from KMC regarding the TERMPOL studies would be asking D. Miller to bring the letter to the December 16, 2013 KAFN Council meeting for consideration. S. Miller requested that the team member call S. Miller or D. Miller on December 16, 2013 to discuss Council's response to the letter. Team member reminded S. Miller of the Facilities Application filing date, confirmed past contact with D. Miller regarding a possible Letter of Understanding (LOU) with KMC and offered to meet with Chief and Council if to engage in the Project.	None
12/16/2013	Letter - Outgoing	Chief Susan Miller	Ian Anderson (KMC)	Team member sent a letter to Chief S. Miller and notified KAFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/16/2013	Phone - Attempt	Chief Susan Miller	Max Nock (KMC)	Team member called Chief S. Miller and left voice mail regarding whether or not KAFN wished to receive and comment on the TERMPOL studies.	None

APPENDIX A-4-05
KWANTLEN FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/7/2013 10:58 AM	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group)	Clare Peacock (TERA)	Team member emailed A. Doyle and attached a notice for upcoming Archaeology Impact Assessments; these assessments occurred from October 16, 2013 - October 17, 2013 and November 1, 2013 - November 12, 2013 within Kwantlen First Nation (KWFN)'s consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013.	None
10/9/2013 1:52 PM	Email-Incoming	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group)	Max Nock (KMC)	<p>Team member emailed A. Doyle and provided contact information. Team member requested KWFN's policy regarding Archaeology Impact Assessments AIA work, copying other team members and requesting that further work be postponed until options had been worked out with KWFN. Team member also requested that A. Doyle discuss the AIA topic with KMC</p> <p>A. Doyle emailed team member and requested a meeting. A. Doyle attached KWFN's Stewardship Policy, blanket permit application and invoice. A. Doyle stated that the permit would be released so that AIAs could go ahead once the required capacity funding had been secured.</p> <p>Team member emailed A. Doyle and provided meeting availability, suggesting a discussion of the AIA and Letter of Understanding (LOU). Team member noted that a TERA representative should attend and requested meeting logistics.</p>	None
10/10/2013 9:31 AM	Email-Incoming	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group)	Max Nock (KMC)	<p>A. Doyle emailed team member to provide potential meeting dates.</p> <p>Team member emailed A. Doyle and stated that all of the potential meeting dates were agreeable. Team member stated that TERA was looking into options regarding AIA work. Team member noted that the meeting should take place to determine next steps because the Project was moving toward the Facility Application stage in mid-December 2013.</p> <p>A. Doyle emailed team member and provided meeting logistics.</p>	None
10/10/2013 3:13 PM	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group)	Sondra Baker (TERA)	Team member emailed A. Doyle to inform KWFN that upcoming fieldwork for Archaeology Crew 6 (Shift 2) would be delayed until further notice.	None
11/5/2013 12:00 AM	In-Person	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Christine Loewen (Supervisor of Operations), Tumia Knott (Councillor)	Wanda Lewis (TERA), Max Nock (KMC), Clare Peacock (TERA), Jamie Andrews (KMC)	<p>Team members met with T. Knott, A. Doyle and C. Loewen on November 5, 2013.</p> <p>Discussed:</p> <ul style="list-style-type: none"> • Archaeology participation • Participant compensation in the event a study was cancelled • LOU with KMC • Community opportunities for Project-related discussions • LOU capacity resources • T. Knott requested technical assistance to review the ESA, team member committed to following-up on this request • Employment and training opportunities for the community <p>Action Items:</p> <ul style="list-style-type: none"> • Team members to discuss study cancellation policy as proposed by KWFN • A. Doyle to provide a traditional territory map • T. Knott to provide Joint Venture Partnerships information to team member 	None
11/12/2013 12:00 AM	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Christine Loewen (Supervisor of Operations), Tumia Knott (Councillor)	Aaron Osicki (TERA), Wanda Lewis (TERA), Max Nock (KMC), Clare Peacock (TERA), Jamie Andrews (KMC)	Team member emailed C. Loewen and requested the name of the proposed repository that any collected artifacts found during Archaeology work for the Project. C. Loewen emailed team member and confirmed that the artifacts should be sent to Kwantlen Cultural Centre.	None
11/17/2013	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Christine Loewen (Supervisor of Operations), Tumia Knott (Councillor)	Jamie Andrews (KMC)	Team member emailed A. Doyle, C. Loewen and T. Knott to suggest a meeting on November 20, 2013 and to request a time and location to meet.	None
11/17/2013	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Christine Loewen	Jamie Andrews (KMC)	Team member emailed A. Doyle, T. Knott, C. Loewen and requested confirmation for the meeting scheduled November 20, 2013.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
		(Supervisor of Operations), Tumia Knott (Councillor)			
11/18/2013	Email-Incoming	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Christine Loewen (Supervisor of Operations), Tumia Knott (Councillor)	Jamie Andrews (KMC)	T. Knott emailed team member, A. Doyle and C. Loewen to confirm meeting on November 20, 2013.	None
11/18/2013	Email-Incoming	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Christine Loewen (Supervisor of Operations), Tumia Knott (Councillor)	Max Nock (KMC), Jamie Andrews (KMC)	T. Knott emailed team member, A. Doyle and C. Loewen and confirmed meeting details for November 20, 2013. Team member committed to providing a copy of the draft LOU. It was team member's suggestion to go through the draft LOU with the community contacts, confirming deliverables and timelines, and to develop an engagement process.	None
11/19/2013	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Christine Loewen (Supervisor of Operations), Tumia Knott (Councillor)	Max Nock (KMC), Jamie Andrews (KMC)	Team member emailed T. Knott, C. Loewen and A. Doyle a draft LOU for review at the November 20, 2013 meeting, noting that deliverables, timelines and a draft budget would be discussed. T. Knott emailed team member, C. Loewen and A. Doyle to confirm receipt of the draft LOU and proposed discussion topics.	None
11/20/2013	Email-Incoming	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Christine Loewen (Supervisor of Operations), Tumia Knott (Councillor),	Clare Peacock (TERA), Karen Baylis (TERA)	Team member emailed C. Loewen and indicated that TERA required a letter from KWFN to authorize the Seyem Qwantlen Group of Companies to represent KWFN in Archaeology work.	None
11/25/2013	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Christine Loewen (Supervisor of Operations), Tumia Knott (Councillor),	Wanda Lewis (TERA), Clare Peacock (TERA), Karen Baylis (TERA)	Team member emailed C. Loewen a Work Agreement for TMEP Archaeology work in KWFN traditional territory and included the appropriate revisions from a meeting on November 5, 2013. C. Peacock informed C. Loewen that a cancelation clause was not approved for this Work Agreement.	None
10/17/2013	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Tumia Knott (Councillor)	Max Nock (KMC)	Team member emailed A. Doyle, T. Knott and another team member and proposed a draft agenda to the upcoming meeting: - Review of AIA, work that needed to be done, roles and responsibilities for TERA and KWFN - Confirm costs of KWFN participation in the AIA - Develop framework for an agreement for funding KWFN participation - Next steps - LOU between KMC and KWFN regarding TMEP - Update Project status since discussions of this spring - Discuss outcome of KWFN's review of draft LOU Team member enquired if A. Doyle had anything to add and asked about the meeting location.	None
10/21/2013	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Tumia Knott (Councillor)	Max Nock (KMC)	Team member emailed A. Doyle and T. Knott and to state that team member would be unable to attend the meeting due to flight cancellations. Team member enquired if a conference call was possible instead but noted that a face-to-face meeting was preferred to review AIA work and the LOU. Team member proposed that KMC and KWFN begin discussions October 21, 2013 and reschedule an actual meeting for October 25, 2013.	None
10/21/2013	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Tumia Knott (Councillor)	Wanda Lewis (TERA), Max Nock (KMC), Clare Peacock (TERA), Jamie Andrews (KMC)	Team member emailed A. Doyle, T. Knott and other team members to provide conference call information for the upcoming meeting on October 21, 2013.	None
10/21/2013	In-Person	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Tumia Knott (Councillor)	Wanda Lewis (TERA), Max Nock (KMC), Clare Peacock (TERA), Jamie Andrews (KMC)	Team members met with A. Doyle and T. Knott of KWFN to discuss AIA work: 1. Reviewed AIA/work that needed to be done/roles and responsibilities of TERA and KWFN. 2. Confirmed costs of KWFN participation in the AIA. 3. Developed framework/LOU for funding KWFN engagement 4. LOU between KMC and KWFN. 5. Updated Project status since discussions of this spring. 6. Discussed outcome of KWFN's review of draft LOU.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				<ul style="list-style-type: none"> •KWFN discussed environmental impacts/where the pipeline comes close to the river/Fisheries Resources. 7. Environmental Assessment Process that KMC was completing. •A. Doyle explained that in the past with other projects, third party professionals are contracted to review environmental studies in order to ensure that all concerns are addressed and mitigated. 8. Next steps: <ul style="list-style-type: none"> •Team members would provide a revised and current draft LOU to T. Knott. T. Knott would provide confirmation of which parts of the spring 2013 LOU that KWFN would request funds for, and an estimate of costs/fee schedule •Next meeting would be November 5, 2013 at 1 pm at Kwantlen Offices. 	
11/3/2013	Email-Outgoing	Ashley Doyle (Land Officer, Seyem' Qwantlen Business Group), Tumia Knott (Councillor)	Max Nock (KMC), Clare Peacock (TERA), Jamie Andrews (KMC)	Team member contacted T. Knott and A. Doyle to confirm a meeting on November 5, 2013 at the Kwantlen offices regarding AIA work and LOU discussions. A TERA representative and another KMC team member would attend via conference call.	None
10/4/2013	Phone - Outgoing	Brenda Fernie (Director, Seyem' Qwantlen)	Max Nock (KMC)	<p>Team member called B. Fernie and proposed further discussion regarding the Project and a potential LOU. B. Fernie noted that Councillor T. Knott was lead on the Project file for KWFN but was unavailable and occupied with other matters. B. Fernie would attempt to talk to T. Knott following discussion with team member.</p> <p>B. Fernie called team member and stated a request for more information about the Project had arisen from a recent Elders' Meeting. T. Knott would be working on the LOU and establishing a meeting date with team member in mid-October.</p>	None
11/28/2013	Email-Outgoing	Christine Loewen (Supervisor of Operations)	Paul Anderson (TERA)	Team member emailed C. Loewen and attached a copy of the 2012/2013 Biophysical field program Results Review Report. Team member stated that TERA was dedicated to accurately and responsibly collecting and reporting the findings of these field studies and requested that KWFN review the attached report and ensure its accuracy and confidentiality.	None
11/29/2013	Email-Incoming	Christine Loewen (Supervisor of Operations)	Clare Peacock (TERA)	C. Loewen emailed team member regarding the KWFN Field Worker.	None
12/16/2013	Letter - Outgoing	Chief Marilyn Gabriel	Ian Anderson (KMC)	Team member sent a letter to Chief M. Gabriel and notified KWFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
10/30/2013	Email-Outgoing	Tumia Knott (Councillor)	Max Nock (KMC)	Team member emailed T. Knott and provided a list of activities and deliverables and timelines for which KMC would provide capacity funding for KWFN to engage with KMC on the Project. Team member noted that the list reflected the progress that the Project had made since the initial LOU, discussions and the types of activities included in recent LOUs and the timeline for submission of the Facilities Application to the National Energy Board. Team member indicated that KMC would also consider other areas that KWFN may wish to include in the LOU.	None
11/18/2013	Email-Outgoing	Tumia Knott (Councillor)	Regan Schlecker (KMC)	Team member emailed T. Knott to extend an invitation to KWFN representatives, Chief and Council to attend an upcoming Burnaby Board of Trade (BBOT) event on November, 27, 2013. Team member stated that KMC would be presenting up-to-date Project information regarding timing, jobs and procurement opportunities available with the project if it proceeds. Team member provided also provided logistical details about the BBOT event.	Socio-Econ. Terrestrial - Employment/Trainin g, Socio-Econ. Terrestrial - Procurement/Busine ss Opportunities
12/4/2013	Email-Outgoing	Tumia Knott (Councillor)	Max Nock (KMC), Jamie Andrews (KMC)	Team member emailed T. Knott and attached the draft LOU requesting that KWFN review the document.	None
12/10/2013	Phone - Outgoing	Tumia Knott (Councillor)	Gary Youngman (KMC), Peter Forrester (KMC), Max Nock (KMC), Jamie Andrews (KMC),	Team member phoned T. Knott regarding the LOU Workplan and budget. T. Knott confirmed that KWFN Chief and Council accepted the terms and conditions and would like to proceed by finalizing a formal final agreement. T. Knott confirmed that the Chief and Council had chosen not to	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
			Terri-Lee Oleniuk (Osler)	participate in the NEB review.	
12/11/2013	Email-Outgoing	Tumia Knott (Councillor)	Max Nock (KMC), Jamie Andrews (KMC)	Team member emailed T. Knott and attached a draft LOU with updates from the legal department. Team member requested that T. Knott review the document for final approval.	None
12/16/2013	Email-Outgoing	Tumia Knott (Councillor)	Max Nock (KMC)	Team member emailed T. Knott and attached a revised LOU Workplan and budget. Team member requested that T. Knott review the LOU and make any comments or revisions before final submission.	None

APPENDIX A-4-06
KWAW-KWAW-APLIT FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing		Ian Anderson (KMC)	Kwaw-kwaw-Apilt First Nation (KKAFN) were copied in a letter sent by Team member to Chief W. Hall notifying Ts'elxweyeqw Tribe Management Ltd. (TTML) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-4-07
KWIKWETLEM FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/21/2013	Email-Outgoing	Paul LePage	Max Nock (KMC)	Team member emailed P. LePage to confirm an upcoming meeting with Kwikwetlem First Nation (KFN). P. LePage emailed team member and indicated that the meeting would need to be rescheduled.	None
10/21/2013	Phone - Outgoing	Paul LePage	Max Nock (KMC)	Team member called P. LePage and rescheduled an upcoming conference call regarding contract and employment opportunities related to TMEP.	None
10/22/2013	Phone - Outgoing	Paul LePage	Max Nock (KMC)	Team member called P. LePage regarding KFN's interest in contract and procurement opportunities related to the Project. Team member indicated that KMC and KFN are at the early stages of LOU discussions.	None
10/23/2013	Email-Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member emailed J. Harris and attached KFN's draft LOU, as discussed with Chief R. Giesbrecht, D. Lessoway and P. LePage. KFN would revise the LOU to reflect previous discussions and the team member requested that J. Harris provide the team member with another draft once the changes had been made.	None
10/23/2013	Email-Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member emailed J. Harris and attached the draft LOU template and LOU Workplan and budget spreadsheet and noted that more information would be sent in a separate email.	None
10/31/2013	Email-Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member emailed J. Harris and asked for an update on the LOU and proposal for Archaeological work. Team member enquired if J. Harris wanted to meet to go over the proposal and confirm next steps regarding the LOU.	None
11/1/2013	Email-Outgoing	Paul LePage	Max Nock (KMC)	Team member emailed P. LePage to initiate the scheduling of a meeting with P. LePage and Chief R. Giesbrecht to discuss how best to approach a possible Mutual benefits Agreement (MBA) related to the Project. Team member indicated having been in contact with J. Harris about the status of the LOU.	None
11/4/2013	Phone - Outgoing	Paul LePage	Max Nock (KMC)	Team member phoned P. LePage and confirmed that KFN is interested discussing a possible an agreement. Team member agreed to set up a meeting with KFN's interests listed above in November 2013.	None
11/5/2013	Email-Incoming	June Harris (Lands and Resource Manager)	Max Nock (KMC)	J. Harris emailed team member to state that J. Harris had a discussion with Brown & Oakes, C. Orr and Chief R. Giesbrecht on November 5, 2013. The ARCH/TUS/ENV work proposal had been drafted and revised. J. Harris stated that R. Giesbrecht had enquired if the team member could draft the revised LOU.	None
11/5/2013	In-Person	June Harris (Lands and Resource Manager), Nicole Oakes (Brown & Oakes Archaeology), Chief Ronald Giesbrecht	Max Nock (KMC), Jamie Andrews (KMC)	Chief R. Giesbrecht explained that he was unhappy with the extent and standard of work done by TERA and AMEC and would like to have meetings with both TERA and KMC, and wanted full participation by KFN and their own Arch consultant. The LOU was also discussed. C. Team member explained the purpose of the TERMPOL letter and Chief R. Giesbrecht asked if KMC would take responsibility for spills, to which team member resolved to provide a response. Chief R. Giesbrecht expressed interest in having the President of KMC come to the community to speak and highlighted the importance of spill response plans, remediation and the community's understanding of response procedures. Actions items resulting from the meeting: <ul style="list-style-type: none"> • TERA to provide feedback on the field work required for this area and on Brown & Oakes Archaeology's proposed estimate of costs \ • Team member to provide response to J. Harris regarding how much funding is available for TERMPOL study review • Team member to look into the shut-down of the railway • Team member to respond to Chief R. Giesbrecht's request to have a spill response professional come to the community to discuss mitigation efforts for KMC • Team member to provide final version of LOU to KFN for execution. 	None
11/6/2013	Email-Incoming	June Harris (Lands and Resource Manager)	Max Nock (KMC)	J. Harris emailed team member and enquired how to prepare the Work Plan for the team member.	None
11/6/2013	Email-Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member emailed J. Harris and indicated that team member would work on a revised LOU based previous input from Chief R. Giesbrecht, D. Lessoway and P. LePage of KFN. The LOU would be updated to reflect the current status of the Project and the work that had been done since initial engagement with KFN. Team member would send the draft to J. Harris first for review.	None
11/7/2013	Email-Incoming	June Harris (Lands and Resource Manager)	Max Nock (KMC)	J. Harris emailed team member to provide availability during the week of November 11, 2013 for a phone conversation about the draft Work Plan.	None
11/7/2013	Email-Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member emailed J. Harris resolving to call J. Harris to confirm how to proceed with the work plan. Team member asked about availability for a conversation on November 8, 2013.	None
11/7/2013	Phone - Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member phoned J. Harris and confirmed that team member would draft the LOU and the agreement for the KFN Archaeology work. Team member resolved to work with J. Harris to prepare a draft for review by Chief R. Giesbrecht and KMC.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/7/2013	Phone - Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member phoned J. Harris and noted that team member expected to receive a draft proposal from KFN on November 7, 2013. .	None
11/7/2013	Phone - Outgoing	June Harris (Lands and Resource Manager)	Jamie Andrews (KMC)	Team member phoned J. Harris to discuss the Archaeology and Biophysical studies. Team member explained that much of the work described in KFN's Biophysical proposal may have already been completed by field crews, and J. Harris agreed that it would be best if the team member discussed what had been completed with KFN's biologist. Team member also explained that the next draft of the LOU would reflect the current status of the Project, which had progressed since initial discussions in spring 2013. It was agreed that once a draft of the LOU was ready, KMC would discuss it with J. Harris and Chief R. Giesbrecht and would update KFN on the current status of the Project. Team member requested that J. Harris forward copies of the Archaeology and Biophysical study proposals.	None
11/7/2013	Email-Incoming	June Harris (Lands and Resource Manager)	Max Nock (KMC)	J. Harris emailed team member the draft Work Plan documents as requested by team member.	None
11/18/2013	Email-Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member emailed J. Harris and suggested meeting on November 20, 2013 in the KFN Office to review the draft LOU. Team member confirmed having received Brown & Oakes Archaeology's proposed TLU study budget and resolved to bring a revised draft LOU and Workplan to the meeting for review. The deliverables and timelines were to reflect the current stage of the Project. Team member suggested reviewing the draft LOU and Workplan and developing a budget. Team member invited J. Harris to add other items for discussion or to provide thoughts on how to proceed.	None
11/19/2013	Email-Incoming	Dale Lessoway (Lands and Resource Manager), June Harris (Lands and Resource Manager)	Max Nock (KMC), Jamie Andrews (KMC)	J. Harris of Kwikwetlam First Nation (KFN) emailed team member and requested the draft Letter of Understanding (LOU) so that KFN could review the document before the November 20, 2013 meeting. Team member emailed J. Harris the draft LOU as requested. T. Team members were to explain any changes in the document during the meeting. J. Harris acknowledged receipt of the email and attachment.	None
11/19/2013	Email-Incoming	Dale Lessoway (Lands and Resource Manager), June Harris (Lands and Resource Manager), Chief Ronald Giesbrecht, Nicole Oakes (Brown & Oakes Archaeology)	Max Nock (KMC), Jamie Andrews (KMC)	J. Harris emailed team members, Chief R. Giesbrecht (KFN), D. Lessoway (KFN), N. Oakes (Brown & Oakes Archaeology) and C. Orr (KFN) to provide the agenda for the meeting about the LOU scheduled for November 20, 2013: <ul style="list-style-type: none"> • Review draft revised LOU; • Work plan; • Budget; • Brown & Oakes Archaeology TLU study budget; • Deliverables and timeline. • Harris confirmed that the team members would be in KFN for the meeting. 	None
11/20/2013	In-Person	June Harris (Lands and Resource Manager), Chief Ronald Giesbrecht	Max Nock (KMC), Jamie Andrews (KMC)	Team members met with N. Oakes (Brown & Oakes Archaeology), J. Harris (KFN), C. Orr (KFN) and E. Hall (KFN) on November 20, 2013. Team members introduced the Project and TEK and TLU studies, explaining that the biophysical studies had been completed for the KFN area. Action items resulting from the meeting: <ul style="list-style-type: none"> • Team member was to discuss the AIA status with TERA. (Complete) • Team member was to draft a document for Chief R. Giesbrecht to consider. (Complete) • Team member was to provide a response on the biophysical studies. (Complete) 	None
11/21/2013	Email-Outgoing	Nicole Oakes (Brown & Oakes Archaeology)	Max Nock (KMC), Clare Peacock (TERA), Jamie Andrews (KMC)	Team member emailed to invite participation in a conference call on November 22, 2013. The purpose of the conference call was to discuss the Archaeology work for KFN. Logistical details for the call were included.	None
11/22/2013	Phone - Outgoing	Nicole Oakes (Brown & Oakes Archaeology)	Max Nock (KMC), Clare Peacock (TERA), Jamie Andrews (KMC)	Team members held a conference call with KFN Archaeologist N. Oakes (Brown & Oakes Archaeology) and discussed the process for completing Archaeology work on KFN Traditional Territory. Team member explained that Wildlife, Aquatics, TEM and Wetlands studies had been completed and KFN was asked multiple times to participate in these studies. N. Oakes said that there had been a lack of clarity and miscommunication with KFN regarding participation in these studies. Team member explained the NEB process. N. Oakes asked for fisheries biologist's information and the number of water crossings in KFN Traditional Territory. Action items resulting from this meeting: <ul style="list-style-type: none"> • TERA team member to revise Clause 1; • KMC team members to respond to N. Oakes regarding the use of two crew members in all areas; 	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				<ul style="list-style-type: none"> • TERA team member to enquire about dates and contract wording for report review by KFN; • TERA team member to enquire about permitting; • TERA team member to provide N. Oakes with more ROW detail, shapefiles and GPS data; • KMC team members to discuss review of studies within the Application; • Conversation to be organized between TERA team member, archaeologists and N. Oakes. 	
11/22/2013	Email-Incoming	Nicole Oakes (Brown & Oakes Archaeology)	Jamie Andrews (KMC)	N. Oakes emailed team member and confirmed availability for the conference call on November 22, 2013 to discuss the Archaeology work for KFN.	None
11/25/2013	Email-Outgoing	Nicole Oakes (Brown & Oakes Archaeology)	Aaron Osicki (TERA), Clare Peacock (TERA), Ian Franck (AMEC)	<p>Team member emailed N. Oakes (Brown & Oakes Archaeology), I. Franck (AMEC) and another team member an invitation to attend a conference call on November 27, 2013 to discuss Archaeology field methods in KFN core Traditional Territory and use and interest territory. Details for the conference call were included.</p> <p>N. Oakes emailed team member to note that N. Oakes and D. Brown would join the call.</p> <p>Team member emailed N. Oakes responded and confirmed receipt of the email.</p>	None
11/27/2013	Email-Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member emailed J. Harris and attached a letter dated November 13, 2013, originally sent to Chief R. Giesbrecht and copied to D. Lessoway, from KMC regarding a TERMPOL study and KFN's interest in receiving and commenting on it. Team member also advised that capacity funding was available to review the study.	None
11/27/2013	Email-Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	<p>Team member emailed J. Harris requesting a change in meeting date from December 10, 2013 to December 11, 2013. Team member also provided meeting availability for dates later in the week.</p> <p>J. Harris emailed team member to note that availability of other KFN members attending the meeting was being verified. J. Harris also requested that the team member send a draft of the LOU prior to the meeting for KFN's review.</p> <p>Team member emailed J. Harris the draft LOU Workplan.</p>	None
11/27/2013	Phone - Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member phoned J. Harris and agreed to meet the week of December 9, 2013 to further discuss the LOU. Team member agreed to send J. Harris a draft of the LOU the week of November 27, 2013 for consideration.	None
12/2/2013	Phone - Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member phoned J. Harris to confirm the December 11, 2013 meeting regarding the draft LOU sent on November 27, 2013 and the TERMPOL letter requesting KFN's participation in the study review process. J. Harris would provide confirmation for the December 11, 2013 meeting later and find out KFN's decision on reviewing the TERMPOL studies.	None
12/3/2013	Email-Incoming	June Harris (Lands and Resource Manager)	Max Nock (KMC)	J. Harris emailed team member and indicated that KFN was still reviewing the draft LOU Team member emailed J. Harris outlining next steps after LOU execution by the parties. T	None
12/3/2013	Email-Incoming	June Harris (Lands and Resource Manager)	Max Nock (KMC)	<p>J. Harris emailed team member to cancel the December 11, 2013 meeting because KFN had decided to move ahead on the LOU. J. Harris planned to provide an update, possibly during the week of December 9, 2013.</p> <p>Team member emailed J. Harris and acknowledged that KFN was proceeding with the LOU, and requested feedback from KFN regarding certain aspects in order to prepare a final version for execution by the parties..</p>	None
12/4/2013	Email-Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member emailed J. Harris and attached a copy of the draft LOU Workplan.	None
12/11/2013	Email-Incoming	June Harris (Lands and Resource Manager)	Max Nock (KMC)	<p>J. Harris emailed team member to request a meeting at KFN on behalf of Council.</p> <p>Team member emailed J. Harris and noted that as per an earlier voicemail message a meeting was proposed for December 12, 2013. The meeting with Chief and Council would be to review the LOU and discuss upcoming Archaeological work.</p>	None
12/16/2013	Letter - Outgoing	Chief Ronald Giesbrecht	Ian Anderson (KMC)	Team member sent a letter to Chief R. Giesbrecht and notified KFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Email-Outgoing	June Harris (Lands and Resource Manager)	Max Nock (KMC)	Team member emailed J. Harris and Chief R. Giesbrecht confirming that team member had put in a request for the LOU be finalized by the Calgary office, executed by KMC and sent to KFN as soon as possible.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/17/2013	Email-Outgoing	Nicole Oakes (Brown & Oakes Archaeology)	Karen Baylis (TERA)	Team member emailed D. Brown and N. Oakes (Brown & Oakes Archaeology) and provided contact information for the TERA team member. Team member also indicated contact information for the TERA team member responsible for health, safety and training queries for Project work. Team member had requested tentative dates for the proposed studies from another TERA team member in order to ensure that the Consulting Service Agreement (CSA) would be completed in accordance with the timelines.	None
12/19/2013	Email-Incoming	June Harris (Lands and Resource Manager)	Max Nock (KMC)	J. Harris emailed team member and indicated having spoken with D. Lessoway (KFN) regarding delivery of the finalized LOU. Team member responded to J. Harris confirming that the document would be sent on January 6, 2014. J. Harris emailed team member and acknowledged that the document would be sent on January 6, 2014.	None

APPENDIX A-4-08
LEQ'A:MEL FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/25/2013	Email - Outgoing	Chief Alice Thompson	Mika Blundell (TERA)	Team member emailed Chief A. Thompson to set up a Results Review meeting on November 7, 2013.	None
12/16/2013	Letter - Outgoing	Chief Alice Thompson	Ian Anderson (KMC)	Team member sent a letter to Chief A. Thompson and notified Leqamel First Nation (LFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
10/30/2013	Phone - Outgoing	Chief Alice Thompson, Barb Leggat (Councillor)	Mika Blundell (TERA)	Team member called Chief A. Thompson and B. Leggat to schedule a Results Review meeting for November 7, 2013. B. Leggat called team member and advised of an upcoming Council meeting where LFN would discuss whether the Results Review meeting could be held on November 7, 2013.	None
12/17/2013	Phone - Outgoing	Chief Alice Thompson, Barb Leggat (Councillor)	Norman Marcy (KMC)	Team member left a message for B. Leggat and Chief A. Thompson advising that the Facilities Application had been filed with the NEB and was available on the Project website. Team member discussed the Letter of Understanding (LOU) and in discussing next steps regarding the Mutual Benefits Agreement (MBA) with Chief A. Thompson and B. Leggat.	None
10/17/2013	Phone - Attempt	Barb Leggat (Councillor)	Norman Marcy (KMC)	Team member called B. Leggat and left a voice message requesting a meeting to discuss a MBA with staff or Chief and Council.	None
10/29/2013	Email - Outgoing	Barb Leggat (Councillor)	Mika Blundell (TERA)	Team member emailed B. Leggat to follow-up on an email sent to Chief A. Thompson on October 25, 2013 to request that a Results Review meeting be scheduled for November 7, 2013.	None
10/30/2013	Email - Outgoing	Barb Leggat (Councillor)	Norman Marcy (KMC)	Team member emailed B. Leggat to follow up on an earlier phone call. Team member stated intent for discussing the Capacity Agreement. Team member also noted that any next steps should be determined so that appropriate plans could be made.	None
10/31/2013	Phone - Outgoing	Barb Leggat (Councillor)	Mika Blundell (TERA)	Team member called B. Leggat who confirmed that the Results Review meeting would be held on November 8, 2013.	None
10/31/2013	Phone - Incoming	Barb Leggat (Councillor)	Norman Marcy (KMC)	B. Leggat called team member and indicated that LFN had concluded the Traditional Land Use (TLU) Study. B. Leggat would be determining finalization steps or meetings required, in consultation with Chief A. Thompson in the near future. B. Leggat noted that LFN would also be considering proceeding to a MBA.	None
11/7/2013	Email - Incoming	Barb Leggat (Councillor)	Mika Blundell (TERA)	B. Leggat emailed team member to request a copy of the presentation that would be shown at the Results Review meeting scheduled for November 8, 2013 in order to make copies for attendees. Team member emailed B. Leggat to confirm that TERA facilitators would provide hard copies of the presentation.	None
11/7/2013	Phone - Incoming	Barb Leggat (Councillor)	Mika Blundell (TERA)	B. Leggat called team member requesting an agenda for the Results Review meeting scheduled for November 8, 2013. B. Leggat requested a copy of the presentation in advance in order to make copies for meeting attendees.	None
11/8/2013	In-Person	Community Members	Brian Bruzzese (TERA) Emily Boiteau (TERA)	The TLU/socio-economic results review meeting was held with LFN on Nov 8, 2013. The objective of the meeting was to provide a summary of the information shared by community members on TLU studies for the Project and provide an opportunity for the community to verify the information and concerns shared. Unresolved concerns and requests for follow-up in the field were reviewed during the results review meeting. No concerns or requests for site-specific mitigation were made. requests for follow-up: - would like to see access built to grounds where community members could go and gather.	None

APPENDIX A-4-09
MUSQUEAM INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/4/2013	Email- Outgoing	Joana Sparrow Crawford (Communications and Protocol Coordinator)	Sondra Baker (TERA)	Team member emailed Musqueam Indian Band (MSIB) and provided a notification letter for Archeological Geotechnical Borehole Drilling fieldwork (Permit No. 2013-0165) between October 16 - 27, 2013 in Abbotsford and November 1 - 12, 2013 in Langley.	None
11/18/2013	Email- Outgoing	Kaitlan Lay (Interim Archivist)	Regan Schlecker (KMC)	Team member emailed K. Lay and invited R. Giesbrecht and MSIB Leadership to attend an upcoming Burnaby Board of Trade event on November 27, 2013. Team member stated that President of KMC will be discussing the project, will be sharing details on timing, types of jobs and procurement opportunities that will be available for the Chilliwack area if the Project proceeds and how businesses can prepare to capture local economic opportunities. K. Lay and other MSIB representatives who are interested in attending were invited to contact the team member by November 25, 2013 to reserve seating. Details about the location and time of the event were provided.	None
12/16/2013	Letter - Outgoing	Chief Wayne Sparrow	Ian Anderson (KMC)	Team member sent a letter to Chief W. Sparrow and notified MSIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-4-10

PETERS BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/17/2013	Email-Outgoing	Jack Andersen (Legal Counsel)	Norman Marcy (KMC)	Team member emailed J. Andersen and indicated an ongoing interest in engagement between KMC and PSFN. Team member noted that considerable information had been provided in response to earlier requests. Team member informed that PSFN was not hosting TMPL and an offer to engage in discussions of the present TMPL and future TMEP use of these lands had been made. Team member noted that KMC would be willing to provide capacity funding as part of relationship building. Once PSFN interests and the Project are mutually understood, KMC would like to discuss possible MBA to facilitate the Project.	None
10/24/2013	Phone - Attempt	Jack Andersen (Legal Counsel)	Norman Marcy (KMC)	Team member called J. Andersen and left a voice message requesting J. Andersen call back concerning the pipeline on Peters IR and engagement with the FN.	None
10/24/2013	Phone - Outgoing	Jack Andersen (Legal Counsel)	Norman Marcy (KMC)	Team member called PSFN band member and discussed the political and other problems of PSFN and potential solutions.	None
10/25/2013	Email-Incoming	Samantha Peters (Forestry Portfolio)	Norman Marcy (KMC)	PSFN band member emailed team member and requested a meeting on behalf of PSFN to discuss the nature and scope of KMC's proposal for work in PSFN land. PSFN band member expressed concern that the scope of the project may directly impact land that belongs to PSFN families and felt it would be necessary to speak to team member to find resolutions. S. Peters informed that PSFN communities live in various locations throughout BC and Alberta. S. Peters requested that special arrangements be made on behalf of KMC to ensure that the community can confirm attendance by a majority of members. PSFN band member recommended that a meeting be arranged one month from this time in Chilliwack. Team member emailed S. PSFN band member and informed that the request would be taken under advisement and discussed with the Project Team. Team member noted that personal travel costs would likely not be covered.	None
10/25/2013	Email-OUTGOING	Samantha Peters (Forestry Portfolio)	Norman Marcy (KMC)	Team member emailed PSFN band member and informed that the request would be taken under advisement and discussed with the Project Team. Team member noted that personal travel costs would likely not be covered.	
10/28/2013	Email-Incoming	Jack Andersen (Legal Counsel)	Norman Marcy (KMC)	J. Anderson emailed team member and informed of having forwarded the request for engagement to PSFN and was awaiting reply.	None
11/6/2013	Phone - Outgoing	Jack Andersen (Legal Counsel)	Norman Marcy (KMC)	Team member left a voicemail for J. Andersen advising that he would like a call back at his earliest opportunity.	None
11/26/2013	Phone - Outgoing	Jack Andersen (Legal Counsel)	Norman Marcy (KMC)	Team member left a voicemail for J. Andersen requesting a meeting with J. Andersen and members of PSFN. Requested a call back. Team member received a call back from an assistant in J. Andersen's office advising that he is out of the country until December 3, 2013 but will contact the team member upon his return. The assistant advised that J. Andersen had contacted PSFN. Team member advised that he would attend the office at PSFN and speak with them directly.	None
11/27/2013	In-Person	Fran Genaille (Administrator), Glen Peters (Community Member), Chief Norma Webb, Robert Peters (Community Member)	Norman Marcy (KMC)	Team member visited Peters First Nation (PSFN) in-person. Attended home of R. Peters. Team member attended PSFN Band Administration Office. Building was unoccupied. Team member left business card. Team member spoke with G. Peters inquired as to location of Chief and Band residences. G. Peters offered directions. Team member left business card with G. Peters. Team member attended home of N. Webb and left business card. Attended home of F. Genaille and left business card.	None
12/3/2013	Phone - Outgoing	Jack Andersen (Legal Counsel)	Norman Marcy (KMC)	Team member left a voicemail for J. Andersen requesting a call back. Team member advised that a letter would be coming to J. Andersen from P. Forrester of KMC requesting a meeting with PSFN Leadership. Team member indicated that there have been requests from PSFN members for meetings directly with KMC about the Project.	None
12/10/2013	Letter - Outgoing	Jack Andersen (Legal Counsel)	Peter Forrester (KMC)	Team member sent a letter to J. Andersen on December 10, 2013 confirming receipt of J. Anderson's letter of December 9, 2013. Team member stated that KMC is prepared to work with Chief and Council, and respects that process. Team member expressed that KMC wants to ensure that progress is being made regarding discussions of the proposed Project, and that they want to ensure that PSFN has the ability to capture the malleable benefits from the Project for its community. Team member requested a meeting with J. Anderson at the end of December 2013, or first thing in January 2014.	None
12/16/2013	Email-Outgoing	Jack Andersen (Legal Counsel)	Norman Marcy (KMC)	Team member emailed J. Andersen to advise that KMC has filed a Facilities Application with the NEB. Team member attached a map of the revised current routing options as they would traverse Peters IR and advised that a new route on the north side of the Hwy 1 may be necessary given the expansion of roads and other developments that have occurred in the area since original construction in the 1950s. Team member advised that he would like to discuss the possible routings with PSFN.	None
12/16/2013	Letter - Outgoing	Chief Norma Webb	Ian Anderson (KMC)	Team member sent a letter to Chief N. Webb and notified PSFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-4-11
POPKUM FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/5/2013	Email- Outgoing	Chief James Murphy	Norman Marcy (KMC)	Team member emailed Chief J. Murphy and requested confirmation that the mutual benefits documents sent last week were received. Team member requested a potential meeting and provided logistics.	None
10/7/2013	Email- Outgoing	Chief James Murphy	Mika Blundell (TERA)	Team member emailed Chief J. Murphy and sent a tentative work plan for a Traditional Land Use (TLU) study.	None
10/7/2013	Email- Outgoing	Chief James Murphy	Mika Blundell (TERA)	Team member emailed Chief J. Murphy with a tentative budget and work plan for the TLU study for the Popkum Band (PB) and requested feedback. Team member attached a copy of the TLU study and socio-economic workplan.	None
10/16/2013	Email- Outgoing		Norman Marcy (KMC), Terri-Lee Oleniuk (Osler)	Team member emailed other team member and attached a draft Popkum letter of understanding (LOU) amendment letter to be forwarded for execution and then to PB.	None
10/22/2013	Email- Outgoing	Chief James Murphy	Norman Marcy (KMC)	Team member emailed Chief J. Murphy and attached action items from the October 9, 2013 meeting. Team member requested speaking this week about follow up meetings.	None
10/22/2013	Email- Outgoing	Chief James Murphy	Norman Marcy (KMC)	Team member emailed P. Theodore and attached the actions items from the October 11, 2013 meeting. Team member requested P. Theodore calls if there were items to discuss.	None
11/4/2013	Phone - Incoming	Chief James Murphy	Norman Marcy (KMC)	Chief J. Murphy called team member to discuss the following: 1. Chief J. Murphy executed the second capacity LOU and will send it to the KMC office in Calgary and keep one executed copy for him. Team member confirmed that that is the correct procedure. 2. Chief J. Murphy indicated that he would be following up on the TLU study proposal. Team member committed to calling TERA and trying to get the two of them connected to get on with that work 3. Chief J. Murphy and team member discussed the basic components and composition of the previously discussed mutual benefits agreement (MBA). 4. Chief J. Murphy stated that he would be discussing some components with a partner regarding possible procurement opportunities with the project. Team member indicated that he would get a revised MBA component matrix prepared and sent.	None
11/6/2013	Phone - Outgoing	Chief James Murphy	Paul Anderson (TERA)	Team member called Chief J. Murphy regarding the Popkum TLU study. Chief J. Murphy agreed to conduct the study from November 12, 2013 to November 14, 2013.	None
11/7/2013	Phone - Attempt	Chief James Murphy	Michelle Langfeldt (TERA)	Team member left a voicemail for Chief J. Murphy regarding the upcoming TLU study on November 12, 2013 and November 13, 2013, and requested a call back to make plans.	None
11/10/2013	Phone - Attempt	Chief James Murphy	Michelle Langfeldt (TERA)	Team member sent a text message to Chief J. Murphy advising that team members would be arriving in Chilliwack the following day to conduct a TLU study on Tuesday and Wednesday. Team member asked Chief J. Murphy whether he is still available on these dates.	None
11/12/2013	Phone - Incoming	Chief James Murphy	Norman Marcy (KMC)	Team member received a voicemail from Chief J. Murphy requesting a call back.	None
11/13/2013	Phone - Attempt	Chief James Murphy	Norman Marcy (KMC)	Team member left voicemail for Chief J. Murphy returning call and left a message advising that team member would be in Chilliwack later that day and would be available by phone or in person. Team member advised that he would call Chief J. Murphy upon arrival in Abbotsford. Requested call back from Chief J. Murphy.	None
11/19/2013	Phone - Attempt	Chief James Murphy	Norman Marcy (KMC)	Team member made three attempts to contact Chief J. Murphy via phone. Left voicemail to make final arrangement for previously-agreed upon meeting.	None
11/28/2013	Email- Outgoing	Chief James Murphy	Paul Anderson (TERA)	Team member emailed Chief J. Murphy with the results of the Traditional Ecological Knowledge (TEK) studies that PB participated in from August 2012 to September 2013. Team member referenced an upcoming results review meeting which to be scheduled at a future date. Results review memo attached.	None
12/16/2013	Letter - Outgoing	Chief James Murphy	Ian Anderson (KMC)	Team member sent a letter to Chief J. Murphy and notified PB of the Facilities Application filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the National Energy Board (NEB) would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Phone - Attempt	Chief James Murphy	Norman Marcy (KMC)	Team member left voicemail for Chief J. Murphy advising that the Facilities Application had been filed with the NEB and is available on the TransMountain website. Team member referenced their scheduled meeting of December 17, 2013 in Chilliwack and requested that Chief J. Murphy call back to confirm the meeting.	None
12/18/2013	Phone - Incoming	Chief James Murphy	Norman Marcy (KMC)	Chief J. Murphy called team member and indicated that he had just finished a meeting with joint venture partner and would be preparing a 5 page proposal for consideration by KMC. He indicated that there would be more information for consideration based on the same elements that have been discussed to date. The proposal will be forwarded to the team member in the first week of January.	None

APPENDIX A-4-12
QAYQAYT FIRST NATION (NEW WESTMINSTER)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013 12:00 AM	Letter - Outgoing	Chief Rhonda Marietta Larrabee	Ian Anderson (KMC)	Team member sent a letter to Chief R. Larrabee and notified Qayqayt First Nation (QFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-4-13
SCOWLITZ FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/21/2013	Phone - Outgoing	Chief Andy Phillips	Norman Marcy (KMC)	Team member called Chief A. Phillips and confirmed contact details for Councillor M Pennier. Chief A. Phillips confirmed roles and responsibilities with regards to Scowlitz affairs. Chief A. Phillips requested to know KMC's impression from previous meeting with Stolo Tribal Council STC (October 9, 2013). Team member expressed KMC's pleasure to address the group. KMC was disappointed that Chief C. Seymour Seabird Indian Band (SIB) did not also attend. Chief A. Phillips expressed interest in continuing engagement with KMC. Team member and Chief A. Phillips discussed present Letter of Understanding (LOU) agreement extension to March 2014. Team member committed to sending documents to this affect.	None
12/16/2013	Letter - Outgoing	Chief Andy Phillips	Ian Anderson (KMC)	Team member sent a letter to Chief A. Phillips and notified Scowlitz First Nation (SZFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Phone - Attempt	Chief Andy Phillips	Norman Marcy (KMC)	Team member left message with Chief A. Phillips to convey that Facilities Application has been filed with the NEB and is available on Trans Mountain website. Team member left open invitation for further questions or discussion.	None
12/20/2013	Phone - Incoming	Chief Andy Phillips	Norman Marcy (KMC)	Chief A. Phillips returned call to team member inquiring about timeline of Facilities Application that was filed with NEB. Chief A. Phillips inquired about the duration of the Enbridge Northern Gateway process and wondered if the NEB would take as long for the KMC Trans Mountain project. Team member indicated the process would take a minimum of 18 months and timing would be made clear by NEB. Chief A. Phillips reminded team member that present agreement was signed and returned to KMC. Confirmed, document was received and signed November 29, 2013.	None
11/28/2013	Email- Outgoing	Colin Pennier (Councillor)	Paul Anderson (TERA)	Team member communicated results from Trans Mountain Expansion Project Biophysical Field Program (August 2012-September 2013) to C. Pennier. Team member summarized SZFN participation in field studies and collective discussions among all parties in attendance. Team member indicated that the results of the Traditional Land and Resource Use study would be reviewed at an upcoming Results Review meeting (TBD). Team member attached all details to email.	None

APPENDIX A-4-14
SEABIRD ISLAND BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/1/2013	In-Person	Community member	Peter Andreasen (TERA)	One Seabird Island Band (SIB) crew member participated in an Archaeological Impact Assessment from October 1-10, 2013.	Socio-Econ. Terrestrial - Heritage Resources - Archaeology
10/1/2013	Email-Incoming	Jay Hope (Research Director)	Clare Peacock (TERA)	J. Hope requested details for a time and place in which the stakeholder participant can meet with the field crew.	None
10/2/2013	Phone - Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member called B. Jones and notified that documentation for the Agreement between KCM and SIB would need to be concluded before the upcoming meeting on October 9, 2013 and that the Agreement would be discussed at the meeting. B. Jones indicated that comments from their lawyer needed to be reviewed and that they would get back to team member as soon as possible.	None
10/4/2013	Email-Incoming	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	B. Jones emailed team member and provided an updated copy of the SIB Protocol Agreement. Team member emailed B. Jones and provided several comments and questions regarding the SIB Protocol Agreement. Team member noted they would attempt to get one more review by KMC's legal group. B. Jones emailed team member and noted that a legal review for KMC would then require another legal review by SIB. Team member emailed B. Jones and responded that no legal issues were expected. Team member also attached two maps for B. Jones to consider for Schedule A of the Protocol.	None
10/7/2013	In-Person	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member attended a meeting with SIB with and relayed the following notes: - A discussion of the engagement process and their intentions moving forward. SIB uses a 6-stage process for engagement for which signing the Protocol is the first step. Team member noted stakeholders' intentions to communicate with other First Nations and discussed the degree of interest and gain enough support to sign the Protocol on October 9, 2013. - SIB has held three community sessions on the project to gauge community support. Concerns lay in potential damage to their fisheries. - SIB acknowledged benefits arising from the project. - Team member advised of the need to keep filing plans on schedule and explained the NEB process. - Stakeholders mentioned the meeting with another team member and noted that the Protocol signing should happen without unnecessary delay once enough support is attained. Team member noted that a Letter of Understanding (LOU) would then need to be negotiated.	None
10/7/2013	Email-Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed B. Jones and requested permission to make two small changes to the SIB Protocol Agreement which were included in the email.	None
10/9/2013	Email-Incoming	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	B. Jones e-mailed team member a small section of Protocol Agreement indicating a change to be made.	None
10/10/2013	Email-Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member e-mailed B. Jones to extend the opportunity to discuss SIB Processes related to the Project. Team member noted that the suggested additions to the proposed Protocol would be taken in consideration. Team member requested a map for Schedule A.	None
10/10/2013	Email-Outgoing	Jay Hope (Research Director)	Sondra Baker (TERA)	Team member emailed J. Hope and informed SIB the upcoming Archaeology study shift would be postponed until further notice. Team member stated that KMC would provide J. Hope with an updated schedule as soon as possible. Team member emailed J. Hope of a date change for an Archaeology study shift 6 scheduled October 17, 2013 – October 26, 2013 in the Merritt area as results from a previous study needed to be confirmed.	None
10/13/2013	Phone - Incoming	Chief Clem Seymour	Regan Schlecker (KMC)	Chief C. Seymour phoned Team member to note the unavailability to attend the Protocol Agreement signing ceremony on December 11, 2013 as proposed.	None
10/22/2013	Email-Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed B. Jones and commented on additions to the SIB Protocol. Team member inquired whether any other suggestions were necessary and about next steps, possible opportunities and timing to have the agreement considered by Chief and Council. B. Jones emailed team member and informed that J. Hope would be presenting to the Chief and Council that week with an agenda to get engagement direction. B. Jones committed to keeping team member updated with results	None
11/4/2013	Email-Outgoing	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	Team member emailed B. Jones and notified of having been contacted by Chief C. Seymour to request a Protocol signing ceremony/meeting with KMC's President and representatives from November 7 - 22, 2013. Team member informed that KMC's President would not be available during that time frame. Team member inquired as to how B. Jones would like to proceed with the signing.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				B. Jones emailed team member and informed that Chief C. Seymour was agreeable with signing the agreement now and hosting a ceremony in December. B. Jones informed that SIB has internal requirements that must be met prior to implementing the capacity funding for the Project. B. Jones requested that the requirement be discussed prior to the ceremony. Team member emailed B. Jones and provided availability for further discussion and potential agreement signing dates.	
11/7/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	B. Jones emailed to enquire if Team member was available for a phone call on November 7, 2013. Team member responded to B. Jones to note KMC's availability for the requested phone call. B. Jones emailed Team member and noted SIB would make the phone call on November 8, 2013 Team member replied and acknowledged that a phone call with SIB would take place on November 8, 2013	None
11/12/2013	Email- Outgoing	Jay Hope (Research Director)	Clare Peacock (TERA)	Team member email J. Hope with information regarding an upcoming Archaeology shift 5. Team member detailed a proposed time line (November 20 - 29, 2013) and RKP range (RKP1-57 - 1079), as well as identifying the crew lead. Team member noted the crew would be staying in Hope, and requested confirmation of participants for the study.	None
11/13/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	Team member emailed B. Jones and required confirmation on whether the proposed signing ceremony date of December 11, 2013 was suitable for Chief and Council. ----- Team member emailed B. Jones and stated that Chief C. Seymour had noted the unavailability for December 11, 2013. Team member noted that Chief C. Seymour had requested from Team members to make arrangements for a community celebration/tour in early 2014. Team member enquired regarding the stage of the final copy of the Protocol Agreement ----- B. Jones emailed Team member and requested the revised Protocol Agreement for signing by SIB. B. Jones noted the signing ceremony could be scheduled based on an agreeable date for Chief C. Seymour and KMC ident. B. Jones stated SIB would like to forward the pre-capacity budget to team member by November 15, 2013 to get the file active.	None
11/14/2013	Email- Incoming	Jay Hope (Research Director)	Clare Peacock (TERA)	J. Hope emailed Team member and provided a participant for the Archaeology study Crew 5. J. Hope requested accommodation and per diems be arranged by TERA. J. Hope requested a Work Participation Form and additional study logistics.	None
11/15/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	Team member emailed B. Jones the latest version of the Protocol Agreement and requested confirmation as to whether or not this was the same version presented to Chief and Council. Team member noted that KMC could arrange for final formation of the Protocol Agreement and signature by the KMC President before forwarding it to Chief Seymour for signature.	None
11/18/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	Team member email B. Jones to enquire whether KMC could proceed with formatting and signing the Protocol Agreement and forward it to Chief C.Seymour for signing. ----- Team member email B. Jones and confirmed KMC WILL PROCEED with formatting and signing the final Protocol Agreement. Team member noted B. Jones would be notified as to when to expect to receive the documents via courier. Team member asked team member F. Angus to check for available dates during January for signing ceremony between Chief C. Seymour and KMC president.	None
11/18/2013	Phone - Incoming	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	Chief C. Seymour phoned Team member and confirmed SIB's approval of the latest version of the Protocol Agreement and requested that Team member prepare a final version for SIB and KMC signing.	None
11/18/2013	Email- Incoming	Fern Angus (Administrator)	Regan Schlecker (KMC)	F. Angus emailed Team member and that the only unavailable date for the Protocol Agreement signing ceremony was January 23, 2014	None
11/18/2013	Email- Incoming	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC), Gary Youngman (KMC)	B. Jones emailed Team members and attached the pre-engagement budget. B. Jones noted that the work had to be done prior to the proposed capacity funds as it would allow SIB to negotiate a successful IBA. Once this had been completed Seabird would be in a position to enter into further stages of the project. ----- Team member emailed B. Jones to confirm receipt of the budget proposal.	None
11/19/2013	Email- Incoming	Jay Hope (Research Director)	Clare Peacock (TERA)	J. Hope emailed C. Peacock and provided a replacement Heritage Monitor for the Archaeology study crew 5 scheduled November 19-20, 2013. J. Hope noted study logistics had been forwarded to the new Heritage Monitor and the facilitators would be notified of the change.	None
11/19/2013	Phone - Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member phoned B. Jones regarding the five stage process proposed by SIB and the option to discuss it in person. B. Jones indicated that the process was now comprised of six stages. Team member indicated KMC wishes to understand the process stages before committing to engagement on basis of the SIB process. B. Jones indicated SIB would attempt to update Team member on the outcome of the SIB process work by the end of the week.	None
11/20/2013	Email- Outgoing	Fern Angus (Administrator)	Regan Schlecker (KMC)	Team member emailed F. Angus to enquire whether January 14, 2014 or January 22, 2014 were suitable for the Protocol Agreement signing ceremony between KMC and SIB.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/20/2013	Email- Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour to inform SIB the signed Protocol Agreement had been sent via courier.	None
11/20/2013	Email- Incoming	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	B. Jones emailed Team member and attached the SIB engagement process for the Project. Team member emailed B. Jones to confirm receipt of the SIB engagement process.	None
11/26/2013	Email- Outgoing	Chief Clem Seymour	Regan Schlecker (KMC)	Team member emailed Chief C. Seymour and enquired whether SIB had received the signed Protocol Agreement.	None
11/26/2013	Email- Incoming	Brian Jones (Economic Development Manager)	Regan Schlecker (KMC)	B. Jones emailed Team member and confirmed receipt of the Protocol Agreement. B. Jones noted the Protocol Agreement had been signed by SIB and couriered back to the Calgary office.	None
11/28/2013	Email- Outgoing	Daryl McNeil (Band Manager)	Paul Anderson (TERA)	Team member emailed D. McNeil the results of the TMEP biophysical field program and requested that the document be reviewed for accuracy in the documentation of knowledge and concerns brought forward by the community members of SIB that participated in field studies.	None
11/29/2013	Email- Outgoing	Jay Hope (Research Director)	Clare Peacock (TERA)	Team member emailed J. Hope to inform them that Archaeology study crew 6 scheduled December 5-12, 2013 would continue into December, 2013 and this would be the last shift of the year. Team member provided study logistics and requested confirmation of a SIB participant for the study.	None
12/2/2013	Email- Incoming	Brian Jones (Economic Development Manager), Jay Hope (Research Director)	Norman Marcy (KMC)	B. Jones emailed Team member and proposed December 10, 2013 or December 12, 2013 to discuss the SIB five-stage process.	None
12/3/2013	Email- Outgoing	Brian Jones (Economic Development Manager)	Norman Marcy (KMC)	Team member emailed B. Jones and confirmed December 12, 2013 to discuss the SIB five-stage process	None
12/5/2013	In-Person	Community member	Brandy Mayes (TERA), Tess Espey (TERA)	One Seabird Island Band crew member participated in an Archaeological Impact Assessment from December 5-13, 2013.	Socio-Econ. Terrestrial - Heritage Resources - Archaeology
12/12/2013	In-Person	Brian Jones (Economic Development Manager), Jay Hope (Research Director)	Regan Schlecker (KMC), Norman Marcy (KMC)	KMC met with SIB to discuss the SIB six-stage process and community involvement in the Project Meeting Minutes Council is comprised of nine members, one for each 100 community members. There is considerable diversity and it is difficult to get all interested and focused on one decision when their individual key interests or portfolios are not getting due attention. Some councilors are not informed of the issues. SIB is made up of both STC and LNQB peoples. 2. J. Hope indicated that SIB wanted to take a measured and deliberate approach to make sure that there is increased understanding of the Project among the Chief and Council and the Community members. Council and community communication are both needed. SIB have a unique history and their territory and peoples are drawn from Spuzzum, Coquihalla Lakes, Fraser Canyon and Skagit areas. 3. The group discussed the Stage one aspects of SIB Proposal.	None
12/16/2013	Letter - Outgoing	Chief Clem Seymour	Ian Anderson (KMC)	Team member sent a letter to Chief C. Seymour and notified SIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/16/2013	Email- Outgoing	Chief Clem Seymour, Fern Angus (Administrator), Jay Hope (Research Director)	Regan Schlecker (KMC), Norman Marcy (KMC)	Team member emailed SIB a copy of December 16, 2013 media release regarding the Project	None
12/17/2013	Phone - Attempt	Jay Hope (Research Director)	Norman Marcy (KMC)	Team member left voice message for J. Hope noting the Facilities Application had been filed with NEB, and indicated it was available to view. Team member invited SIB to reach out should there be any questions regarding the application. Team member indicated that TERA team member would be in touch to discuss the Aboriginal Interest and Use Study (AIUS) study proposal and requested a proposed work plan and deliverables from SIB to initiate the contracts process.	None
12/18/2013	Phone - Outgoing	Jay Hope (Research Director)	Norman Marcy (KMC)	Team member phone J. Hope to follow up on the December 12, 2013 meeting. J. Hope noted the work currently being done on the Aboriginal Interest and Use Study proposal. J. Hope indicated a discussion was to take place with Chief C. Seymour on December 18, 2013 with regards to meeting from December 12, 2013. J. Hope indicated that proposal for the AIUS could be expected before December 25, 2013.	None

APPENDIX A-4-15
SEMIAHMOO FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/07/2013	Phone - Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member called A. Munnings to discuss the major concern of Semiahmoo First Nation (SOFN) which is cumulative impacts and the number of projects and impacts. Future dialogue needs to consider ongoing impacts and needs to focus on improving the environment, rather than taking away. Reconciliation of these matters is important. There is concern that SOFN's beach is closed to shellfish harvest and DFO has not completed any testing in recent years. Team Member to prepare capacity approach for continuing discussion.	None
10/07/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings and inquired as to whether a response had been received to a previous email from TERA. Team member requested a discussion about the next stage of Letter of Understanding (LOU) funding and moving toward reaching a legacy agreement. Team member noted the potential for re-allocating funding towards the legacy agreement and input on TERMPOL marine studies in the fall. Team member proposed a potential meeting Thursday afternoon.	None
10/07/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings and attached a draft amended LOU letter and proposed schedule B which outlines elements of the scoping 'concept' for Semiahmoo Bay. Team member requested the draft be sent back after edits have been inserted once it has been discussed with Chief Cook.	None
10/08/2013	Email- Outgoing	Don Welsh (Manager - Archaeological Services)	Clare Peacock (TERA)	Team member provided information to D. Welsh regarding next 10 day shift starting October 16 and working west 3km/day west of Sumas Mountain. Team member requested a crew member for the October 16 shift and would provide a work agreement/contract. D. Welsh expressed interest in the 10 day shift and requested information related to the 10 day shift, work agreement and pay arrangement. Team member provided D. Welsh with 10 day shift information and options for work agreement/contract and another Team member's contact information related to the work agreement and suggested a time to contact the team member.	None
10/10/2013	Email- Incoming	Adam Munnings (Legal Counsel), John Somogyi (Consultant)	Wanda Lewis (TERA), Ellen Frisch (KMC)	A. Munnings emailed Team Members and submitted a revised Marine Traditional Use Study for review.	None
10/11/2013	Email- Outgoing	Don Welsh (Manager - Archaeological Services)	Karen Baylis (TERA)	Team member emailed D. Walsh to follow-up on the conversation that had occurred on October 9, 2013 regarding SOFN's participation in upcoming TERA archaeology studies and the necessary next steps.	None
10/14/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Wanda Lewis (TERA), Ellen Frisch (KMC)	Team member emailed A. Munnings to confirm receipt of SOFN's proposed TMRU study.	None
10/21/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings to advise of a map request to create a map that overlays SOFN territory with the TMEP existing and new study corridors. Team member noted that this map should help to refine the pinpoint areas of study for land-based areas. Team member inquired if A. Munnings had a chance to review the draft LOU and provide comments for KMC's consideration. Team member informed that the LOU would need to be signed off on to move forward with the legacy agreement.	None
10/22/2013	Email- Outgoing	Don Welsh (Manager - Archaeological Services)	Clare Peacock (TERA)	Team Member emailed D. Welsh and stated that current contract negotiations with other First Nation groups have temporarily paused Archaeology Impact Assessment study progress in the lower mainland and that they would be in contact with SOFN when a revised fieldwork schedule became available.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/23/2013	Email-Incoming	Adam Munnings (Legal Counsel)	Wanda Lewis (TERA), Ellen Frisch (KMC)	A. Munnings emailed Team Members to request clarification on a document that was sent to SOFN. Team member replied to advise that the document is a Work Agreement from TERA for right of way Archeological work. Team Member also confirmed that the MTRU budget was approved and requested confirmation to meet on capacity funding. A. Munnings emailed Team Member to inquire whether a formal approval letter would be provided to SOFN.	None
10/23/2013	Email-Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings a copy of the updated capacity agreement extension for review.	None
10/28/2013	Email-Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	A. Munnings emailed Team Member to inquire whether a formal approval letter for the MTRU budget would be provided to SOFN. Team member emailed A. Munnings and noted an official letter regarding the TSU would be issue to SOFN once the funding agreement was executed. Team member and A. Munnings arranged a phone call to discuss the proposed LOU.	None
10/28/2013	Letter - Outgoing	Chief Willard Cook	Gary Youngman (KMC)	Team member sent Chief W. Cook a letter to acknowledge receipt of SOFN's preliminary interests related to the Project. Team member noted that KMC was reviewing these interests and would provide a thorough response to the issues raised by SOFN. Pursuant to a confidential LOU, interests would be compiled in the Project's Facilities Application, which was to be filed with the NEB in December 2013.	None
10/29/2013	Phone - Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member called A. Munnings to discuss capacity requirements.	None
10/31/2013	Email-Incoming	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	A. Munnings emailed Team Member to inquire whether SOFN was required to sign a TUS agreement with KMC regarding the Traditional Marine Resource Use (TMRU) Study. KMC agreed that the final report was to be released upon approval by SOFN Chief and Council and that the TUS report was under SOFN ownership.	None
11/06/2013	Email-Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	A. Munnings emailed Team Member to follow-up on a previous email sent October 31, 2013. A. Munnings inquired whether SOFN was required to sign a TUS agreement with KMC regarding the Traditional Marine Resource Use Study, and if KMC agreed that the final report was to be released upon approval by SOFN Chief and Council and that the TUS report was under SOFN ownership. Team Member to confirm that the contract would be signed with TERA. Team Member stated that the contract does not have to be signed immediately if work needs to get underway. Team member committed to check with TERA and ensure they provide a draft agreement. The funding would flow based on the deliverables and payment schedule included in the Workplan/budget.	None
11/13/2013	Letter - Outgoing	Chief Willard Cook	Gary Youngman (KMC)	Team member sent Chief W. Cook a letter to inform SOFN about KMC's engagement with Transport Canada in as part of the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that SOFN's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
11/14/2013	Email-Incoming	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	A. Munnings emailed Team Member to clarify that SOFN preferred an alternative tool and requested a new draft of the capacity agreement.	None
11/17/2013	In-Person	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member met with A. Munnings, legal counsel of SOFN, to define budgets for LOU and MTRU and to begin legacy agreement discussions. Team member noted that funding was flexible but intended to be directed toward a capacity project. SOFN would be most affected by cumulative impacts of the Project and other regional developments, and A. Munnings enquired about legacy funding and about reconciliation of the environment in the long-term. SOFN resolved to discuss potential consideration in the LOU and respond to KMC. Next meeting tentatively scheduled for late October. SOFN would submit a new project plan, based on the established budget, and KMC would provide a draft CFA.	None
11/20/2013	Email-Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings to acknowledge receipt of the request for a new form capacity agreement sent November 14, 2013 and advised that one would be sent shortly.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/20/2013	Letter - Outgoing	Chief Willard Cook	Gary Youngman (KMC)	Team Member emailed Chief W. Cook a letter regarding the TERMPOL process and notifying SOFN of the intent to file the Facilities Application to the NEB in mid-December. In addition to completing environmental studies, KMC has been working with Transport Canada to complete studies which focus on the safety of tankers entering Canadian waters; navigating through channels, approaching and berthing at a marine terminal and loading and unloading processes. The TERMPOL process was described. KMC is providing the opportunity for SOFN to review and comment on the technical studies and aggregate comments will be considered into the TERMPOL process. Feedback and advice from SOFN is sought in the initial 2-3 months to ensure adequate time. Team member advised SOFN to respond by November 30 if interested in receiving the studies.	None
11/25/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings and noted that KMC was currently working towards an updated LOU and noted the LOU contained a deliverable, the conclusion of a marine legacy framework. Team member requested any edits or comments regarding the last draft legacy document provided to SOFN	None
11/26/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings a copy of the draft LOU for SOFN and invited discussion of the document later in the week.	None
12/03/2013	Email- Incoming	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	A. Munnings emailed Team Member and attached edits to the draft LOU.	None
12/04/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings to follow-up on the review of the LOU. Team member noted that some changes to the Workplan had been made to reflect the proposed research project. Team member requested a further discussion of the proposed research project's confidentiality and suggested speaking on December 5, 2013. A. Munnings emailed team member a draft Terms of Reference for the LOU for review by team member. A. Munnings suggested a meeting on December 9, 2013 to review and sign the agreement.	None
12/04/2013	Phone - Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member left a voicemail for A. Munnings regarding proposed edits to the draft LOU and availability to talk by telephone.	None
12/06/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings and forwarded draft benefits agreement from October and suggested potential approaches to enable SOFN to participate in important regional long-term processes.	None
12/06/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings to identify possible meeting dates between December 10 and 11, 2013 and to confirm signing and funding arrangements for December.	None
12/06/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings to provide feedback on the Shellfish Project Terms of Reference, which team member noted would be included in the National Energy Board (NEB) filing. Team member explained changes made to the current draft LOU, which included amendment of the NEB reference clause to reflect interest in being able to summarize impact and mitigation engagements with SOFN for the purposes of the Project. Team member indicated the signing deadline that would permit fund transfer before Christmas holidays and suggested a meeting on December 10, 2013 to discuss the legacy agreement.	None
12/09/2013	Email- Outgoing	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	Team member emailed A. Munnings and proposed a meeting time and location to sign the legacy draft agreement. Team member and A. Munnings agreed on a meeting date of December 10, 2013.	None
12/10/2013	Email- Incoming	Adam Munnings (Legal Counsel)	Ellen Frisch (KMC)	A. Munnings emailed team member and requested a written waiver from KMC President to TERA releasing TERA from the audit obligations in respect to SOFN. Team member emailed A. Munnings and noted the waiver had been forwarded to TERA and the KMC legal team.	None
12/10/2013	In-Person	Adam Munnings (Legal Counsel), Joanne Charles (Councillor), Chief Willard Cook	Ellen Frisch (KMC)	Team Member attended a meeting with A. Munnings, Chief W. Cook and J. Charles to review next steps in a legacy agreement and to executive the next level capacity agreement. SOFN is concerned the cumulative impacts of marine and land-based projects on the environment in the SOFN territory. Working to remediate existing issues and supporting mitigation measures of the KMC project is important. The parties discussed the work agreement waiver matter to better understand the concern. Team Member will discuss internally and advise.	None
12/16/2013	Letter - Outgoing	Chief Willard Cook	Ian Anderson (KMC)	Team member sent a letter sent a letter to Chief W. Cook and notified SOFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-4-17
SHXW'OW'HAMEL FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/1/2013	In-Person		Peter Andreasen (TERA)	One Shxw'ow'hamel First Nation (SLFN) crew member participated in an Archaeological Impact Assessment from October 1-10, 2013.	None
10/1/2013	Email-Outgoing	Si:yam Alfred James	Clare Peacock (TERA)	Team Member emailed Si:yam A. James and notified SLFN that, while it had been discussed that the SLFN Archaeology crew member might be able to attend in the area from Upper Coquihalla to the coast of Sto:lo Nation Traditional Territory, it was not within the parameters of KMC or TERA's agreements with SLFN. As such, the SLFN Archaeology crew member would only be permitted to attend while in SLFN Traditional Territory, as outlined in the First Nation territory maps provided to TERA previously. Team member noted that once Crew 6 Shift 1 had completed in Chilliwack, another crew member would be requested for Crew 5 in mid-October, to work south along the Coquihalla. Dates to be confirmed.	None
10/3/2013	Email-Incoming	Si:yam Alfred James	Norman Marcy (KMC)	Si:yam A. James emailed team member and provided information regarding the SLFN consultation boundary. Si:yam A. James provided contact information for K. Chisholm from MFNLR if team member should need more information.	None
10/3/2013	Email-Outgoing	Si:yam Alfred James	Norman Marcy (KMC), Clare Peacock (TERA)	Team member emailed Si:yam A. James and informed of the communication between team members to clarify SLFN territorial extent.	None
10/9/2013	Email-Outgoing	Si:yam Alfred James	Clare Peacock (TERA)	Team member emailed Si:yam A. James and informed SLFN that the next Archaeological Impact Assessment AIA field crew was scheduled from October 17 - 26, 2013. Team member also asked for Si:yam A. James to confirm the participant that would be sent.	None
10/10/2013	Email-Outgoing	Si:yam Alfred James	Sondra Baker (TERA)	Team member emailed Si:yam A. James and informed of upcoming Archaeology crew 6 shift from October 17 - 26, 2013 would be postponed due to ongoing contract negotiations with other First Nations in the lower mainland. Team member stated that an updated schedule would be provided as soon as possible.	None
10/12/2013	In-Person	Si:yam Alfred James, Community Members, Genevieve George	Norman Marcy (KMC)	<p>Team member met with SLFN Council, Si:yam A. James, G. George, D. George, D. Jones and L. McHalsie to discuss the revised approach for the TLUS, the LOU f and the Mutual Benefits Agreement (MBA) topics and approach.</p> <ul style="list-style-type: none"> - Si:yam A. James confirmed that SLFN was willing to proceed with TLUS. The project would be a third party arrangement. - SLFN Council is prepared to proceed with MBA discussions. - Si:yam A. James inquired about the next meeting where an explanation of integrity digs and hydrostatic testing being conducted in the area would be provided. - Si:yam A. James inquired about where soil samples could be taken for testing for oil products. Team member was not aware of where this could be done. - The group brainstormed ideas that may be considered for MBA negotiations. 	None
10/16/2013	Email-Outgoing	Si:yam Alfred James, Alfred James	Norman Marcy (KMC)	Team member emailed Si:yam A. James as follow up to October 12, 2013 meeting where progress and the next steps in initiating the Traditional Land Use Study (TLUS) project was discussed. Team member informed that the budget was acceptable and would be awaiting for Si:yam A. James to send the documentation to TERA. Team member noted leaving a follow up voice message concerning the same matter. Team member noted that the Letter of Understanding (LOU) should be signed by the end of the week.	None
10/16/2013	Phone - Attempt	Si:yam Alfred James	Norman Marcy (KMC)	Team member called Si:yam A. James and left a voice message concerning TLUS required budget and approach to be agreed and sent to TERA.	None
10/17/2013	Email-Incoming	Si:yam Alfred James	Norman Marcy (KMC), Karen Baylis (TERA)	<p>Si:yam A. James emailed team member and informed that SLFN had not responded earlier as one of the community Elders was in the hospital. Si:yam A. James indicated SCFN attempt to put the TLUS together in a timely manner but as agreed upon in several meetings about the process, the given time frame was very short. Si:yam A. James noted that there would be a little more time to work with as TERA would be submitting more reporting in the spring-summer. Si:yam A. James inquired about potential reporting dates in March and June. Si:yam A. James indicated that SLFN Council wants to participate in a TLUS but also wants to get the best results out of the process for both the benefit of TERA and SLFN.</p> <p>Another team member emailed Si:yam A. James and clarified the timing issues about the need for information from TLUS work:</p> <ul style="list-style-type: none"> - the deadline for information to be included in the NEB application had already passed - Work undertaken now can be included in supplemental filing with the NEB - Supplemental filing was anticipated in March 2014 - Filing in March requires that work is underway now to be ready for early February so it can be included - Team member indicated that Si:yam A. James with TERA to conclude paperwork so that approval can be attained. 	None
10/18/2013	Email-Incoming	Si:yam Alfred James	Regan Schlecker (KMC), Norman Marcy (KMC), Karen	Si:yam A. James emailed team members and expressed concern that SLFN would not be able to conduct a relevant Traditional Land Use Study unless they were given until June 2014 to submit SLFN findings in a supplemental report	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
			Baylis (TERA)	to the National Energy Board and that SLFN deliverables would need to be based around this June 2014 time frame. Si:yam A. James stated that SLFN wanted to participate in a Traditional Land Use Study but also wanted to get the best results out of the process for both TERA and SLFN.	
10/21/2013	Phone - Incoming	Si:yam Alfred James	Norman Marcy (KMC)	Si:yam A. James called team member to cancel a scheduled meeting and presentation on October 23, 2013 due to the passing of a community member.	None
10/21/2013	Email-Outgoing	Si:yam Alfred James	Norman Marcy (KMC)	Team member emailed Si:yam A. James and informed of a request made that Operations and Pipeline Expansion Project team not contact Si:yam A. James for the next week in recognition of the passing of a community member.	None
10/22/2013	Phone - Incoming	Si:yam Alfred James	Karen Baylis (TERA)	Si:yam A. James called team member and expressed concern that Shxw'ow'hamel First Nation would not be able to do a relevant study unless they were given a year to conduct it.	None
10/30/2013	Phone - Attempt	Si:yam Alfred James	Norman Marcy (KMC)	Team member called Si:yam A. James and left a message with the receptionist requesting call back.	None
10/31/2013	Phone - Outgoing	Si:yam Alfred James	Norman Marcy (KMC)	Team member called Si:yam A. James to touch base on: recovery from death in the community, inquiry on coal tar enamel from SLFN consultant, next opportunity to convene community meeting. - Si:yam A. James indicated that proceedings are back to normal following the death in the community - Si:yam A. James confirmed that the consultant who requested information about the pipeline coating works for SLFN. Si:yam A. James was appreciative of team member for having answered the consultant's question. - Si:yam A. James indicated a potential community meeting on November 13, 2013 - Si:yam A. James inquired about TLUS dates and the acceptability of completing it by the supplemental filing deadline with NEB. Team member indicated that this would be fine and that the scheduling was SLFN's choice. Late materials and reports would be dealt with in the best way possible given the timing constraints. Team member committed to confirming the meeting date once the appropriate resource people were lined up for the presentation.	None
10/31/2013	Email-Outgoing	Si:yam Alfred James, Ian Collings (Consultant)	Norman Marcy (KMC)	Team member emailed I. Collings (Teranis Consulting) and Si:yam A. James and confirmed that I. Collings request for information on the pipeline's existing coating through the Stakeholder Engagement and Communications team was received. Team member notified of having spoken to Si:yam A. James on the this and other matters. Team member directed I. Collings to the TMEP website for information about the existing pipeline and proposed expansion.	None
11/12/2013	Email-Outgoing	Si:yam Alfred James	Clare Peacock (TERA)	TERA team member emailed Si:yam A. James of SLFN and informed SLFN of an upcoming Archaeology shift (Crew 5, Cycle 6: November 20-29, 2013, RK 1057-1079, based in Hope, BC). The team member requested a name for the participant.	None
11/18/2013	Email-Outgoing	Si:yam Alfred James	Clare Peacock (TERA)	TERA team member emailed Si:yam A. James of SLFN and followed up on an earlier email about Archaeology shift Crew 5, Cycle 6 on November 12, 2013, the team member asked for the name and phone number of the SLFN participant who will be joining this crew.	None
11/25/2013	Phone - Incoming	Si:yam Alfred James	Norman Marcy (KMC)	Si:yam A. James of SLFN phoned the team member and inquired about approval of the TLU study proposal. The team member indicated that the team member had followed up and that calls and emails had been made to try to get the proposal cleared. The team member indicated that follow ups would continue.	None
11/28/2013	Email-Outgoing	Si:yam Alfred James	Paul Anderson (TERA)	Team member emailed Si:yam A. James of SLFN and attached the results of the Project's Biophysical Field Program that ran from August 2012 to September 2013. The results of the TLU study conducted for the Project will be reviewed at an upcoming Results Review meeting which TERA will confirm with SLFN soon. The team member requested that the attached report be reviewed to ensure its accuracy and confidentiality.	None
11/29/2013	Email-Outgoing	Si:yam Alfred James	Clare Peacock (TERA)	Team member emailed Si:yam A. James and informed SLFN about an upcoming Archaeology study (Crew 6, December 5-12, 2013, starting at RK 1057, based out of Hope, BC). One participant was requested and the Participation form was attached.	None
12/5/2013	In-Person		Brandy Mayes (TERA), Tess Espey (TERA)	One Shxw'ow'hamel First Nation crew member participated in an Archaeological Impact Assessment from December 5-13, 2013.	None
12/14/2013	In-Person	Si:yam Alfred James, Community Members, Shane James, Lenora Fraser, Leona Kelly, Genevieve George	Norman Marcy (KMC), Jennifer Hooper (KMC), Martha Matthew (KMC)	Team members met with Si:yam A. James, Si:yam S. James, C. Paul, L. Kelly, L. Fraser, V. Jones, G. George, D. George, C. Jones, R. Peters, B. Peters and I. Smith of SLFN on December 14, 2013. S. James confirmed that the pit houses at the east end of Ohamil Indian Reserve were a key resource that needed to be protected when the Project is built. S. James indicated that there will likely need to be traditional burning ceremonies at the pit house sites. The fact that the sites are registered archaeological sites will assure some level of respect and legal recognition of these resources. Routing near the pit houses would ideally be on the south side of the existing pipe to ensure that potential damage is minimized. Concern was raised by the early closing of archaeology work by TERA; this work needs to be completed by KMC. There was discussion about the MBA. S. James and V. Jones asked if the engineering on the Project had been done; a team member answered that the preliminary route had been examined, but detailed engineering had not begun. Training for environmental monitors was stressed as a priority for the community. S.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				<p>James indicated that SLFN would be working with other nations, including Tait Tribe Nations, UBIB, PSFN, YFN, PB and CMFN. Team member presented on procurement opportunities and being prepared for opportunities that may be available. Team member outlined the construction and procurement schedule for the Project and current procurement opportunities. Team member presented on training opportunities, the number of spreads and the number and type of jobs in each spread.</p> <p>Action items resulting from the meeting: 1. Team members and Si:yam A. James will develop a training proposal; 2. Si:yam A. James and M. Matthew will develop an employment needs assessment; 3. J. Hooper will share information about the summer program with SLFN; 4. Si:yam A. James will share a list of priorities for the MBA; 5. Si:yam A. James will schedule the next meetings.</p>	
12/16/2013	Letter - Outgoing	Si:yam Alfred James	Ian Anderson (KMC)	<p>Team member sent a letter to Chief A. James and notified SLFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.</p>	None
12/16/2013	Email-Outgoing	Si:yam Alfred James	Martha Matthew (KMC)	<p>Team member emailed Si:yam A. James in follow up to meeting December 14, 2013. Team member requested that Si:yam A. James inform team member when another meeting can be scheduled to discuss skill training and employment opportunities related to the Project.</p>	None
12/17/2013	Phone - Attempt	Si:yam Alfred James	Norman Marcy (KMC)	<p>Team member attempted to call Si:yam A. James and left a message with reception stating that the Facilities Application has been filed with the NEB and that it is available on the Trans Mountain website. The team member invited A. James to return call if there were any questions or would like further discussion about the Facilities Application. SLFN reception indicated that SLFN did not believe SLFN had received the notice of the Facilities Application filing.</p>	None
12/18/2013	Email-Outgoing	Si:yam Alfred James	Jennifer Hooper (Consultant)	<p>Team member emailed Si:yam A. James and indicated that during the December 14, 2013 meeting that the team member agreed to send the Aboriginal Procurement Policy, which was attached to the email. Team member also, attached an electronic copy of the Procurement Overview document that was provided during the meeting. Team member invited Si:yam A. James to contact team member if there were any questions.</p>	None

APPENDIX A-4-18
SHXWHA:Y VILLAGE

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing		Ian Anderson (KMC)	Shxwha:y Village (SV) were copied in a letter sent by team member to Chief W. Hall notifying Ts'elxweyeqw Tribe Management Ltd. (TTML) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-4-19
SKAWAHLOOK FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/13/2013	Email - Outgoing	Chief Maureen Chapman	Norman Marcy (KMC)	Team member emailed Chief M. Chapman to advise that contact has been made with D. Kelly and to discuss SKFN engagement on the proposed Project. Stated that until SKFN indicates an intention to engage further, team member will not pursue further communication.	None
10/17/2013	Phone - Attempt	Daniel Kelly (Seven Generations Environmental Services for Skawahlook)	Norman Marcy (KMC)	Team member called D. Kelly and left a voice message inquiring as to willingness to engage.	None
10/17/2013	Phone - Attempt	Chief Maureen Chapman	Norman Marcy (KMC)	Team member called Chief M. Chapman and left a voice message inquiring as to willingness to engage.	None
10/17/2013	Phone - Attempt	Daniel Kelly (Seven Generations Environmental Services for Skawahlook)	Norman Marcy (KMC)	Team member called D.Kelly and left a voice message inquiring as to willingness to engage.	None
11/13/2013	Phone - Outgoing	Daniel Kelly (Seven Generations Environmental Services for Skawahlook)	Norman Marcy (KMC)	Team member called D. Kelly who advised that he is waiting for direction from Chief M. Chapman. Team member to email Chief M. Chapman to advise that engagement can begin when Skawahlook First Nation (SKFN) decides to do so.	None
12/16/2013	Letter - Outgoing	Chief Maureen Chapman	Ian Anderson (KMC)	Team member sent a letter to Chief M. Chapman and notified SKFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Phone - Outgoing	Chief Maureen Chapman	Norman Marcy (KMC)	Team member left a message for Chief M. Chapman advising that the Facilities Application has been filed with the NEB and is available on the transmountain.com website.	None

APPENDIX A-4-20
SKOWKALE FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Robert Hall	Ian Anderson (KMC)	Team member sent a letter to Chief R. Hall and notified Skowkale First Nation (SEFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-4-21
SKWAH FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Douglas McIntyre	Ian Anderson (KMC)	Team member sent a letter to Chief D. McIntyre and notified Skwah First Nation (SKFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-4-22
SOOWAHLIE INDIAN BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing		Ian Anderson (KMC)	Soowahlie First Nation (SWFN) were copied in a letter sent by Team member to Chief W. Hall notifying Ts'elxweyeqw Tribe Management Ltd. (TTML) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-4-23
SQUAMISH NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/4/2013	Email- Outgoing	Lisa Wilcox (Senior Executive Assistant)	Sondra Baker (TERA)	Team member emailed Lisa Wilcox and notified Squamish First Nation (SMFN) of the Archaeological Impact Assessment (AIA) scheduled October 16, 2013 – November 12, 2013 in the SMFN Traditional Territory.	None
10/25/2013	Email- Outgoing	Lisa Wilcox (Senior Executive Assistant)	Max Nock (KMC)	Team member emailed L. Wilcox to enquire if SMFN would be interested in receiving information about Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) studies for the Project or the design of the Westridge facility. Team member acknowledged SMFN elections in December 2013 and suggested a meeting between KMC and the newly elected SMFN Chief and Council in January 2014.	None
10/25/2013	Phone - Outgoing	Lisa Wilcox (Senior Executive)	Max Nock (KMC)	Team member called L. Wilcox and discussed engaging with SMFN in advance of the Facilities Application (FA). Team member noted that SMFN would be in "election mode" in November and L. Wilcox suggested waiting until after the election to engage, preferably in January. Team member proposed meeting in advance of the FA filing to share project info and confirmed that L. Wilcox would be in a position to share TERMPOL studies as well as more info on the terminal design. L. Wilcox would discuss with Chiefs and notify team member of the outcome.	None
11/18/2013	Email- Outgoing	Lisa Wilcox (Senior Executive Assistant)	Regan Schlecker (KMC)	Team member emailed L. Wilcox to invite L. Wilcox and SMFN Leadership to attend an upcoming Burnaby Board of Trade event on November 27, 2013. Team member stated that KMC President would be sharing details on Project timing, types of jobs and procurement opportunities that will be available for the Chilliwack area if the Project proceeds and how businesses can prepare to capture local economic opportunities. L. Wilcox and other SMFN representatives who are interested in attending were invited to contact team member by November 25, 2013 to reserve seating. Details about the location and time of the event were provided.	None
11/29/2013	Phone - Outgoing	Lisa Wilcox (Senior Executive Assistant)	Max Nock (KMC)	Team member phoned L. Wilcox to enquire regarding the status of review of the TERMPOL studies. L. Wilcox advised the studies were under review. Team member confirmed that limited funding was available to assist in the review.	None
12/16/2013	Letter - Outgoing	Chief Gibby Jacob	Ian Anderson (KMC)	Team member sent a letter to Chief G. Jacob and notified SMFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/18/2013	Email- Incoming	Lisa Wilcox (Senior Executive Assistant)	Max Nock (KMC)	Team member called L. Wilcox to confirm results of recent SMFN elections and advised that KMC would be receiving a letter from SMFN regarding the Project in 2014.	None

APPENDIX A-4-24
SQUIALA FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing		Ian Anderson (KMC)	Squiala First Nation (SIFN) were copied in a letter sent by Team member to Chief W. Hall notifying Ts'elxweyeqw Tribe Management Ltd. (TTML) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-4-25
STS'AILES BAND (CHEHALIS INDIAN BAND)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Harvey Paul	Ian Anderson (KMC)	Team member sent a letter to Chief H. Paul and notified Chehalis Indian Band (Sts'ailes) (CSIB) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-4-26
SUMAS FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/4/2013	Email- Outgoing	Jennifer Campbell (Lands and Resources Manager)	Sondra Baker (TERA)	Team member sent J. Campbell notification of fieldwork for TMEP Archeological Impact Assessment (AIA) and attached a fieldwork notification letter.	None
11/13/2013	Email- Outgoing	Jennifer Campbell (Lands and Resources Manager), Leah Ballantyne (Lands and Resources Manager)	Natalie Loban (KMC), Regan Schlecker (KMC), Norman Marcy (KMC)	Team member emailed J. Campbell and L. Ballantyne with an update about maintenance activities at Sumas Terminal. Team member requested that J. Campbell and L. Ballantyne inform community members by way of notice deliver to homes or through newsletter. Team member provided details of progress in area and contact information of internal contact for questions.	None
11/13/2013	Email- Outgoing	Leah Ballantyne (Lands and Resources Manager)	Max Nock (KMC)	Team member emailed to indicate that information on the Letter of Agreement (LOA) cannot be released at the moment because Sumas First Nation (SFN) was not formally a signatory on the LOA. O. Jasper responded giving the go ahead to share the LOA and ICA with L. Ballantyne. Team member sent copy of Integrated Cultural Agreement (ICA).	None
11/13/2013	In-Person	Leah Ballantyne (Lands and Resources Manager)	Max Nock (KMC)	Teleconference call between L. Ballantyne Lands Manager for Sumas and team member. L. Ballantyne was unaware that SFN had been involved in the LOA administered by Ts'elxweyeqw Tribe Management Ltd. (TTML) . Team member confirmed that KMC was told by O. Jasper that SFN had been engaged through the LOA and that KMC understood that SFN were part of the LOA although this was still to be confirmed by Otis. . L. Ballantyne advised that Chief Silver had been ill, perhaps not receiving information thus requesting copies of the ICA and LOA. Team member sent both documents on Nov. 13/13 to L. Ballantyne. Team member suggested L. Ballantyne call O. Jasper to confirm details around SFN participation with other LOA FNs. L. Ballantyne to follow up with that call.	None
11/26/2013	Email- Outgoing	Leah Ballantyne (Lands and Resources Manager)	Natalie Loban (KMC), Regan Schlecker (KMC), Max Nock (KMC), Jamie Andrews (KMC)	Team member emailed L. Ballantyne with updates on maintenance work at SFN terminal. Team member indicated that work had been extended until November 28-30 2013 due to changes in pipeline scheduling.	None
12/16/2013	Letter - Outgoing	Chief Dalton Silver	Ian Anderson (KMC)	Team member sent a letter to Chief H. Paul and notified SFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-4-27
TSAWWASSEN FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/04/2013	Email- Outgoing	Saira Bradley (Manager of Human Resources)	Sondra Baker (TERA)	Team member sent Tsawwassen First Nation (TAFN) notification related to TMEP Archaeological Impact Assessment (AIA) fieldwork.	None
10/07/2013	Email- Outgoing	Andrew Bak (Government Services Technician), Saira Bradley (Manager of Human Resources)	Clare Peacock (TERA)	Team member contacted A .Bak and S. Bradley attached notification of AIA.	None
10/08/2013	Email- Incoming	Saira Bradley (Manager of Human Resources)	Clare Peacock (TERA)	S. Bradley emailed Team member enquiring if monitors from TAFN were need, if so how many and requested timeframes. Team member responded to S. Bradley and requested a contract or work agreement with TAFN be filed before starting work. Two weeks are needed to perform work in TAFN boundary and involve 10 work days. S. Bradley responded to Team member. One TAFN member is interested (F.Bak) and provided contacted information and requested work agreement/contract be forwarded. Team member provided S. Bradley two options of work agreements. Team member provided a revision of the two options of work agreements to S. Bradley. S. Bradley requested forms for the first work agreement with TERA.	None
10/09/2013	Email- Outgoing	Tom McCarthy (Chief Administrative Officer)	Ellen Frisch (KMC)	Team member e-mailed T. McCarthy checking for availability to discuss TAFN's interests regarding the TMEP project and potential mitigations	None
10/10/2013	Email- Outgoing	Andrew Bak (Government Services Technician), Saira Bradley (Manager of Human Resources)	Sondra Baker (TERA)	Team member emailed S. Braley and A. Bak to inform them that the upcoming archaeology crew shifts would be postponed until further notice due to ongoing contract negotiations with other First Nations in the lower mainland.	None
10/17/2013	Phone - Outgoing	Tom McCarthy (Chief Administrative Officer)	Ellen Frisch (KMC)	Team member called T. McCarthy (CAO of TAFN) and discussed next steps and the status of the Project. Team member noted that KMC is awaiting a project proposal from TAFN for funds to articulate and map treaty/marine interests in the region as well as an outstanding interests statement. Team member made T. McCarthy aware of the following progress: - TERMPOL studies would be available for review in mid-December - WCMRC pilot project in Burrard Inlet is working well, potential for replication on the Coast - Dialogue with Salish Sea Chiefs in progress to address environmental interests - Opportunities to bid on the TMEP project - Opportunity to explore TAFN's environmental protection needs and meet long term objectives (training, habitat restoration and other initiatives) Team member notified of request to receive TAFN's interest statement in time for the Application Filing in mid-December TAFN advised of the following: - Concerns to community of potential spill - Participation in spill response program not economically viable - Interest in regional initiatives - Concerns about lack of response capacity cited by BC government T. McCarthy noted that further engagement with KMC must go to Council and got the sense that Council is not supportive of project and would likely not be interested in discussing long-term project opportunities. Team member offered a project presentation to Chief and Council or an update with KMC's president directly. T. McCarthy felt it necessary to brief Council on project status directly and let them decide to meet with KMC. Team member and T. McCarthy discussed next steps: - T. McCarthy to meet with technical team on October 18, 2013 to discuss outstanding Interests Lists from the LOU and potential project proposal. - T. McCarthy to add KMC's proposal for project update to Chief and Council on Council Agenda - Team member would follow up on October 28, 2013.	None
10/17/2013	Email- Outgoing	Tom McCarthy (Chief Administrative Officer)	Ellen Frisch (KMC)	Team member emailed T. McCarthy to confirm an upcoming phone call later that day. Team member emailed T. McCarthy to follow up on an earlier phone call: - Follow up on October 28, 2013 - T. McCarthy to brief Chief and Council on status of project and determine if they want to receive a project update directly from KMC - T. McCarthy to meet with Technical Team and provide feedback on "2 pager" interests statement flowing from the LOU and potential for marine-related research project.	None
10/22/2013	Email- Outgoing	Saira Bradley (Manager of Human Resources)	Clare Peacock (TERA)	Team Member emailed S. Bradley to advise that current contract negotiations with other First Nation groups had temporarily paused Archaeology Impact Assessment progress in the lower mainland and that Team Member would contact S. Bradley as soon as a revised schedule was available. S. Bradley emailed Team Member and thanked them for letting them know.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/04/2013	Phone - Outgoing	Tom McCarthy (Chief Administrative Officer)	Ellen Frisch (KMC)	Team member phoned T. McCarthy to enquire if a discussion of the Project had been put on the Legislature Agenda for the week of October 23, 2013 or October 30, 2013 to determine what future engagement activities may take place. T. McCarthy noted that the Project wasn't on the agenda yet, so team member offered to make a presentation during the week of November 11, 2013. T. McCarthy would provide an email update on a potential marine use study later in the week.	None
11/10/2013	Email- Outgoing	Tom McCarthy (Chief Administrative Officer)	Ellen Frisch (KMC)	Team member emailed T. McCarthy to request an update as to whether the Project discussion had been placed on the Legislature Agenda this week and/or the technical committee had discussed a potential marine use study.	None
11/13/2013	Letter - Outgoing	Chief Bryce Williams	Gary Youngman (KMC)	Team member sent Chief B. Williams a letter to inform TAFN about KMC's engagement with Transport Canada in as part of the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that TAFN's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
11/20/2013	Letter - Outgoing	Chief Bryce Williams, Tom McCarthy (Chief Administrative Officer)	Gary Youngman (KMC)	Team member emailed letter regarding the TERMPOL process and notifying TFN of the intent to file the Facilities Application to the NEB in mid-December. In addition to completing environmental studies, KMC has been working with Transport Canada to complete studies which focus on the safety of tankers entering Canadian waters; navigating thorough channels, approaching and berthing at a marine terminal and loading and unloading processes. The TERMPOL process was described. KMC is providing the opportunity for LFN to review and comment on the technical studies and aggregate comments will be considered into the TERMPOL process. Feedback and advice from TFN is sought in the initial 2-3 months to ensure adequate time. If TAFN was interested in receiving the studies a response was required by November 30.	None
11/20/2013	Email- Outgoing	Tom McCarthy (Chief Administrative Officer)	Theresa Lane (KMC)	Team member emailed T. McCarthy a copy of the TERMPOL study letter originally mailed to TAFN on November 13, 2013.	None
11/22/2013	Email- Incoming	Tom McCarthy (Chief Administrative Officer)	Ellen Frisch (KMC)	T. McCarthy requested a summary of key topics decision that were before TAFN in order that a briefing note may be prepared for TAFN executive council for end of day. Team member responded with the following decision points: 1. Whether TAFN wished to undertake marine research which would support learning more about TAFN's activities in treaty harvest areas and other marine areas on the TFN territory; or to undertake alternative research and study related to the marine corridor to be agreed. The financial figure was reiterated. 2. KMC would like to meet with the Executive Committee or other leadership group it recommend to discuss the project and opportunities to collaborate on Regional processes. 3. Regional processes are being developed to explore geographic spill response planning, a FN role on spill response, cooperative Salish Sea environmental monitoring initiatives. We want to discuss Tsawwassen's interests in being part of or even providing leadership in these initiatives. T. McCarthy confirmed receipt and that a regional meeting had been attended earlier that day attended by the TAFN Chief.	None
12/03/2013	Email- Incoming	Tom McCarthy (Chief Administrative Officer)	Ellen Frisch (KMC)	T. McCarthy confirmed desire to receive TERMPOL studies and asked that they be sent to the attention of B. Bocking who was to provide his address.	None
12/03/2013	Email- Incoming	Tom McCarthy (Chief Administrative Officer)	Ellen Frisch (KMC)	T. McCarthy confirmed discussion had occurred with the Executive Committee. December 6 was suggested for a call.	None
12/03/2013	Email- Incoming	Tom McCarthy (Chief Administrative Officer)	Theresa Lane (KMC)	T. McCarthy emailed team member and requested that TAFN receive TERMPOL studies related to the Project. T. McCarthy noted that these studies should be sent to TAFN representative B. Bocking.	None
12/04/2013	Email- Outgoing	Tom McCarthy (Chief Administrative Officer)	Ellen Frisch (KMC)	Team member emailed T. McCarthy to confirm call for December 6.	None
12/06/2013	Email- Outgoing	Tom McCarthy (Chief Administrative Officer)	Ellen Frisch (KMC)	Team member emailed T. McCarthy acknowledging that TAFN's Executive Committee decision on how to engage on the Project, but that KMC looked forward to speaking to TAFN Executive Council o better convey information about TMEP. Team member clarified that funding available for a marine use would be targeted at identifying potential impacts of the Project on TAFN's treaty rights under normal operations. Information gathered in such a study would need to be submitted to KMC by June 2014 to be included in supplemental filings with the National Energy Board (NEB). Team member requested confirmation of January 22, 2014 for the proposed TMEP presentation to the Executive Council.	None
12/06/2013	Phone -	Tom McCarthy (Chief Administrative Officer)	Regan Schlecker	Team member phoned T. McCarthy and left a voicemail message requesting a call back.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
	Incoming	Officer)	(KMC)	Team member phoned T. McCarthy and acknowledged TAFN's request for TERMPOL studies. T. McCarthy indicated that the TAFN Executive Committee was not in favour of the Project at that time, but TAFN would like to continue to receive information updates on mitigations and benefits while conducting its own analysis of the Project. T. McCarthy noted that KMC was welcome to make a presentation about the Project; January 22, 2014 was suggested as a date. Team member reminded T. McCarthy of KMC's offer to fund marine studies for TAFN, and T. McCarthy noted that a proposal for a cumulative impact assessment would be forthcoming. Next steps included KMC confirming team participation with TAFN and T. McCarthy placing a Project update on the Executive Council agenda.	
12/16/2013	Letter - Outgoing	Bob Bocking (Vice President of LGL Limited)	Gary Youngman (KMC)	Team member mailed B. Bocking, of LGL Environmental Associates, a copy of the Transport Canada TERMPOL studies (on a USB stick) related to the Project for TAFN's review. Team member requested that TAFN provide feedback on the studies within two to three months.	None
12/16/2013	Letter - Outgoing	Chief Bryce Williams	Ian Anderson (KMC)	Team member sent a letter to Chief B. Williams and notified TAFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-4-28

TS'KWAYLAXW (PAVILLION INDIAN BAND)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
09/30/2013	Letter - Outgoing	Chief Robert Shintah	Howard Heffler (KMC)	Team member sent a letter to Chief R. Shintah which described the Trans Mountain Expansion Project, provided links to additional information about the Project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that the Pavilion Indian Band may have about the Project.	None

APPENDIX A-4-29
TSLEIL-WAUTUTH NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/4/2013	Email- Outgoing	Chief Justin George	Sondra Baker (TERA)	Team member emailed Chief J. George and sent notification of fieldwork for the Project Archaeology Impact Assessment (AIA).	None
11/18/2013	Email- Outgoing	Brenda Baptiste (Senior Administrator)	Regan Schlecker (KMC)	Team member emailed B. Baptiste on November 18, 2013. Team member invited B. Baptiste and Tsleil- Waututh Nation (TWN) Leadership to attend an upcoming Burnaby Board of Trade event on November 27, 2013. Team member stated that the KMC President will be sharing details on timing of the Project, types of jobs and procurement opportunities that will be available for the Chilliwack area if the Project proceeds and how businesses can prepare to capture local economic opportunities. B. Baptiste and other TWN representatives who are interested in attending were invited to contact the team member by November 25, 2013 to reserve seating. Details about the location and time of the event were provided.	None
11/22/2013	Email- Outgoing	Brenda Baptiste (Senior Administrator)	Max Nock (KMC)	Team member emailed B. Baptiste to invite discussion about engaging TWN in the Project. Team member acknowledged KMC's understanding that TWN wishes to engage with the federal government before engaging with KMC but emphasized that both TWN and KMC have been in discussions with federal Minister Oliver about the Project. Team member referred to KMC's November 13, 2013 letter in stating that KMC would like to discuss opportunities for TWN's review and comments on the KMC TERMPOL studies, the review of which is led by Transport Canada.	None
11/22/2013	Phone - Outgoing	Brenda Baptiste (Senior Administrator)	Max Nock (KMC)	Team member phoned B. Baptiste to discuss further engagement with Minister Oliver and TWN's review of Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) studies. B. Baptiste noted that Chief and Council was meeting to discuss future options but that TWN had already been engaging with various federal departments, ministers and the National Energy Board (NEB) to best understand the NEB review process and its implications. B. Baptiste offered to contact team member about TWN's position and response to the TERMPOL letter (dated November 13, 2013) following the Chief and Council meeting today. B. Baptiste emailed team member and enquired whether the TERMPOL engagement matter could be discussed next week.	None
11/29/2013	Email- Outgoing	Brenda Baptiste (Senior Administrator)	Max Nock (KMC)	Team member emailed B. Baptiste and noted that KMC was prepared to offer capacity funding for First Nations to review and prepare comments regarding the TERMPOL studies. Team member requested that B. Baptiste inform team member when Chief and Council have decided whether to engage in the TERMPOL study review process.	None
12/16/2013	Letter - Outgoing	Chief Maureen Thomas	Ian Anderson (KMC)	Team member sent a letter to Chief M. Thomas and notified TWN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-4-30
TZEACHTEN FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief W. Hall	Ian Anderson (KMC)	TZFN were copied in a letter sent by Team member to Chief W. Hall notifying TST of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-4-31
UNION BAR FIRST NATIONS

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/17/2013	Phone - Outgoing	Chief Andrew Alex	Norman Marcy (KMC)	Team member called Chief A. Alex to inquire about meeting to discuss next steps. Team member and Chief A. Alex discussed potential meeting logistics. Team member inquired about following up in December to address all UBIB/KMC issues including present pipeline, indenture and Mutual Benefits for the proposed Project. No commitments to meet or follow up were made.	None
11/29/2013	Email- Outgoing	Chief Andrew Alex	Norman Marcy (KMC)	Team member emailed Chief A. Alex to explain that KMC planned to file the Facilities Application for the Project in December 2013 but that the submission would not end engagement activities with First Nations. Team member attached a video of a simulated fly-over of the KawkawaK IR area and requested that Chief A. Alex review it prior to potentially examining routing maps in more detail. Team member expressed a desire to build a better long-term relationship and to enter into Mutual Benefits Agreement negotiations for the Indenture.	None
11/29/2013	Phone - Outgoing	Chief Andrew Alex	Norman Marcy (KMC)	Team member phoned Chief A. Alex and left a voicemail message regarding a Project routing option near Kawkawa IR, expressing willingness to engage in negotiations for a Mutual Benefits Agreement in this area.	None
12/16/2013	Letter - Outgoing	Chief Andrew Alex	Ian Anderson (KMC)	Team member sent a letter to Chief A. Alex and notified UBIB of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Phone - Attempt	Chief Andrew Alex	Norman Marcy (KMC)	Team member phoned Chief A. Alex and left a voicemail message stating that KMC had filed a Facilities Application for the Project with the NEB. Team member provided the Project website for more information and invited a phone conversation with Chief A. Alex to discuss questions. Team member expressed eagerness to continue MBA negotiations with UBIB and conveyed that earlier information was sent by email to both Chief A. Alex and to his legal counsel.	None

APPENDIX A-4-32
YAKWEAKWIOOSE BAND

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing		Ian Anderson (KMC)	Yakwekwioose First Nation (YKFN) were copied in a letter sent by Team member to Chief W. Hall notifying Ts'elxweyeqw Tribe Management Ltd. (TTML) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-4-33
YALE FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/02/2013	Email- Outgoing	Dominic Hope (Consultant) Jesse James (Administrator)	Norman Marcy (KMC)	Team member emailed J. James and D. Hope and requested updated contact information as a new Chief had been elected. Team member also requested logistics for an upcoming meeting to engage with YFN and brief Chief Hanson.	None
10/17/2013	Phone - Outgoing	Jesse James (Administrator)	Norman Marcy (KMC)	Team member called J. James to follow up on: - outstanding commitments from the LOU for capacity funding: J. James seemed unaware of the unexpended funds and obligations of the initial LOU and committed to looking into these - TLUS proposal: J. James requested that the proposal be reviewed as is due to the amount of work needed. - request for meeting with Chief and Council: J. James indicated that a meeting request to discuss the project had been made at a recent meeting but the Council still needed time to get used to working with each other. J. James committed to seeking opportunities to discuss the project. J. James indicated that getting the TLUS moving would push the Project forward on the Council agenda. Team member reminded J. James that the existing LOU also provided opportunity and resources to engage.	None
10/30/2013	Phone - Outgoing	Dominic Hope (Consultant) Jesse James (Administrator)	Norman Marcy (KMC)	Team member called YFN and left a message for either D. Hope or J. James to call team member back to discuss next steps.	None
11/13/2013	Phone - Outgoing	Chief Doug Hansen	Norman Marcy (KMC)	Team member called D. Hansen and discussed the following: 1. Key contact will be with D. Hansen from now on. 2. Staff James and Hope have been relieved. 3. Consultant Wild is no longer working with YFN. 4. Consultant R. Diaz is now looking into relations with KMC. Team member updated D. Hansen on the capacity agreement and TLU status. D. Hansen seemed familiar with the TLU but not the Capacity agreement. Team member to send LOU documents.	None
11/14/2013	Email- Incoming	Robert Diaz (Consultant)	Norman Marcy (KMC)	R. Diaz emailed team member and advised that D. Hansen had forwarded him the original and amended LOA. Requested meeting with team member to discuss the Project. Also requested a copy of the YFN TEK agreement. Team member replied to R. Diaz advising that he has a meeting scheduled with D. Hansen on November 19, 2013 at YFN but is available on the phone from November 15 - November 17, 2013. Team member copied team member at TERA and requested that she send copies of the TLU and TEK agreements to R. Diaz.	None
11/14/2013	Email- Incoming	Robert Diaz (Consultant)	Norman Marcy (KMC), Karen Baylis (TERA)	R. Diaz emailed team member to request a good time to call. Also requested the following: 1. Current status of the Project in the NEB process. 2. Project application timelines if the May 2013 Project description has changed. 3. Overall Project timeline if the May 2013 project description has changed. 4. A list of regulatory documents filed to date with NEB. 5. Status of baseline study field work programs. 6. Record of YFN participation in field work programs. 7. Record of consultation with YFN. 8. Shapefiles for the line and for any auxiliary activities such as pump stations, access roads (new or upgraded) etc. R. Diaz copied team member from TERA and asked to speak with her about the TLU program and timelines. Team member from TERA replied that she is available on November 15, 2013 after 1:00 pm.	None
11/15/2013	Email- Outgoing	Robert Diaz (Consultant)	Norman Marcy (KMC)	Team member emailed R. Diaz with responses to his questions in an email sent November 14, 2013. Questions and answers are as follows: 1. Current status of the project in the NEB process. •The Project has been to the NEB only for the Tolling Application (commercial terms with the shippers) which has been decided on. •Additional steps include the Project Description being filed in May. It is available on the NEB site. •KMC and the Project team are intending to file the Facilities Application on December 15, 2013. •For the past 1.5 years KMC and the TMEP Team have been in the pre-application stage doing biophysical and other studies necessary for the application. Some of this work will continue in 2014 as well.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				<p>2. Project application timelines if the May 2013 project description has changed.</p> <ul style="list-style-type: none"> •The Project Description has not changed. •As above the Facilities Application is scheduled for December 15, 2013. •Routing options continue to be looked at based on ongoing information gathered from communities, scientists, engineers and others. <p>3. Overall project timeline if the May 2013 project description has changed.</p> <ul style="list-style-type: none"> • No change <p>4. A list of regulatory documents filed to date with NEB</p> <ul style="list-style-type: none"> •as above. <p>5. Status of baseline study field work programs.</p> <p>6. Record of YFN participation in field work programs.</p> <ul style="list-style-type: none"> • TERA team member will be able to assist you with this information requested in 5 and 6 <p>7. Record of consultation with YFN</p> <ul style="list-style-type: none"> • In summary: team member has attended YFN Offices on 4 occasions: • an initial introduction with staff chief and consultant • a Chief and Council session • community Meeting • informal meeting with Jesse James on engagement progress • we had occasion for YFN staff to attend open house in Hope • there has been extensive communication and participation between YFN and TERA on biophysical and Traditional Land Use Study efforts. TLUS is to begin soon. • all notices of project intent and progress and any operational issues have been conveyed to YFN in the same way that they have been conveyed to each of the Land Based first nations from Edmonton to Burnaby along the existing pipeline route. <p>8. Shape files for the line and for any auxiliary activities such as pump stations, access roads (new or upgraded) etc.</p> <ul style="list-style-type: none"> • KMC have provided route maps to YFN previously. This includes any additional expected pump station locations. • Detailed engineering has not yet been undertaken so details of access and auxiliary activities have not been determined. There is nothing to share in this regard at this time. • Hope routing is also available on YouTube as a simulated fly over. http://www.youtube.com/watch?v=1xJaT6Sv4Wg 	
11/17/2013	Email-Incoming	Robert Diaz (Consultant)	Norman Marcy (KMC)	<p>R. Diaz emailed team member and advised that YFN is in discussions with another team member from TERA regarding YFN conducting their own 3rd party TLU. R. Diaz advised that TEK gathering is occurring via field work being conducted by TERA. YFN is also very interested in having their archaeologist K. Twohig conduct archaeological work on YFN territory.</p> <p>R. Diaz also referenced the Esri Arcview Nad 83 shapefiles for the Project route, alternate routes, pumping stations etc. Stated that hard copy maps have already been provided, but that YFN requires shape files to conduct an initial desktop analysis of the proposed Project in relation to their existing data sets.</p> <p>R. Diaz discussed the scheduled meeting between the team member and D. Hansen on November 19, 2013 and stated that he is unable to attend. Stated that he would like to arrange a meeting with the team member in the coming weeks.</p>	None
11/18/2013	Phone - Incoming	Chief Doug Hansen	Norman Marcy (KMC)	<p>D. Hansen called team member to confirm the meeting scheduled for November 19, 2013 at 9:30 or 10:00 am in YFN. D. Hansen advised that he has other meetings in the morning and will need to drive to Hope when they are done.</p>	None
11/18/2013	In-Person	Chief Doug Hansen Pedro Moreno (Councillor)	Norman Marcy (KMC)	<p>Team member had an in-person meeting with D. Hansen and P. Moreno on November 19, 2013. Team member presented an overview of the Project. D. Hansen indicated that the new council is not very familiar with the Project or the process to date. The recent change in Chief is the first change in 35 years. The third councillor elected was not able to attend at our meeting today.</p> <p>Team member presented the Project overview maps of Kamloops to Burnaby and specific routing maps of the Hope area. D. Hansen asked for paper copies of the route within YFN territory.</p> <p>D. Hansen asked about procurement opportunities and the requirements or IS net world certification.</p> <p>D. Hansen and P. Moreno indicated that they wanted to have another meeting with Chief and Council and a meeting with the community before the third week of December 2013. YFN representatives will indicate preferred dates soon.</p>	None
11/18/2013	Email-Outgoing	Robert Diaz (Consultant)	Norman Marcy (KMC)	<p>Team member emailed R. Diaz to advise that he started the process for transferring the shapefiles him. Team member requested contact information for who will actually be receiving the information, whether it be R. Diaz and his firm, or YFN or another subcontractor. Team member advised that the firm name and a person and their contact information will be required to the waiver form for data the transfer.</p>	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/26/2013	Email-Incoming	Robert Diaz (Consultant)	Norman Marcy (KMC)	R. Diaz emailed team member to determine a date and location for a meeting. Advised he is available the first week of December 2013 in Vancouver. Also requested shapefiles to examine the Project as it goes through YFN territory. Team member replied to R. Diaz advising that another team member at KMC will be forwarding the shapefiles shortly. Team member scheduled a meeting with R. Diaz and D. Hansen for December 6, 2013 in Vancouver. Team member also advised that a paper version of the route maps through YFN Territory were sent to D. Hansen by courier on November 26, 2013.	None
11/28/2013	Email-Outgoing	Robert Diaz (Consultant)	Paul Anderson (TERA)	Team member emailed R. Diaz about the TEK results of the biophysical field studies in which YFN participated. TEK results review was attached.	None
12/06/2013	In-Person	Chief Doug Hansen Pedro Moreno (Councillor) Robert Diaz (Consultant)	Norman Marcy (KMC)	Team Member met with consultant Diaz and Chief and Council in Vancouver over lunch. Possible future MBA negotiations were discussed including the importance of employment and procurement opportunities or Yale FN. Chief Hanson indicated the existing Capacity agreement commitments entered with the previous Chief and Council will be honored by Yale. Concluding a TLUS agreement with TERA will be a priority. Yale will want to review existing biophysical studies, and will be seeking resources from KMC to undertake that review.	None
12/16/2013	Letter - Outgoing	Chief Doug Hansen	Ian Anderson (KMC)	Team member sent a letter to Chief D. Hansen and notified YFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Phone - Outgoing	Deanna Venusio (Social Development Worker)	Norman Marcy (KMC)	Team member called D. Hansen and spoke with D. Venusio advising that the Facilities Application has been filed with the NEB and is available on the transmountain.com website. D. Venusio inquired about the Project accessing the Cascade Lower Canyon Community Forest (CLCCF) lands from Hope area to Popkum area on the south side of the Fraser River. D. Venusio also works for CLCCF. TERA has asked permission and had committed to providing reports to the CLCCF of the results of the biophysical studies conducted in the area. Team member to have TERA representatives contact D. Venusio directly to follow up. D. Venusio can be reached during the day at YFN.	None

APPENDIX A-5**ABORIGINAL COMMUNITIES LOCATED IN THE MARINE CORRIDOR**

A-5-01: Cowichan Tribes
A-5-02: Ditidaht First Nation
A-5-03: Halalt First Nation
A-5-04: Huu-ay-aht First Nation
A-5-05: Hwlitsum First Nation
A-5-06: Lake Cowichan First Nation
A-5-07: Lyackson First Nation
A-5-08: Malahat First Nation
A-5-09: Pacheedaht First Nation
A-5-10: Pauquachin First Nation
A-5-11: Penelakut First Nation
A-5-12: Sechelt Indian Band
A-5-13: Snaw-Naw-As (Nanoose)
A-5-14: Snuneymuxw First Nation
A-5-15: Songhees Nation
A-5-16: Stz'uminus First Nation (Chemainus)
A-5-17: T'Sou-ke First Nation
A-5-18: Tsartlip First Nation
A-5-19: Tseycum First Nation

APPENDIX A-5-01
COWICHAN TRIBES

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/07/2013	Email-Outgoing	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	<p>Team member emailed E. Gaunt to follow up on previous emails regarding the next steps with Cowichan Nation Alliance (CNA) and Cowichan Tribes (CT). Collective matters for the CNA discussed:</p> <ul style="list-style-type: none"> - CNA's interest in Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) marine studies and third party review - Receiving further interest and mitigation summaries. - Discussion of KMC's proposed mitigation approaches and the participation of CNA members in planning and implementation. - A meeting involving the KMC Training Leads with CNA to determine project-related training types that may be of interest and the type of procurement capacity available for services. <p>Matters for CT specifically:</p> <ul style="list-style-type: none"> - Discussing and concluding the next phase of capacity funding. - Discussing CT interests in the proceeding phase of negotiations and exploring the elements of a Marine Legacy Agreement. <p>Team member proposed to set aside potential meeting dates for CNA meetings later in October through mid-December. Team member and E. Gaunt planned to meet to discuss CT-specific components with a view to discussing agreements.</p>	None
10/28/2013	Letter - Outgoing	Chief Harvey Alphonse	Gary Youngman (KMC)	<p>Team member sent Chief H. Alphonse a letter to acknowledge receipt of CT's preliminary interests related to the Project. Team member noted that KMC was reviewing these interests and would provide a thorough response to the issues raised by CT. Pursuant to a confidential LOU, interests would be compiled in the Project's Facilities Application, which was to be filed with the NEB in December 2013.</p>	None
10/31/2013	In-Person	Eamon Gaunt (Resource Lead) Alan Grove (Hwlitsum), David Robbins (Woodward & Company), Denise James, Helen Reid (Referrals Coordinator), Jack Smith (Community Consultant Halalt), Ronda Jordan (Stz'uminus), Ruth Sauder (Penelakut)	Ellen Frisch (KMC)	<p>Team member met with CT representatives A. Grove, D. James, H. Reid, R. Jordon, R. Sauder and J. Smith and CNA representative E. Gaunt on October 31, 2013 to discuss Project archaeological studies and TERMPOL studies. Action items from the meeting included:</p> <ul style="list-style-type: none"> - KMC to provide the length of each TERMPOL study to assist CNA in determining which reports to be selected for review - TERA/KMC to provide CNA notice of future Archaeological Impact Assessments (AIAs) occurring in the Lower Mainland, particularly the Coquitlam River Watershed - Hwlitsum First Nation to be consulted on all work in the Coquitlam River Watershed - KMC to provide names of archaeologists being used in this region - KMC to report on number of spills on the TMPL in 2012 - KMC to clarify CBC report citing 270 oil spills in BC. KMC noted all TMEP spills are reported to the NEB and identified on the TMEP website. As of 10/31/2013, it was 81 spills since 1961. - CNA to pass team member's contact information to P. Sam at Coast Salish Employment and Training System CSETS - CNA to notify TERA if there is any interest in sending participants for archaeological fieldwork. <p>The next meeting was tentatively scheduled for November 20, 2013.</p>	None
11/06/2013	Email-Outgoing	Eamon Gaunt (Resource Lead) Alan Grove (Hwlitsum), Denise James, Helen Reid (Referrals Coordinator), Jack Smith (Community Consultant Halalt), Ronda Jordan (Stz'uminus), Ruth Sauder (Penelakut)	Ellen Frisch (KMC)	<p>Team member emailed A. Grove, D. James, H. Reid, R. Jordan, R. Sauder and J. Smith, and attached a draft list of actions and responses that resulted from the meeting with CNA on October 31, 2013. Team member noted that work would potentially begin in December 2013.</p>	None
11/07/2013	Email-Outgoing	Eamon Gaunt (Resource Lead) Alan Grove (Hwlitsum), Denise James, Helen Reid (Referrals Coordinator), Jack Smith (Community Consultant Halalt), Ronda Jordan (Stz'uminus), Ruth Sauder (Penelakut)	Wanda Lewis (TERA), Clare Peacock (TERA), Ellen Frisch (KMC)	<p>Team member emailed E. Gaunt, J. Smith, R. Sauder, D. James, H. Reid, R. Jordan, and A. Grove to state that TERA Archaeology crews potentially could begin field work during the week of November 18, 2013. Team member was responsible for contacting CNA to determine participant information.</p> <p>A. Grove emailed team member and volunteered a participant from HWFN to partake in the Archaeology Study during the week of November 18, 2013 in Hope. A. Grove requested a phone call to discuss financial and logistics information.</p>	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/07/2013	Phone - Outgoing	Helen Reid (Referrals Coordinator)	Ellen Frisch (KMC)	Team member phoned H. Reid to identify CT and CNA participant representatives for Archaeology field work commencing during the week of November 18, 2014 in the Hope and Coquihalla region. H. Reid directed team member to contact D. Hinkely for all Archaeology work in the future. H. Reid would contact E. Gaunt to determine the best way to engage CNA in the upcoming study.	None
11/08/2013	Phone - Attempt	Alan Grove (Hwlitsum)	Clare Peacock (TERA)	A. Grove phoned team member and left a voice message requesting a call back.	None
11/13/2013	Letter - Outgoing	Chief Harvey Alphonse	Gary Youngman (KMC)	Team member sent Chief H. Alphonse a letter to inform CT about KMC's engagement with Transport Canada in as part of the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that CT's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
11/20/2013	Email-Outgoing	Eamon Gaunt (Resource Lead)	Theresa Lane (KMC)	Team member emailed E. Gaunt a copy of the TERMPOL study letter originally mailed to CT on November 13, 2013.	None
11/29/2013	Email-Incoming	Eamon Gaunt (Resource Lead)	Gary Youngman (KMC)	E. Gaunt emailed team member to indicate that CT intended to receive and comment on TERMPOL studies for the Project.	None
11/29/2013	Email-Outgoing	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	Team member emailed E. Gaunt to confirm receipt of CT's request to receive the TERMPOL studies and to request clarification that the review would occur on behalf of CNA members.	None
11/29/2013	Email-Incoming	Pamela Williams	Angelina Silver (TERA)	P. Williams emailed team member a digital file of the report and maps associated with the CT TMRU Study. P. Williams confirmed that the study report would undergo minor changes and would be finalized thereafter. Team member emailed P. Williams confirmed that the study report was received and shared with other team members.	None
11/30/2013	Phone - Incoming	Helen Reid (Referrals Coordinator)	Ellen Frisch (KMC)	H. Reid phoned team member to confirm that topics scheduled for a conference call on November 20, 2013 would be discussed at a meeting tentatively scheduled December 5, 2013. Meeting dates in January 2014 would be confirmed at a later date.	None
12/04/2013	Email-Outgoing	Pamela Williams	Angelina Silver (TERA)	Team member emailed P. Williams and requested clarification regarding the CT TMRU report.	None
12/05/2013	Email-Incoming	Eamon Gaunt (Resource Lead) Alan Grove (Hwlitsum), Jack Smith (Community Consultant Halalt), Melissa Bellamy (Cowichan Tribes Treaty Manager), Ronda Jordan (Stz'uminus), Ruth Sauder (Penelakut)	Ellen Frisch (KMC)	M. Bellamy emailed team member, E. Gaunt, R. Sauder, R. Jordan, J. Smith and A. Grove and confirmed a CNA working group meeting on December 11, 2013 at CT.	None
12/09/2013	Email-Outgoing	Pamela Williams	Angelina Silver (TERA), Wanda Lewis (TERA)	Team member phoned P. Williams to confirm the December 9, 2013 evening Results Review meeting.	None
12/10/2013	Email-Incoming	Pamela Williams	Wanda Lewis (TERA), Angelina Silver (TERA)	P. Williams emailed Team Member to confirm the arrival of a Team Member to the December 9, 2013 meeting.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/11/2013	In-Person	David Robbins (Woodward & Company), Alan Grove (Hwlitsum), Jack Smith (Community Consultant Halalt), Ronda Jordan (Stz'uminus), Ruth Sauder (Penelakut)	Ellen Frisch (KMC)	<p>Meeting with CNA members to discuss status of MTRU Studies and considerations for mutual benefit approach</p> <p>Topics Discussed</p> <ul style="list-style-type: none"> -Contaminated Sediments: Want remediation plan in the event of a spill to address contamination -Spills - Environmental Impact - Role of Transport Canada -Emergency Spill Response – CNA wants improved spill response regime immediately not waiting until project approval. <p>Spill response concerns:</p> <ul style="list-style-type: none"> -CNA noted concerns about no spill response plans available now for CNA communities. --BC Nuka report identifies shortcomings in spill response now; equipment, human resources, locations and size of tankers with poor weather and sea conditions. -Impacts of spill are catastrophic in the marine environment. <p>CNA had nominated a Hwlitsum FN member to participate in field studies, however, Burnaby work had subsequently been put on hold to undertake other work outside of the CNA territory. There have been no other permits applied for within the CNA territory.</p> <p>Discussion of TERMPOL Reports: KMC highlighted that they would be mailed on a disk to CNA members in mid-December upon their release.</p> <p>CNA noted concern that Transport Canada had not been engaged to date and requested a workshop. January 10 was set as the date. The group reported each community would address mutual benefit discussions independently</p>	None
12/11/2013	Email-Incoming	Alan Grove (Hwlitsum), Melissa Bellamy (Cowichan Tribes Treaty Manager), Melissa Charlie (Administrator), Ronda Jordan (Stz'uminus), Ruth Sauder (Penelakut)	Ellen Frisch (KMC)	M. Bellamy emailed team member and CNA Working Group members E. Gaunt, J. Smith, A. Grove, R. Sauder, R. Jordan and M. Charlie the details for the meeting scheduled December 11, 2013.	None
12/13/2013	Email-Outgoing	Eamon Gaunt (Resource Lead) Alan Grove (Hwlitsum), Melissa Bellamy (Cowichan Tribes Treaty Manager), Melissa Charlie (Administrator), Ronda Jordan (Stz'uminus), Ruth Sauder (Penelakut)	Ellen Frisch (KMC)	Team member emailed M. Bellamy, E. Gaunt, R. Jordan, R. Sauder, M. Charlie, A. Grove to confirm a follow-up meeting with M. Bellamy on January 17, 2014 at which Transport Canada would lead a workshop on TERMPOL studies.	None
12/16/2013	Letter - Outgoing	Chief Harvey Alphonse	Gary Youngman (KMC)	Team member mailed Chief H. Alphonse a copy of the Transport Canada TERMPOL studies (on a USB stick) related to the Project for CT's review. Team member requested that CT provide feedback on the studies within two to three months.	None
12/16/2013	Letter - Outgoing	Chief Harvey Alphonse	Ian Anderson (KMC)	Team member sent a letter to Chief H. Alphonse and notified CT of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-5-02
DITIDAHT FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/13/2013	Letter - Outgoing	Chief Jack Thompson	Gary Youngman (KMC)	Team member sent Chief J. Thompson a letter to inform Ditidaht First Nation (DFN) about KMC's engagement with Transport Canada in as part of the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) study process for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that DFN's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
11/20/2013	Email- Outgoing	Carl Edgar (Councillor)	Theresa Lane (KMC)	Team member emailed C. Edgar a copy of the TERMPOL study letter originally mailed to DFN on November 13, 2013.	None
12/16/2013	Letter - Outgoing	Chief Jack Thompson	Ian Anderson (KMC)	TBC if Ditidaht received this correspondence. Insert paragraph.	None

APPENDIX A-5-03
HALALT FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/09/2013	Email- Outgoing	Jack Smith (Community Consultant)	Angela Isaac (TERA)	Team member emailed J. Smith and attached a sample Traditional Land Use (TLU) report to guide Halalt First Nation's (HFN) Traditional Marine Resources Use (MTRU) report.	None
10/09/2013	Phone Outgoing	Jack Smith (Community Consultant)	Angela Isaac (TERA)	Team member called J. Smith and discussed a template to guide HFN's independent MTRU report. Team member to send a sample public report as a guide.	None
10/28/2013	Letter Outgoing	Chief James Thomas	Gary Youngman (KMC)	Team member sent Chief J. Thomas a letter to acknowledge receipt of HFN's preliminary interests related to the Project. Team member noted that KMC was reviewing these interests and would provide a thorough response to the issues raised by HFN. Pursuant to a confidential Letter of Understanding (LOU), interests would be compiled in the Project's Facilities Application, which was to be filed with the NEB in December 2013.	None
10/31/2013	In-Person	Jack Smith (Community Consultant)	Ellen Frisch (KMC), John MacDonald (KMC), Randy Neufeldt (West Coast Marine Response Corp (WCMRC))	Team member met with CNA representatives A. Grove, D. James, H. Reid, R. Jordon, R. Sauder, J. Smith and E. Gaunt on October 31, 2013 to discuss Lower Mainland Routing in the CNA Territory, Project archaeological studies within the proposed corridors, WCMRC Pilot Spill Response Program and TERMPOL studies. Action items from the meeting included: - KMC to provide the length of each Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) study to assist CNA in determining which reports to be selected for review - TERA/KMC to provide CNA notice of future AIAs occurring in the Lower Mainland, particularly the Coquitlam River Watershed - Hwlitsum First Nation to be consulted on all work in the Coquitlam River Watershed - KMC to provide names of archaeologists being used in this region - KMC to report on number of spills on the TMPL in 2012 - KMC to clarify CBC news report citing 270 oil spills in BC. KMC noted all TMEP spills are reported to the NEB and identified on the TMEP website. As of 10/31/2013, it was 81 spills since 1961. - CNA to pass team member's contact information to P. Sam at Coast Salish Employment and Training Services (CSETS) - CNA to notify TERA if there is any interest in sending participants for archaeological fieldwork. The next meeting was tentatively scheduled for November 20, 2013.	None
11/06/2013	Email- Outgoing	Jack Smith (Community Consultant)	Ellen Frisch (KMC)	Team Member emailed J. Smith to transmit action items to HFN from the October 31, 2013 meeting and to request edits. Team Member followed-up regarding field work in the Lower Mainland, which is expected to start in December. Team Member advised that TERA will get contracts with HFN members that will be participating and include the right individuals in the team coordination activities. Team Member provided the name of the contact Team Member at TERA. Team Member stated that there may need to be internal discussion amongst HFN as to how to approach this, if it has not occurred already.	None
11/07/2013	Email- Outgoing	Jack Smith (Community Consultant)	Ellen Frisch (KMC)	Team Member emailed J. Smith to advise FNS that TERA Archeology crews are able to begin work within the CNA territory as early as next week. The primary area is around Hope, but it will move westward. TERA is coordinating crews and site participation from First Nations in whose territories activities are occurring. A key question which was discussed at the meeting on October 31, 2013, was how HFN would like to participate. Team Member stated that there may be interest in coordinating one or two individuals on behalf of HFN to be present, and have those people report back to HFN. It may be the case that those persons need to be identified in the next couple weeks and paperwork completed with TERA. TERA will be in contact with HFN to get a better understanding of the preferred approach and work through potential dates and locations for activity in the territory.	None
11/07/2013	Email- Outgoing	Jack Smith (Community Consultant)	Wanda Lewis (TERA), Clare Peacock (TERA), Ellen Frisch (KMC)	Team member emailed J. Smith to advise HFN representatives of TERA's work with Archeology crews in the CNA territory and connecting CNA with TERA to identify a representative to participate in field Archeology work.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/13/2013	Letter - Outgoing	Chief James Thomas	Gary Youngman (KMC)	Team member sent Chief J. Thomas a letter to inform HFN about KMC's engagement with Transport Canada in as part of the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) study process for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that HFN's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
11/20/2013	Email- Outgoing	Jack Smith (Community Consultant)	Theresa Lane (KMC)	Team member emailed J. Smith a copy of the TERMPOL study letter originally mailed to HFN on November 13, 2013.	None
12/05/2013	Email- Incoming	Jack Smith (Community Consultant)	Ellen Frisch (KMC)	Team member received an email from J. Smith confirming HFN participation in the meeting scheduled for December 11, 2013.	None
12/11/2013	In-Person	Jack Smith (Community Consultant)	Ellen Frisch (KMC)	Meeting with CNA members to discuss status of MTRU Studies and considerations for mutual benefit approach Topics Discussed -Contaminated Sediments: Want remediation plan in the event of a spill to address contamination -Spills - Environmental Impact - Role of Transport Canada -Emergency Spill Response – CNA wants improved spill response regime immediately not waiting until project approval. Spill response concerns: -CNA noted concerns about no spill response plans available now for CNA communities. --BC Nuka report identifies shortcomings in spill response now; equipment, human resources, locations and size of tankers with poor weather and sea conditions. -Impacts of spill are catastrophic in the marine environment. CNA had nominated a Hwlitsum FN member to participate in field studies, however, Burnaby work had subsequently been put on hold to undertake other work outside of the CNA territory. There have been no other permits applied for within the CNA territory. Discussion of TERMPOL Reports: KMC highlighted that they would be mailed on a disk to CNA members in mid-December upon their release. CNA noted concern that Transport Canada had not been engaged to date and requested a workshop. January 10 was set as the date. The group reported each community would address mutual benefit discussions independently	None
12/11/2013	In-Person	Jack Smith (Community Consultant)	Ellen Frisch (KMC)	Team member met with CNA Working Group members to discuss the status of MTRU Studies and next steps in legacy negotiations. Attendees discussed training monies available in early 2014 related to a Marine Legacy Agreement. J. Smith noted that it was unlikely that training monies provided in Spring 2014 could be utilized.	Engagement Process - Aboriginal
12/12/2013	Email- Incoming	Jack Smith (Community Consultant), Chief James Thomas	Ellen Frisch (KMC)	J. Smith emailed Team Member and submitted two interest documents to KMC. HFN document submitted previously in July 2013 and Appendix from recently completed TransMountain Marine Use study.	None
12/12/2013	Email- Incoming	Jack Smith (Community Consultant)	Wanda Lewis (TERA), Angelina Silver (TERA)	J. Smith of HFN emailed team members and attached the HFN MTRU Study. J. Smith clarified that the first document was the full disclosure report, which was to be kept confidential, and the second document was the proponent report. J. Smith noted that the report was presented in draft form pending the production of maps.	None
12/16/2013	Letter - Outgoing	Chief James Thomas	Gary Youngman (KMC)	Team member mailed Chief J. Thomas a copy of the Transport Canada TERMPOL studies (on a USB stick) related to the Project for HFN's review. Team member requested that HFN provide feedback on the studies within two to three months.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief James Thomas	Ian Anderson (KMC)	Team member sent a letter to Chief J. Thomas and notified HFN of the Facilities Application Filing with the National Energy Board (NEB) on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/19/2013	Email- Outgoing	Jack Smith (Community Consultant)	Angelina Silver (TERA)	Team member emailed J. Smith of HFN in response to J. Smith's email of December 12, 2013 acknowledging receipt of the HFN TMUS report and the maps pending.	None

APPENDIX A-5-04
HUU-AY-AHT FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
9/27/2013	In-Person Meeting	Executive Council James Edwards John Jack Charlie Clappis Sheila Charles Tom Happynook Deborah Smith	Michael Davies (KMC) Randy Neufeldt (WCMRC) Ellen Frisch (KMC)	KMC and WCMRC attended a meeting of the Executive Council presented on the TMEP project in Bamfield. Discussion focused on navigation and shipping safety, spill response processes, particularly in international waters. HFN is keenly interested in west coast spill response times in the territory and ensuring the protection of the marine coastal environment. There are 14 Nuu-Chah-Nulth nations that could be affected in the event of a spill. HFN seeks to know more about future response enhancements and how to get involved in response training opportunities.	None
10/9/2013	Email – Incoming	Deborah Smith (Executive Assistant and Deputy Law Clerk (HFN))	Ellen Frisch (KMC)	D. Smith requested the contact information for M. Davies and R. Neufeldt. Team member responded thanking D. Smith for the opportunity to meet and see HFNs new facilities. Contact information was provided.	None
11/13/2013	Letter - Outgoing	James Edwards (Executive Director)	Gary Youngman (KMC)	Team member emailed letter regarding the TERMPOL process and notifying SIGD of the intent to file the Facilities Application to the NEB in mid-December. In addition to completing environmental studies, KMC has been working with Transport Canada to complete studies which focus on the safety of tankers entering Canadian waters; navigating through channels, approaching and berthing at a marine terminal and loading and unloading processes. The TERMPOL process was described. KMC is providing the opportunity for SIGD to review and comment on the technical studies and aggregate comments will be considered into the TERMPOL process. Feedback and advice from FN is sought in the initial 2-3 months to ensure adequate time. If SIGD is interested in receiving the studies, please respond as soon as possible by November 30.	None
11/22/2013	Letter – Incoming	James Edwards (Executive Director)	Gary Youngman (KMC)	Letter was received affirming interest in receiving the TERMPOL study reports.	None
12/16/2013	Letter - Outgoing	James Edwards (Executive Director)	Gary Youngman (KMC)	A letter conveying the TERMPOL study reports on a USB key was sent.	None
12/16/2013	Letter – Incoming	James Edwards (Executive Director)	Gary Youngman (KMC)	Team member sent a letter to Chairman and notified HFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-5-05
HWLITSUM FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/01/2013	Email- Outgoing	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC)	Team member emailed A. Grove and attached the draft Hwlitsum Letter of Understanding (LOU) Amendment Letter and would await feedback on this document following A. Grove's discussions with Hwlitsum First Nation (HWFN) Chief and Council. Team member also committed to follow up with WCMRC regarding the land lease/barge/net storage option discussed as part of the VAFD Project. Team member enquired as to what additional training HWFN members would be interested in receiving. Team member noted an upcoming meeting regarding the next phase of the legacy agreement was targeted for the week of October 14, 2013.	None
10/02/2013	Email- Outgoing	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC)	Team member emailed A. Grove regarding the LOU and also noted KMC willingness to move toward scoping the framework of a legacy agreement Team member requested to be notified as to how HWFN would like to proceed.	None
10/09/2013	Email- Outgoing	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC)	Team member emailed A. Grove to acknowledge receipt of the draft LOU Amendment Letter. Team member requested feedback regarding the LOU.	None
10/18/2013	In-Person	Alan Grove (CNA Working Group Member), Chief Raymond (Rocky) Wilson	Ellen Frisch (KMC)	Team member met with Chief R. Wilson and A. Grove to review the amended draft Letter of Understanding and discussed HFN's concerns and interests regarding spill response in the Salish Sea.	None
10/25/2013	Email- Outgoing	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC)	Team member emailed A. Grove and attached an amended LOU.	None
10/28/2013	Letter - Outgoing	Chief Raymond (Rocky) Wilson	Gary Youngman (KMC)	Team member sent Chief R. Wilson a letter to acknowledge receipt of HWFN's preliminary interests related to the Project. Team member noted that KMC was reviewing these interests and would provide a thorough response to the issues raised by HWFN. Pursuant to a confidential LOU, interests would be compiled in the Project's Facilities Application, which was to be filed with the Nation Energy Board (NEB) in December 2013.	None
10/30/2013	Email- Outgoing	Alan Grove (CNA Working Group Member), John Gailus (Devlin Gailus Barristers and Solicitors), Chief Raymond (Rocky) Wilson	Ellen Frisch (KMC)	Team member emailed Chief R. Wilson, A. Grove and J. Gailus to provide a copy of the draft Legacy Agreement.	None
10/31/2013	In-Person	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC), John MacDonald (KMC), Randy Neufeldt (West Coast Marine Response Corp)	Team member met with CNA representatives A. Grove, D. James, H. Reid, R. Jordon, R. Sauder, J. Smith and E. Gaunt on October 31, 2013 to discuss Lower Mainland Routing in the CNA Territory, Project archaeological studies within the proposed corridors, WCMRC Pilot Spill Response Program and TERMPOL studies. Action items from the meeting included: - KMC to provide the length of each TERMPOL study to assist CNA in determining which reports to be selected for review - TERA/KMC to provide CNA notice of future AIAs occurring in the Lower Mainland, particularly the Coquitlam River Watershed - Hwlitsum First Nation to be consulted on all work in the Coquitlam River Watershed - KMC to provide names of archaeologists being used in this region - KMC to report on number of spills on the TMPL in 2012 - KMC to clarify CBC news report citing 270 oil spills in BC. KMC noted all TMEP spills are reported to the NEB and identified on the TMEP website. As of 10/31/2013, it was 81 spills since 1961. - CNA to pass team member's contact information to P. Sam at Coast Salish Employment and Training Services (CSETS) - CNA to notify TERA if there is any interest in sending participants for archaeological fieldwork. The next meeting was tentatively scheduled for November 20, 2013.	None
11/07/2013	Email- Incoming	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC)	Team Member and A. Grove exchanged emails regarding a proposed field visit on Canoe Pass to be attended by KMC and WCMRC.	None
11/07/2013	Phone - Outgoing	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC)	Team member phoned A. Grove to plan how to progress discussion regarding potential Project mitigation measures, including the form of enhanced spill response. A. Grove reported that HWFN had developed a spill response plan for another project on the Fraser River, a critical pathway for salmon fingerlings. Agreement was made for the team member to consult KMC and WCMRC team members to agree on a date for the tour. A. Grove stated that HWFN was planning a meeting with the NEB and that KMC's application for the Project must include HWFN's interests.	None
11/07/2013	Phone -	Alan Grove (CNA	Ellen Frisch (KMC)	A. Grove phoned team member regarding a letter from TERA that notified CNA of Archaeological fieldwork on CNA Traditional Territory. A. Grove	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
	Incoming	Working Group Member)		noted that an HWFN community member from the study area would be able to participate. Team member explained TERA's participation method and noted that team member would liaise with CNA to introduce a TERA's coordinator and schedule field participation.	
11/11/2013	Email-Outgoing	Alan Grove (CNA Working Group Member)	Karen Baylis (TERA)	Team member emailed A. Grove to discuss participation on Archaeological studies for the Project on behalf of the CNA.	None
11/12/2013	Email-Incoming	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC)	A. Grove emailed team member to confirm the meeting on November 13, 2013 between KMC and HWFN. Team member confirmed the meeting and provided the names of WCMRC participants	None
11/12/2013	Email-Outgoing	Alan Grove (CNA Working Group Member)	Karen Baylis (TERA)	Team member emailed A. Grove to discuss participation on Archaeological studies for the Project.	None
11/12/2013	Email-Outgoing	Alan Grove (CNA Working Group Member)	Clare Peacock (TERA)	Team member emailed A. Grove to notify HWFN of an upcoming Archaeology Study Crew 6 (shift 2) scheduled November 20, 2013 - November 29, 2013. Team member provided logistical details for HWFN participant.	None
11/13/2013	In-Person	Alan Grove (CNA Working Group Member), John Gailus (Devlin Gailus Barristers and Solicitors), Chief Raymond (Rocky) Wilson	Michael Davies (KMC), Bikramjit Kanjilal (KMC), Ellen Frisch (KMC)	Team members met with HWFN for a site visit and marine tour of Canoe Pass region on a Hwlitsum vessel. Participants observed the habitat of the South Fraser, currents, navigation, shoreline attributes and discussed marine spill response in the Fraser River region. HWFN discussed the critical nature of the ecosystem of the area, and the critical nature of stopping any spill should it occur outside the river from entering that ecosystem. HWFN will be developing a vision document for the area in the future. The "Moody Report" was referenced as a research document regarding monitoring marsh vegetation response to a jet fuel spill. A. Grove to forward Moody Report to KMC.	None
11/13/2013	Email-Incoming	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC)	A. Grove emailed Team Member and attached the Moody Report.	None
11/13/2013	Letter - Outgoing	Chief Raymond (Rocky) Wilson	Gary Youngman (KMC)	Team member sent Chief R. Wilson a letter to inform HWFN about KMC's engagement with Transport Canada in as part of the TERMPOL study process for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that HWFN's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
11/18/2013	Email-Outgoing	Alan Grove (CNA Working Group Member)	Clare Peacock (TERA)	Team member emailed A. Grove to provide additional logistical information for HWFN participant on Archaeology Study Crew 6 (shift 2) scheduled November 20, 2013 - November 29, 2013. A. Grove emailed team member to confirm logistics for HWFN participant on Archaeology Study Crew 6 (shift 2) scheduled November 20, 2013 - November 29, 2013.	None
11/20/2013	Email-Outgoing	Alan Grove (CNA Working Group Member)	Theresa Lane (KMC)	Team member emailed A. Grove a copy of the TERMPOL study letter originally mailed to HWFN on November 13, 2013.	None
11/29/2013	Email-Outgoing	Alan Grove (CNA Working Group Member)	Clare Peacock (TERA)	Team member emailed A. Grove to notify HWFN of upcoming Archaeology Crew 6 (Shift 3) scheduled December 5, 2013 - December 12, 2013. Team member requested one HWFN participant. A. Grove emailed team member to provide a HWFN participant for upcoming Archaeology Crew 6 (Shift 3) scheduled December 5, 2013 - December 12, 2013. Team member emailed A. Grove to provide study logistics for the HWFN participant on upcoming Archaeology Crew 6 (Shift 3) scheduled December 5, 2013 - December 12, 2013.	None
11/30/2013	Email-Incoming	Alan Grove (CNA Working Group Member)	Wanda Lewis (TERA)	A. Grove emailed team member a set of HWFN Traditional Territory maps illustrating traditional use areas.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/30/2013	Email-Incoming	Alan Grove (CNA Working Group Member)	Wanda Lewis (TERA)	A. Grove emailed team member an electronic copy of the 2013 Hwilitsum Marine Traditional Use Study, noting that a hard copy of the document was being mailed.	None
12/02/2013	Email-Outgoing	Alan Grove (CNA Working Group Member)	Karen Baylis (TERA)	Team member emailed A. Grove and confirmed receipt of the 2013 Hwilitsum Marine Traditional Use Study.	None
12/03/2013	Email-Outgoing	Alan Grove (CNA Working Group Member)	Clare Peacock (TERA)	Team member emailed A. Grove and provided additional logistical details for the HWFN participant on Archaeology Crew 6 (Shift 3) scheduled December 5, 2013 - December 12, 2013.	None
12/11/2013	In-Person	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC)	<p>Meeting with CNA members to discuss status of MTRU Studies and considerations for mutual benefit approach</p> <p>Topics Discussed</p> <ul style="list-style-type: none"> -Contaminated Sediments: Want remediation plan in the event of a spill to address contamination -Spills - Environmental Impact - Role of Transport Canada -Emergency Spill Response – CNA wants improved spill response regime immediately not waiting until project approval. <p>Spill response concerns:</p> <ul style="list-style-type: none"> -CNA noted concerns about no spill response plans available now for CNA communities. --BC Nuka report identifies shortcomings in spill response now; equipment, human resources, locations and size of tankers with poor weather and sea conditions. -Impacts of spill are catastrophic in the marine environment. <p>CNA had nominated a Hwilitsum FN member to participate in field studies, however, Burnaby work had subsequently been put on hold to undertake other work outside of the CNA territory. There have been no other permits applied for within the CNA territory.</p> <p>Discussion of TERMPOL Reports: KMC highlighted that they would be mailed on a disk to CNA members in mid-December upon their release.</p> <p>CNA noted concern that Transport Canada had not been engaged to date and requested a workshop. January 10 was set as the date.</p>	None
12/13/2013	Email-Outgoing	Alan Grove (CNA Working Group Member)	Ellen Frisch (KMC)	Team member emailed M. Bellamy, E. Gaunt, R. Jordon, R. Sauder, M. Charlie, A. Grove, J. Smith to confirm a follow-up meeting with M. Bellamy on January 17, 2014 at which KMC and Transport Canada would lead a workshop on TERMPOL studies.	None
12/16/2013	Letter - Outgoing	Chief Raymond (Rocky) Wilson	Gary Youngman (KMC)	Team member mailed Chief R. Wilson a copy of the Transport Canada TERMPOL studies (on a USB stick) related to the Project for HWFN's review. Team member requested that HWFN provide feedback on the studies within two to three months.	None
12/16/2013	Letter - Outgoing	Chief Raymond (Rocky) Wilson	Ian Anderson (KMC)	Team member sent a letter to Chief R. Wilson and notified HWFN of the Facilities Application Filing with the National Energy Board (NEB) on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process. Team member noted the results of the Environmental and Socio-Economic Assessment as related to the preliminary interest shared by the community are currently being reviewed and a finalized response would be provided by January 14, 2014.	None

APPENDIX A-5-06
LAKE COWICHAN FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/04/2013	Email- Outgoing	Chief Cyril Livingstone	Sondra Baker (TERA)	Team member emailed Lake Cowichan First Nation (LCFN) and attached a notice for an upcoming Archaeology Impact Assessment (AIA); this assessment commenced October 16, 2013 within CT's consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013.	None
11/13/2013	Letter - Outgoing	Chief Cyril Livingstone	Gary Youngman (KMC)	Team member sent Chief C. Livingstone a letter to inform LCFN about KMC's engagement with Transport Canada in as part of the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) study process for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that LCFN's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
12/16/2013	Letter - Outgoing	Chief Cyril Livingstone	Ian Anderson (KMC)	Team member sent a letter to Chief C. Livingstone and notified Lower Cowichan First Nation (LCFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-5-07
LYACKSON FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/13/2013	Letter - Outgoing	Chief Richard Thomas	Gary Youngman (KMC)	Team member sent Chief R. Thomas a letter to inform LYFN about KMC's engagement with Transport Canada in as part of the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) study process for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that LYFN's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
11/20/2013	Email- Outgoing	Kathleen Johnnie (Land & Resources Coordinator)	Theresa Lane (KMC)	Team member emailed letter regarding the TERMPOL process and notifying Lyackson First Nation (LYFN) of the intent to file the Facilities Application to the NEB in mid-December. In addition to completing environmental studies, KMC has been working with Transport Canada to complete studies which focus on the safety of tankers entering Canadian waters; navigating through channels, approaching and berthing at a marine terminal and loading and unloading processes. The TERMPOL process was described. KMC is providing the opportunity for LFN to review and comment on the technical studies and aggregate comments will be considered into the TERMPOL process. Feedback and advice from LFN is sought in the initial 2-3 months to ensure adequate time. If LFN is interested in receiving the studies, please respond as soon as possible by November 30.	None
12/16/2013	Letter - Outgoing	Chief Richard Thomas	Ian Anderson (KMC)	Team member sent a letter to Chief R. Thomas and notified LYFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-5-08
MALAHAT FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/11/2013	Email-Incoming	Henrietta Charlie (Councillor, Tseycum First Nation)	Georgia Dixon (KMC)	H. Charlie emailed team member to provide contact information for Chief David Michael Harry.	None
10/14/2013	Email-Outgoing	Henrietta Charlie (Councillor, Tseycum First Nation)	Georgia Dixon (KMC)	Team member emailed H. Charlie to confirm receipt of contact information for Chief David Michael Harry.	None
10/16/2013	Phone - Outgoing	Chief David Michael Harry	Georgia Dixon (KMC)	Team member called Chief D. Harry to discuss arrangements for a meet-and-greet on October 29, 2013, to make protocol arrangements and to confirm MTFN attendees.	None
10/22/2013	Phone - Outgoing	Chief David Michael Harry	Georgia Dixon (KMC)	Team member called Chief D. Harry to confirm a meeting scheduled for November 5, 2013 to discuss the TMEP Project.	None
10/31/2013	Phone - Incoming	Chief David Michael Harry	Georgia Dixon (KMC)	Chief D. Harry called team member to confirm a meeting on November 5, 2013 and requested a change to the meeting time. Chief D. Harry expressed an interest in discussing the Capacity Agreement and requested a brief overview of the Project.	None
11/5/2013	In-Person	Chief David Michael Harry	Georgia Dixon (KMC)	Team member met with Chief D. Harry and provided a brief overview of the Project, its timeline, its current status and KMC's intent to file an FA on December 16, 2013. Team member noted that capacity funds were available for MTFN. Chief D. Harry would provide the presented information to an administrator and request that an agreement would be with team member on the Capacity Agreement within 2 weeks.	None
11/12/2013	Email-Outgoing	Chief David Michael Harry	Georgia Dixon (KMC)	Team member emailed Chief D. Harry to note that KMC awaited MTFN's changes to the Capacity Agreement for finalization on November 18, 2013.	None
11/12/2013	In-Person	Chief David Michael Harry	Georgia Dixon (KMC)	Team member met with Chief D. Harry, who provided team member with a tour of the community. Team member was introduced to Administrative staff and met with Chief and Council to review the Capacity Agreement. MTFN was interested in a Mutual Benefits Agreement (MBA). MTFN would review the matter with Council and determine next steps as to whether to sign the Capacity Agreement.	None
11/14/2013	Email-Outgoing	Chief David Michael Harry	Georgia Dixon (KMC)	Team member emailed Chief D. Harry with a reminder to incorporate wording into the LOU in preparation for signing on November 18, 2013.	None
11/19/2013	In-Person	Chief David Michael Harry	Georgia Dixon (KMC)	Team member met with Chief D. Harry and Council to review draft capacity agreement. MTFN agreed to sign the agreement. Chief D. Harry to speak with Douglas Treaty Nations about their views on TMEP. Next steps to schedule a signing of the final capacity agreement.	None
11/21/2013	In-Person	Chief David Michael Harry	Georgia Dixon (KMC)	Team member met with Chief D. Harry, who had some draft changes to the LOU of November 19 2013. Chief D. Harry would sign the agreement and send a copy to team member. Next step was to finalize the LOU and forward to M. Harry.	None
11/25/2013	Email-Outgoing	Chief David Michael Harry	Georgia Dixon (KMC)	Team member emailed Chief D. Harry to state that KMC legal had made adjustments to the draft LOU of November 19, 2013 and attached a copy. Team member requested that Chief D. Harry review the changes and advise whether these changes were agreeable.	None
11/26/2013	Email-Outgoing	Chief David Michael Harry	Georgia Dixon (KMC)	Team member emailed Chief D. Harry a reminder that an LOU with minor changes was sent to Chief D. Harry on November 25, 2013. Team member noted that if Chief D. Harry was agreeable to the changes, team member could finalize the document for signature.	None
11/28/2013	Email-Incoming	Chief David Michael Harry	Georgia Dixon (KMC)	Chief D. Harry emailed team member to confirm approval of the changes to the LOU and noted that the LOU could be finalized for signatures. Team member emailed Chief D. Harry and attached the final LOU for signature, requesting that the LOU be returned to the team member so that it can be signed by KMC before an executed copy was sent back to Chief D. Harry.	None
12/2/2013	Email-Outgoing	Chief David Michael Harry	Georgia Dixon (KMC)	Team member emailed Chief D. Harry and noted that the LOU had been sent to Chief D. Harry for signing, attaching an additional copy of the LOU. Team member resolved to contact Chief D. Harry on December 3, 2013.	None
12/6/2013	Email-Incoming	Sharon Marshall (Executive Assistant)	Georgia Dixon (KMC)	S. Marshall emailed team member and attached a copy of the signed Letter of Understanding (LOU). Team member emailed S. Marshall and responded that the couriered copies were not required as the electronic copy could be signed and executed. S. Marshall emailed team member and confirmed receipt of team member's email.	None
12/11/2013	Email-Outgoing	Chief David Michael Harry	Georgia Dixon (KMC)	Team member emailed Chief D. Harry and attached a fully executed LOU of November 29, 2013, referencing discussions at the meeting on December 11, 2013.	None
12/11/2013	In-Person	Chief David Michael Harry	Georgia Dixon (KMC)	Chief D. Harry advised team member that the draft LOU of November 29, 2013 was approved and could be finalized.	None
12/16/2013	Letter - Outgoing	Chief David Michael Harry	Ian Anderson (KMC)	Team member sent a letter to Chief D. Harry and notified Malahat First Nation (MTFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/16/2013	Email-Outgoing	Chief David Michael Harry	Georgia Dixon (KMC)	Team member emailed Chief D. Harry a copy of the media release of December 16, 2013 advising that TMEP filed a Facilities Expansion Application with the NEB for the Project.	None

APPENDIX A-5-09
PACHEEDAHT FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/01/2013	Email- Outgoing	Dorothy Hunt (Band Manager)	Ellen Frisch (KMC)	Team member emailed D. Hunt and attached response to Pacheedaht First Nation (PTFN) Budget/Studies proposal. Team member outlined key project review components in the coming weeks as follows: - Working with PTFN to support community needs to have enough information about the project to decide to engage with KMC at upcoming member meetings; - supporting research to PTFN towards understanding the Environmental and Socio-Economic Approach and ability to review the TERMPOL marine studies as they become available in the coming weeks; - Initiating a marine traditional use study Team member noted the possibility to meet to review a more detailed collective approach.	None
10/15/2013	Letter - Incoming	Dorothy Hunt (Band Manager)	Ian Anderson (KMC), Peter Forrester (KMC)	PTFN is engaged in capacity discussions with KMC. Traditional Marine Use (TMU) Data PTFN's TMU Data must be collected and incorporated into KMC's Application before it is filed with the National Energy Board (NEB). It is not a stand-alone document. Pacheedaht has serious concerns that the Application will be filed without the MTRU and that KMC will not revise conclusions related to the project impacts and effects, irrespective of the TMU data. KMC is asked to revisit the intention to file in December. Marine Biophysical Studies: PTFN is concerned with the understanding that no marine biophysical studies outside Burrard Inlet are intended to be undertaken. Desktop studies are not adequate to permit the effects from the Proposed project to be considered and analyzed. This approach is considered a half-measure, and is unacceptable considering the impacts of a tanker spill of diluted bitumen. PTFN proposes studies to be conducted. Fate and Behaviour of Bitumen: This is of particular concern as PTFN understand spilled diluted bitumen would sink. The matter should be fully explored and PTFN would like to receive all information related to the matter. Selection of VCs: PTFN is unaware of what VCs have been identified and the criteria and thresholds KMC is considering. PTFN welcomes engagement to devise an appropriate methodology. An approach must result in meaningful assessment of impacts to aboriginal rights – which would include effects on harvesting activities, culture and cultural transference of traditional ecological knowledge and preferred means and locations for exercising rights. TERMPOL Process: PTFN would like to learn more about this process and whether KMC has agreed to engage in such a process. Pacheedaht wishes to participate on the committee if it has been struck. PTFN seeks to understand KMC's intentions with respect to the committee's recommendations. PTFN believes that TERMPOL studies and recommendations must be incorporated into the analysis set out in the KMC application to the NEB. Crown Consultation: PTFN is concerned about the lack of crown consultation to date. TMUS information will be too late to influence KMC filing. KMC should not file until receipt of information. Biophysical studies of the marine environment should be undertaken to understand potential effects. Environmental impacts of bitumen was unknown. PTFN wants meaningful input into selection of VCs, aided by upcoming studies. TERMPOL process should include PTFN and studies should be part of NEB process. Crown consultation is lacking.	None
10/17/2013	Email- Outgoing	Dorothy Hunt (Band Manager)	Ellen Frisch (KMC)	Team member emailed D. Hunt and notified that KMC would move forward with capacity agreement approach to enable PTFN to be engaging with KMC. KMC would propose to send PTFN a draft LOU with schedule attached that outlines deliverables. Team member noted that the expiry date would be August 31, 2014. Team member requested additional information on the Traditional Marine Use Study (TMUS) regarding proposed deliverables, timing, involvement of the community, use of existing digitized information and details associated with line items as part of the budget proposal.	None
10/21/2013	Email- Incoming		Ellen Frisch (KMC)	Email exchanges to establish a time for a telephone call that afternoon to discuss the email to move forward with capacity and marine traditional use study work.	None
10/21/2013	Email- Incoming	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle provided the Workplan for PTFN's TMUS.	None
10/21/2013	Phone - Outgoing		Ellen Frisch (KMC)	Team member confirmed requirements for timing and deliverables for marine traditional use study and proposed funding amount. Requested a Workplan and detailed budget associated with work. Discussed timing, amounts and mechanisms for agreement on funding a single or separate Letter of Understanding (LOU).	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				PTFN seeks significant funding to undertake research, baseline studies, engagement, application review etc. over the next 24 months. It's expected that KMC will provide appropriate funding in the next fiscal year. NEB funding is inadequate for PTFN to conduct the research necessary to participate in the NEB process.	
10/21/2013	Email-Incoming	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle emailed team member and attached the Workplan for PTFN's TMUS. R. Kyle requested feedback for the Workplan in order to move forward with the engagement.	None
10/23/2013	Email-Outgoing	Dorothy Hunt (Band Manager), Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	Team member responded to R. Kyle email from October 21, 2013. Team member provided information regarding LOU and TMUS funding to R. Kyle. Team member included attachments of the TMUS Workplan Budget.	None
10/23/2013	Email-Outgoing	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	Team member emailed R. Kyle and attached a draft LOU. Team member noted being available by phone to discuss if needed.	None
10/24/2013	Email-Incoming	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle forwards the updated TMUS work plan.	None
10/24/2013	Email-Incoming	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle emailed team member and informed that PTFN does not agree with KMC's impact assessment and methodological approach in relation to studying Aboriginal Groups. R. Kyle indicated of the importance of PTFN's traditional marine use data being used in the application. R. Kyle noted the length of the funding negotiation process and that PTFN would seek separate funding from KMC to conduct the historical research. R. Kyle attached a revised Workplan for review. R. Kyle noted concern regarding missed deadline for input on the ESA approach document and informed that this was due to a lack of funding. R. Kyle requested a list of marine studies currently available for review and copies of these studies. R. Kyle stated that the draft agreement would be reviewed and comments provided.	None
10/25/2013	Email-Incoming	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle sends edited LOU and offers Monday, October 28 to discuss it.	None
10/25/2013	Email-Incoming	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle sends edited LOU.	None
10/29/2013	Email-Outgoing	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	Team member responded to R. Kyle that she was available on October 31st for a call.	None
10/29/2013	Email-Outgoing	Dorothy Hunt (Band Manager), Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	Team member acknowledges receipt of the draft LOU and asks to contact PTFN for high level feedback that afternoon on PTFN edits and questions. Team member emailed R. Kyle and D. Hunt on October 29, 2013, and provided R. Kyle and D. Hunt with a link to the NEB's public notice posted in July for participant funding from the NEB. Team member informed R. Kyle and D. Hunt that additional funding to review and comment on the project application beyond what was provided by the NEB was not being considered at that time. On October 29, 2013 R. Kyle responded by email to Team member's email regarding funding for PTFN to participate in the process. Team member replied to R. Kyle email providing the details of future and currently proposed funding. R. Kyle requested to set up a time to talk to R. Kyle the afternoon of October 29, 2013.	None
10/29/2013	Email-Outgoing	Dorothy Hunt (Band Manager), Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	Team member contacted R. Kyle and D. Hunt by email on October 29, 2013, to summarize the TMUS Deliverables and Budget, and Capacity Budget. Team member provided R. Kyle and D. Hunt with a list of TERMPOL studies to be released in mid-December which may interest PTFN. R. Kyle responded by email to Team member on October 29, 2013, to discuss a meeting time. Team member provided times of availability and contact information to R. Kyle.	None
11/04/2013	Email-Outgoing	Dorothy Hunt (Band Manager), Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	Team member was contacted by R. Kyle on November 4, 2013 to determine a time to discuss an agreement regarding the Traditional Marine Use Study. Team member responded to R. Kyle's email on November 4, 2013, identifying a time of availability and commenting on the budget. Emails were further exchanged outlining an editing approach and document sharing.	None
11/05/2013	Email-Outgoing		Ellen Frisch (KMC)	Team member transmits next draft LOU with accepted changes, edits and items flagged for discussion. Team member offers a call that afternoon or Nov 6.	None
11/06/2013	Email-Outgoing	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle summarized key issues related to the proposed outputs of the TMUS and budgeting process in advance of the 2:00 call. TMUS is not being conducted to identify project impacts. Impacts should be part of the overall environmental assessment process. PTFN will not agree to a deliverable that assesses how their interests may be impacted by the project. PTFN wants to understand why KMC seeks a detailed TMUS budget as funding proposed does not align with actual PTFN budget. PTFN's views on where to allocate additional funding between the TMUS or other capacity were provided. Work will need to be prioritized.	None
11/06/2013	Phone - Outgoing		Ellen Frisch (KMC)	Discuss key matters raised in previous email, resulting in understandings on funding allocations, deliverables and engagement elements going forward.	None
11/06/2013	Email-Outgoing	Dorothy Hunt (Band Manager), Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle provided team member with a revised LOU. Team member responded on November 6, 2013, to R. Kyle indicating the LOU would be looked at and a clause inserted as discussed previously.	None
11/07/2013	Email-Outgoing	Dorothy Hunt (Band Manager), Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	KMC requests more detailed budget for marine use study. PTFN expresses concern regarding the level of funding offered and purpose for detailed budget. Team member emailed R. Kyle and D. Hunt regarding TMEP/Pacheedaht draft LOU.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/08/2013	Email- Outgoing	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle emailed team member with a budget for the TMUS Workplan and committed to contacting team member the week of November 11-15, 2013.	None
11/12/2013	Email- Outgoing	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle emailed team member on November 12, 2013 regarding PTFN LOU. R Kyle indicated PTFN is confirming PTFN TMUS Workplan and budget. Team member responded on November 12, 2013, with attachments of the draft PTFN LOU, TMUS Budget and revised Workplan.	None
11/13/2013	Letter - Outgoing	Chief Marvin McClurg	Gary Youngman (KMC)	Team Member sent a letter to Chief M. McClurg regarding the TERMPOL process and notified of KMC's intent to file the Facilities Application to the NEB in mid-December. Team Member advised that in addition to completing environmental studies, KMC has been working with Transport Canada to complete studies which focus on the safety of tankers entering Canadian waters, navigating through channels, approaching and berthing at a marine terminal and loading and unloading processes. Team Member stated that KMC is providing the opportunity for PTFN to review and comment on the technical studies over the next 2-3 months, and aggregate comments will be considered in the TERMPOL process. Team Member requested that PTFN respond by November 30, 2013 if interested in receiving the studies.	None
11/14/2013	Email- Outgoing	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle emailed team member on November 14, 2013 to discuss changes to the TMUS Workplan, and PTFN TMUS budget . Emails were exchanged to affirm funding actions.	None
11/18/2013	Email- Incoming	Dorothy Hunt (Band Manager)	Ellen Frisch (KMC)	D.Hunt transmitted to Team Member the signed LOU.	None
11/18/2013	Email- Outgoing	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle emailed team member with a revised final TMUS Workplan and budget.	None
11/20/2013	Email- Outgoing	Dorothy Hunt (Band Manager)	Theresa Lane (KMC)	Team member emailed D. Hunt a copy of the TERMPOL study letter originally mailed to PTFN on November 13, 2013.	None
11/25/2013	Email- Outgoing	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle emailed team member on November 25, 2013, for a map indicating the proposed tanker routes, and a copy of the signed LOU.	None
11/26/2013	Email- Outgoing	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	Team member emailed R. Kyle on November 26, 2013 with a copy of the signed PTFN LOU, and a map of the tanker traffic lanes as requested by R. Kyle on November 25, 2013. Team member noted the map of tanker routes had also been sent in August, 2013.	None
11/27/2013	Fax - Incoming	Virginia Mathers (JFK Law)	Gary Youngman (KMC)	V. Mathers , staff member of JFK Law, faxed team member a response to KMC's November 13, 2013 TERMPOL study letter, indicating that PTFN intended to receive copies of and comment on the studies for the Project.	None
12/13/2013	Email- Incoming	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle inquired if KMC still planned to file its application to the NEB on December 18/2013. R. Kyle also inquired if there are any NEB mandated timelines for the sufficiency review of the draft application. R. Kyle acknowledged that there is a commitment between KMC and PTFN to provide comments on the TERMPOL studies and Facilities Application by Feb 15, 2014.	None
12/16/2013	Letter - Outgoing	Chief Marvin McClurg	Gary Youngman (KMC)	Team member mailed Chief M. McClurg a copy of the Transport Canada TERMPOL studies (on a USB stick) related to the Project for PTFN's review. Team member requested that PTFN provide feedback on the studies within two to three months.	None
12/16/2013	Letter - Outgoing	Chief Marvin McClurg	Ian Anderson (KMC)	Team member sent a letter to Chief M. McClurg and notified PTFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the National Energy Board (NEB) would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Email- Incoming	Dorothy Hunt (Band Manager)	Ellen Frisch (KMC)	D. Hunt asked Team member to provide dates in January to give a presentation to PTFN members and offered January 14, 1:30 at the PTFN community in Port Renfrew.	None
12/17/2013	Email- Outgoing	Rosanne Kyle (JFK Law)	Ellen Frisch (KMC)	R. Kyle emailed team member on December 17, 2013, requesting a hard copy and CD of the TMEP NEB Application.	None

APPENDIX A-5-10
PAUQUACHIN FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/10/2013	In-Person	Danny Henry (Administrator)	Georgia Dixon (KMC)	Team member and D. Henry conducted a meeting. Team member provided a PPT presentation of an overview of the TMEP to D. Henry. Team member offered to provide a presentation to the Pauquachin First Nation (PNFN) Chief and Council. Team member advised D. Henry of arrangements to organize a meet and greet of the KMC President the WSANEC chiefs. Team member and D. Henry exchanged emails and set up a date to present to PNFN.	None
10/16/2013	Phone - Outgoing	Danny Henry (Administrator)	Georgia Dixon (KMC)	Team member phoned D. Henry on October 16, 2013. Team member indicated to D. Henry arrangements were underway for a meet and greet at Brentwood Lodge on October 29, 2013. Team member discussed with D. Henry protocol arrangements and requested confirmation of PNFN attendees.	None
10/16/2013	Email- Outgoing	Danny Henry (Administrator)	Georgia Dixon (KMC)	Team member emailed PNFN and informed that KMC's president would be available to meet the Chiefs and Councils on October 29, 2013 at the Brentwood Lodge. Team member notified of other team members that planned on attending. Team member inquired if the PNFN Chief and Council would be available for this date.	None
10/18/2013	In-Person	Danny Henry (Administrator)	Georgia Dixon (KMC)	Team Member called D. Henry to inquire about Pauquachin's interest in the TMEP and was advised by the receptionist that D. Henry was not available, but would leave a message that Team Member had visited.	None
10/21/2013	Phone - Outgoing	Danny Henry (Administrator)	Georgia Dixon (KMC)	Team member called D. Henry on October 21, 2013 to arrange a pre-briefing of the TMEP in preparation of the meet and greet with KMC President and AET Team schedule of October 29, 2013.	None
10/24/2013	In-Person	Danny Henry (Administrator), John Pritchard	Georgia Dixon (KMC)	Team member met with and presented D. Henry, A. Thom, D. Henry and J. Pritchard with a PPT presentation of the TMEP on October 24, 2013.	None
10/28/2013	Email- Outgoing	Danny Henry (Administrator),	Georgia Dixon (KMC)	Team member contacted D. Henry and J. Pritchard on October 28, 2013. Team member provided D. Henry and J. Pritchard with an attachment of a letter with the project description of the TMEP which was provided to the NEB for D. Henry and J. Pritchard's reference. Team member informed D. Henry and J. Pritchard that a follow up regarding the NEB process will be completed.	None
10/29/2013	In-Person	Chief Bruce Underwood Danny Henry (Administrator)	Georgia Dixon (KMC)	Team Member visited the Pauquachin office to ask for Chief B. Underwood and D. Henry to advise that the meeting with the President of KMC scheduled for October 29, 2013, due to the President of KMC being ill.	None
11/15/2013	In-Person	Danny Henry (Administrator)	Georgia Dixon (KMC)	Team Member called D. Henry to inquire about the Letter of Understanding (LOU) review and was advised by the receptionist that D. Henry was not available, but would leave a message that Team Member had arrived for the meeting.	None
11/25/2013	Phone - Attempt	Danny Henry (Administrator)	Georgia Dixon (KMC)	Team member called D. Henry on November 25, 2013. Team member was directed to D. Henry's voice mail and left a message asking D. Henry to return Team member's call regarding engagement with the TMEP.	None
11/26/2013	Phone - Outgoing	Danny Henry (Administrator)	Georgia Dixon (KMC)	Team member called D. Henry and was advised by reception that D. Henry was in a meeting. Team member left a voice mail with D. Henry to request a phone call to follow up the October 24, 2013, meeting regarding engagement with the TMEP.	None
12/16/2013	Letter - Outgoing	Chief Bruce Underwood	Ian Anderson (KMC)	Team member sent a letter to Chief B. Underwood and notified PNFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/16/2013	Email- Outgoing	Danny Henry (Administrator)	Georgia Dixon (KMC)	Team member shared with D. Henry by email on December 16, 2013, a copy of a media release regarding to the filing of Kinder Morgan Facilities Application with the NEB.	None

APPENDIX A-5-11
PENELAKUT FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/02/2013	Email-Incoming	Ruth Sauder (Administrator)	Ellen Frisch (KMC)	R. Sauder responded to email from team member sent July 30, 2013. R. Sauder indicated that Penelakut First Nation (PEFN) was currently working on the Marine Traditional Resource Use (MTRU) study report and indicated that report would be submitted November 15, 2013 as indicated by other Cowichan Nation Alliance (CNA) members. R. Sauder indicated that PEFN was interested in other opportunities through KMC projects but that capacity was a concern for PEFN.	None
10/10/2013	Email-Outgoing	Ruth Sauder (Administrator)	Wanda Lewis (TERA), Angelina Silver (TERA)	Team member emailed R. Sauder and provided a link of a sample Traditional Land Use (TLU) report to be a guide for the communities TMRU report.	None
10/28/2013	Letter - Outgoing	Chief Earl Jack Sr.	Gary Youngman (KMC)	Team member sent Chief E. Jack a letter to acknowledge receipt of PEFN's preliminary interests related to the Project. Team member noted that KMC was reviewing these interests and would provide a thorough response to the issues raised by PEFN. Pursuant to a confidential Letter of Understanding (LOU), interests would be compiled in the Project's Facilities Application, which was to be filed with the NEB in December 2013.	None
10/31/2013	In-Person	Denise James (Natural Resources/Community Planner), Myrus James (Alternative to the Chief), Ruth Sauder (Administrator)	Ellen Frisch (KMC), John MacDonald (KMC), Randy Neufeldt (Western Canada Marine Response Corp)	Team member met with CNA representatives A. Grove, D. James, H. Reid, R. Jordon, R. Sauder, J. Smith and E. Gaunt on October 31, 2013 to discuss Lower Mainland Routing in the CNA Territory, Project archaeological studies within the proposed corridors, WCMRC Pilot Spill Response Program and TERMPOL studies. Action items from the meeting included: <ul style="list-style-type: none"> - KMC to provide the length of each Technical Review Process of Marine Terminal Systems and Transshipment Sites TERMPOL study to assist CNA in determining which reports to be selected for review - TERA/KMC to provide CNA notice of future AIAs occurring in the Lower Mainland, particularly the Coquitlam River Watershed - Hwlitsum First Nation to be consulted on all work in the Coquitlam River Watershed - KMC to provide names of archaeologists being used in this region - KMC to report on number of spills on the TMPL in 2012 - KMC to clarify CBC news report citing 270 oil spills in BC. KMC noted all TMEP spills are reported to the NEB and identified on the TMEP website. As of 10/31/2013, it was 81 spills since 1961. - CNA to pass team member's contact information to P. Sam at Coast Salish Employment and Training System Coast Salish Employment and Training Services (CSETS) - CNA to notify TERA if there is any interest in sending participants for archaeological fieldwork. The next meeting was tentatively scheduled for November 20, 2013.	None
11/11/2013	Email-Outgoing	Ruth Sauder (Administrator)	Ellen Frisch (KMC)	Team member emailed R. Sauder and requested contact information for R. Sauder's contact at CSETS. Team member would like to contact the individual regarding training. Team member also proposed meeting in the coming weeks to discuss potential for mutual benefit agreement with PEFN. R. Sauder responded and indicated that the best approach would be to invite a CSETS contact to a meeting with team member and PEFN staff when training funding is discussed.	None
11/13/2013	Letter - Outgoing	Chief Earl Jack Sr.	Gary Youngman (KMC)	Team member sent Chief E. Jack a letter to inform PEFN about KMC's engagement with Transport Canada in as part of the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that PEFN's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
11/20/2013	Email-Outgoing	Ruth Sauder (Administrator)	Theresa Lane (KMC)	Team member emailed R. Sauder a copy of the TERMPOL study letter originally mailed to PEFN on November 13, 2013.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/27/2013	Email-Incoming	Eamon Gaunt (Resource Lead), Ruth Sauder (Administrator)	Ellen Frisch (KMC)	E. Gaunt emailed team member and informed that the November 27, 2013 CNA working group meeting was postponed. Team member responded indicated that team member was still available to meet and was interested in determining the interest of CNA members on discussing a legacy approach. Team member requested to determine if additional information is required from each community to discuss the legacy approach at the Chief and Council level. R. Sauder responded indicating interest from PEFN to discuss the legacy issues. R. Sauder recommended that team member put forward an initial agreement for review. R. Sauder inquired about team member's availability to meet prior to Christmas break and notified that PEFN members would be notified of meeting as well.	None
11/28/2013	Email-Incoming	Ruth Sauder (Administrator)	Ellen Frisch (KMC)	R. Sauder emailed team member to schedule a meeting before Christmas to discuss learning more about potential mutual benefit considerations with PEFN.	None
12/02/2013	Email-Outgoing	Ruth Sauder (Administrator)	Ellen Frisch (KMC)	Team member emailed R. Sauder to ask for suggestions for possible dates and times to meet.	None
12/03/2013	Email-Incoming	Helen Reid (Referrals Coordinator Cowichan Tribes), Ruth Sauder (Administrator)	Ellen Frisch (KMC)	R. Sauder emailed team member on December 3, 2013 to discuss meeting time options. Team member confirmed meeting at 1:30 pm on December 11, 2013 at Cowichan and discussed attendees.	None
12/04/2013	Email-Outgoing	Ruth Sauder (Administrator)	Angelina Silver (TERA)	Team member emailed R. Sauder and provided a URL link for R. Sauder to upload a copy of the Penelakut Tribe Community report.	None
12/04/2013	Email-Incoming	Ruth Sauder (Administrator)	Angelina Silver (TERA)	R. Sauder emailed team member to confirm team member received the community report. Team member emailed R. Sauder and confirmed the community report was received.	None
12/11/2013	In-Person	Ruth Sauder (Administrator)	Ellen Frisch (KMC)	Meeting with CNA members to discuss status of MTRU Studies and considerations for mutual benefit approach Topics Discussed -Contaminated Sediments: Want remediation plan in the event of a spill to address contamination -Spills - Environmental Impact - Role of Transport Canada -Emergency Spill Response – CNA wants improved spill response regime immediately not waiting until project approval. Spill response concerns: -CNA noted concerns about no spill response plans available now for CNA communities. --BC Nuka report identifies shortcomings in spill response now; equipment, human resources, locations and size of tankers with poor weather and sea conditions. -Impacts of spill are catastrophic in the marine environment. CNA had nominated a Hwlitsum FN member to participate in field studies, however, Burnaby work had subsequently been put on hold to undertake other work outside of the CNA territory. There have been no other permits applied for within the CNA territory. Discussion of TERMPOL Reports: KMC highlighted that they would be mailed on a disk to CNA members in mid-December upon their release. CNA noted concern that Transport Canada had not been engaged to date and requested a workshop. January 10 was set as the date.	None
12/16/2013	Letter - Outgoing	Chief Earl Jack Sr.	Gary Youngman (KMC)	Team member mailed Chief E. Jack a copy of the Transport Canada TERMPOL studies (on a USB stick) related to the Project for PEFN's review. Team member requested that PEFN provide feedback on the studies within two to three months.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Earl Jack Sr.	Ian Anderson (KMC)	Team member sent a letter to Chief E. Jack and notified PEFN of the Facilities Application Filing with the National Energy Board (NEB) on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-5-12
SECHELT INDIAN GOVERNMENT DISTRICT

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/13/2013	Letter - Outgoing	Chief Garry Feschuk	Gary Youngman (KMC)	Team member sent Chief G. Feschuk a letter to inform Sechelt Indian Government District (SIGD) about KMC's engagement with Transport Canada in as part of the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that SIGD's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
11/20/2013	Email- Outgoing	Chief Garry Feschuk	Gary Youngman (KMC)	Team member emailed G. Feschuk regarding the TERMPOL process and to notify SIGD of the intent to file the Facilities Application to the National Energy Board (NEB) in mid-December. In addition to completing environmental studies, KMC has been working with Transport Canada to complete studies which focus on the safety of tankers entering Canadian waters; navigating through channels, approaching and berthing at a marine terminal and loading and unloading processes. The TERMPOL process was described. KMC is providing the opportunity for SIGD to review and comment on the technical studies and aggregate comments will be considered into the TERMPOL process. Feedback and advice from SIGD is sought in the initial 2-3 months to ensure adequate time. Team member requested a response from G. Feschuk by November 30, 2013 if SIGD is interested in receiving the studies.	None
12/16/2013	Letter - Outgoing	Chief Garry Feschuk	Ian Anderson (KMC)	Team member sent a letter to Chief G. Feschuk and notified SIGD of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-5-13
SNAW-NAW-AS (NANOOSE)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/4/2013	Email- Outgoing	Chief David Bob Jr.	Sondra Baker (TERA)	Team member emailed Chief D. Bob Jr. and notified Snaw'Naw'As First Nation (SNAN) of the Archaeological Impact Assessment (AIA) scheduled October 16, 2013 – November 12, 2013 in the SNAN Traditional Territory.	None
10/8/2013	Email- Outgoing	Chief David Bob Jr.	Georgia Dixon (KMC)	Team member emailed Chief D. Bob Jr. to follow up on the last discussion about team member getting on the Chief and Council agenda. Team member enquired if a presentation to the Council regarding TMEP was still warranted and, if so, team member noted KMC would be available at SNAN's convenience.	None
11/6/2013	Phone - Attempt	Chief David Bob Jr.	Georgia Dixon (KMC)	Team member phoned Chief D. Bob Jr. and left a voice mail regarding the Chief and Council's decision to receive a Project presentation as per email sent on October 8, 2013. Team member requested a return call.	None
12/16/2013	Email- Outgoing	Chief David Bob Jr.	Georgia Dixon (KMC)	Team member emailed Chief D. Bob Jr. with an attached copy of a media release from a local newspaper from December 16, 2013.	None
12/16/2013	Letter - Outgoing	Chief David Bob Jr.	Ian Anderson (KMC)	Team member sent a letter to Chief D. Bob Jr. and notified SNAN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-5-14
SNUNEYMUXW FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/5/2013	Email-Incoming	Sandra Atkinson (Executive Assistant)	Georgia Dixon (KMC)	S. Atkinson emailed Team member to arrange a meeting between Snuneymuxw First Nation (SNFN) and KMC and proposed a meeting date of November 15, 2013 or between November 18-22, 2013 to discuss Project related Agreements	None
11/7/2013	Email-Outgoing	Sandra Atkinson (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed S. Atkinson and stated that KMC President had suggested that the morning of November 19, 2013 in Vancouver would not work for Chief D.White and enquired whether a mid morning or luncheon on December 12, 2013 would be suitable to discuss Project related agreements.	None
11/13/2013	Email-Incoming	Sandra Atkinson (Executive Assistant)	Georgia Dixon (KMC)	S. Atkinson emailed team member and notified of Chief D. White's availability to meet with KMC President during the week of November 25 or December 2, 2013.	None
11/14/2013	Email-Outgoing	Sandra Atkinson (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed S. Atkinson and noted KMC President's willingness to meet with Chief D. White at the earliest convenience. Team member committed to following-up on KMC President's availability during the weeks of November 25 and December 2, 2013.	None
11/15/2013	Email-Outgoing	Sandra Atkinson (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed S. Atkinson to enquire on Chief D. White availability to meet with the KMC President on November 19, 2013.	None
11/15/2013	Email-Outgoing	Sandra Atkinson (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed S. Atkinson stating that the meeting would be held at the Fairmont Hotel	None
11/18/2013	Email-Outgoing	Sandra Atkinson (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed S. Atkinson to notify SNFN of the KMC attendees for the November 19, 2013 meeting.	None
11/19/2013	In-Person	Chief D. White III Paul Silvey	Ian Anderson (KMC), Gary Youngman (KMC)	Team members met with Chief D. White III and P. Silvey and discussed SNFN's treaty history and, by extension, SNFN's governance rights. Chief D. White III requested to know how the Project would approach the recognition of SNFN's treatise rights. Team member responded that KMC approaches aboriginal engagement with respect for the community and endeavour to design a process that is agreeable for all involved parties. Chief D. White III noted that SNFN has agreements with other proponents and KMC agreed to review these agreements with consideration for the agreements' language, as such language would be utilized should KMC choose to move forward with engagement of SNFN.	None
11/25/2013	Email-Outgoing	Sandra Atkinson (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed S. Atkinson and stated that there had been discussion to provide document language previously used in former SNFN agreements with proponents. Team member enquired if S. Atkinson would be able to assist with the request.	None
12/05/2013	Letter-Outgoing	Chief D. White III	Gary Youngman (KMC)	Team member sent a letter to Chief D. White III in follow-up to the November 19, 2013 meeting with Chief D. White III and P. Silvey. Team member reiterated KMC's position, as noted in the November 19, 2013 meeting, which stated that KMC would consider SNFN's agreements with other proponents and formulate an agreement bearing similar language should KMC decide to move forward with engagement. Team member also noted that KMC respectfully engages several aboriginal groups along the Project line and designs specific engagement processes with these communities that best serves the communities' and KMC's interests.	None
12/16/2013	Letter - Outgoing	Chief John Wesley	Ian Anderson (KMC)	Team member sent a letter to Chief J. Wesley and notified SNFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/16/2013	Email-Outgoing	Sandra Atkinson (Executive Assistant)	Georgia Dixon (KMC)	Team member emailed S. Atkinson with attached copy of media release pertaining to the Facilities Application filed with the NEB on November 28, 2013.	None

APPENDIX A-5-15
SONGHEES NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/16/2013	Letter - Outgoing	Chief Ken Cossey	Ian Anderson (KMC)	Team member sent a letter to Chief K. Cossey and notified Songhees First Nation (SSFN) of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-5-16

STZ'UMINUS FIRST NATION (CHEMAINUS)

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/28/2013	Letter - Outgoing	Chief John Elliot	Gary Youngman (KMC)	Team member sent Chief J. Elliott a letter to acknowledge receipt of Chemainus (Stz'uminus) First Nation's (CFN) Preliminary Interests related to the Project. Team member noted that KMC was reviewing these interests and would provide a thorough response to the issues raised by CFN. Pursuant to a confidential LOU, interests would be compiled in the Project's Facilities Application, which was to be filed with the NEB in December 2013.	None
11/13/2013	Letter - Outgoing	Chief John Elliot	Gary Youngman (KMC)	Team member sent Chief J. Elliott a letter to inform CFN about KMC's engagement with Transport Canada in as part of the Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) for the Project. Team member noted that these studies addressed oil tanker navigation and safety in the Salish Sea, expanding the scope of Project-related marine studies being conducted by KMC, TERA and individual First Nations (which were outlined in a March 22, 2013 letter detailing ESA field studies). Team member provided an overview of the study methodology and evaluation process through the TERMPOL Review Committee (TRC). Team member provided an invitation to receive and comment on these studies in December 2013, stating that feedback from First Nations would be shared with Transport Canada and the TRC to assist in reviewing study results. Team member requested that CFN's intent whether or not to participate in the TERMPOL process be sent to team member by November 30, 2013.	None
11/20/2013	Email-Outgoing	Ronda Jordan (Administrator/Finance Manager)	Theresa Lane (KMC)	Team member emailed R. Jordan a copy of the TERMPOL study letter originally mailed to CFN on November 13, 2013.	None
12/06/2013	Email-Incoming	Ronda Jordan (Administrator/Finance Manager)	Wanda Lewis (TERA), Ellen Frisch (KMC)	R. Jordan emailed Team Member to advise that the final Marine Traditional Resource Use (MTRU) Study will be scanned and sent on December 9, 2013.	None
12/09/2013	Email-Outgoing	Ronda Jordan (Administrator/Finance Manager)	Angelina Silver (TERA)	Team member emailed R. Jordan and provided a link to the online drop box for the CFN community report. R. Jordan replied advising that the CFN cover letter and study have been submitted to the drop box. Team member acknowledged receipt of the report.	None
12/11/2013	In-Person	Ronda Jordan (Administrator/Finance Manager)	Ellen Frisch (KMC)	Meeting with CNA members to discuss status of MTRU Studies and considerations for mutual benefit approach Topics Discussed -Contaminated Sediments: Want remediation plan in the event of a spill to address contamination -Spills - Environmental Impact - Role of Transport Canada -Emergency Spill Response – CNA wants improved spill response regime immediately not waiting until project approval. Spill response concerns: -CNA noted concerns about no spill response plans available now for CNA communities. --BC NUCA report identifies shortcomings in spill response now; equipment, human resources, locations and size of tankers with poor weather and sea conditions. -Impacts of spill are catastrophic in the marine environment. CNA had nominated a Hwlitsum FN member to participate in field studies, however, Burnaby work had subsequently been put on hold to undertake other work outside of the CNA territory. There have been no other permits applied for within the CNA territory. Discussion of TERMPOL Reports: KMC highlighted that they would be mailed on a disk to CNA members in mid-December upon their release. CNA noted concern that Transport Canada had not been engaged to date and requested a workshop. January 10 was set as the date.	None
12/13/2013	Email-Incoming	Ronda Jordan (Administrator/Finance Manager)	Ellen Frisch (KMC)	R. Jordan emailed Team Member to confirm availability for the TERMPOL Workshop scheduled for January 17, 2014.	None
12/16/2013	Letter - Outgoing	Chief John Elliot	Gary Youngman (KMC)	Team member mailed Chief J. Elliott a copy of the Transport Canada TERMPOL studies (on a USB stick) related to the Project for CFN's review. Team member requested that CFN provide feedback on the studies within two to three months.	None
12/16/2013	Letter - Outgoing	Chief John Elliot	Ian Anderson (KMC)	Team member sent a letter to Chief J. Elliot and notified CFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-5-17
T'SOU-KE FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/8/2013	Phone - Outgoing	Michelle Thut (Administrator)	Georgia Dixon (KMC)	Team member phoned M. Thut and verified that the team member would re-send KMC and TMEP information for review by M. Thut. M. Thut requested a TMEP presentation on behalf of T'Sou-ke First Nation (TUFN).	None
10/8/2013	Email- Outgoing	Michelle Thut (Administrator)	Georgia Dixon (KMC)	Team member contacted M. Thut and provided information on the Kinder Morgan Canada Inc. Trans Mountain Expansion Project. Team member attached 6 email attachments: (1) the project description (2) information about the environmental studies currently underway (3) 1 route map, 1 map of the shipping lanes adjacent to the reserves (4) 1 map of the study area of the environmental studies (5) a marine supplemental to provide information on shipping lanes, marine traffic and liability (6) Capacity Funding Guidelines.	None
10/16/2013	Phone - Outgoing	Michelle Thut (Administrator)	Georgia Dixon (KMC)	Team member phoned M. Thut and discussed plans and attendees for a potential presentation to TUFN on November 6, 2013.	None
11/6/2013	In-Person	Michelle Thut (Administrator)	Georgia Dixon (KMC)	Team member met with M. Thut and provided an overview of the Project. M. Thut noted that TUFN Chief and Council were in disagreement over whether to engage with TMEP, so a TUFN administrator was prepared to hear the Project presentation and make a recommendation to Chief and Council on November 15, 2013. M. Thut asserted TUFN's interests in the Salish sea and asked about the liability for an oil spill and the role of the WCMRC. M. Thut also enquired about capacity funding.	None
11/25/2013	Email- Outgoing	Michelle Thut (Administrator)	Georgia Dixon (KMC)	Team member emailed M. Thut to follow-up on the presentation given to TUFN on November 6, 2013, enquiring whether Chief G. Planes and Council had yet decided to engage with the Project. Team member welcomed questions about the Project from TUFN.	None
11/25/2013	Phone - Outgoing	Michelle Thut (Administrator)	Georgia Dixon (KMC)	Team member phoned M. Thut and reached the receptionist, who noted that M. Thut would be out of the office until November 26, 2013.	None
11/26/2013	Phone - Outgoing	Michelle Thut (Administrator)	Georgia Dixon (KMC)	Team member phoned M. Thut and left a voicemail requesting a return call to follow up on the Chief and Council meeting on November 15, 2013.	None
12/16/2013	Letter - Outgoing	Chief Gordon Planes	Ian Anderson (KMC)	Team member sent a letter to Chief G. Planes and notified TUFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/16/2013	Email- Outgoing	Michelle Thut (Administrator)	Georgia Dixon (KMC)	Team member emailed M. Thut to provide an attached copy of a media release (Dated December 16, 2013) detailing KMC's filing of a Facilities Application for the Project with the NEB.	None

APPENDIX A-5-18
TSARTLIP FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/8/2013	Phone - Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member called K. Harry to arrange a meeting on October 10, 2013 and request information about the fee structure with Western Canada Marine Response Corporation (WCMRC.)	None
10/10/2013	In-Person	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member met with K. Harry of Tsartlip First Nation (TRFN) on October 10, 2013 to review TRFN's interests. K. Harry indicated that TRFN is focused on youth and education and has a 4-year economic plan. TRFN owns land on Mayne Island and overlaps with TRFN territory. TRFN wants to know about KMC's emergency response plans ahead of time. TRFN is interested in a Mutual Benefits Agreement (MBA) once the relationship between parties is understood. K. Harry suggested a meet and greet within two weeks with KMC President and Aboriginal Engagement Team (AET) from different disciplines. K. Harry also suggested an October 21, 2013 presentation to Council K. Harry suggested letting the other WSA NEC Nations know; the event would be semi-formal and include an official welcome from the Chiefs, introductions and gift exchange.	None
10/16/2013	Phone - Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member called K. Harry of TRFN on October 16, 2013 regarding the Meet and Greet planned for October 29, 2013. Team member and K. Harry discussed logistical arrangements and protocol arrangements. Team member requested confirmation of TRFN attendees.	None
10/16/2013	Email- Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry and informed that KMC's president would be available to meet Chiefs and Council on October 29, 2013 at the Brentwood Lodge. Team member informed of two other team members that would be attending and inquired if K. Harry would be available. Team member proposed arranging to brief the TRFN Council in preparation for the meet and greet. K. Harry confirmed availability and a time for the upcoming meet and greet.	None
10/16/2013	Email- Incoming	Karen Harry (Administrator)	Georgia Dixon (KMC)	K. Harry of TRFN emailed team member on October 16, 2013 to indicate that K. Harry had contacted the venue for the Meet and Greet scheduled for October 29, 2013 and will keep in touch with the team member regarding the venue. Team member replied to this email on the same day indicating that TRFN Chief and Council are confirmed for the event and the team member expects to hear from Pauquachin First Nation that afternoon.	None
10/16/2013	In-Person	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member met with K. Harry of TRFN on October 16, 2013 to discuss arrangements for the Meet and Greet scheduled for October 29, 2013. Protocol arrangements were discussed. Team member requested confirmation of TRFN attendees.	None
10/21/2013	Phone - Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member called K. Harry of TRFN on October 21, 2013 to arrange a pre-briefing of the Project in preparation of the Meet and Greet with KMC President and AET scheduled for October 29, 2013.	None
10/22/2013	In-Person	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member met with K. Harry to discuss arrangements for a meet and greet at Brentwood Lodge on October 29, 2013. Meeting record is as follows: • Site visit to Tsartlip First Nation – Administrator unavailable. • Rebook meeting	None
10/28/2013	Email- Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on October 28, 2013 to inquire about the attached menu for the October 29, 2013 Meet and Greet. The team member responded to this email on the same date indicating receipt of the email and asking if K. Harry had a confirmed number of attendees.	None
10/29/2013	In-Person	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member met with K. Harry to discuss cancellation of meet and greet that was scheduled for October 29, 2013. Meeting record is as follows: • Site visit to Tsartlip First Nation – Administrator unavailable. • Team member advised receptionist that KMC President is unable to attend the meet and greet due to illness.	None
10/29/2013	Email- Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on October 29, 2013 to inform K. Harry that KMC President cannot attend the Meet and Greet scheduled for the same day due to illness. Team member informed K. Harry that the event is cancelled and the meeting will be rescheduled.	None
10/30/2013	Email- Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on October 30, 2013 attaching a draft capacity agreement for review. Team member invited K. Harry to ask for any clarifications.	None
11/1/2013	Email- Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on November 1, 2013. Following up on a question regarding tax revenues collected by government for the Project, the team member provided the Project information guide that contains the information and summarized the Estimated Tax Revenues.	None
11/13/2013	Email- Incoming	Karen Harry (Administrator)	Georgia Dixon (KMC)	K. Harry of TRFN emailed team member on November 13, 2013 stating that TRFN's land committee has agreed to review the draft Letter of Understanding (LOU). K. Harry also related that comprehensive reviews are required in mitigating concerns in relation to KMC projects and TRFN has first-hand experience in Toxic Spills in the traditional areas and need to take a lead in developing a Safety plan that is culturally sensitive.	None
11/14/2013	Phone - Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team Member telephoned K. Harry to arrange a meeting for November 15, 2013, to discuss TRFN's engagement process with TMEP. Meeting was scheduled for 9:00 am, November 14, 2013, at Tsartlip.	None
11/14/2013	Email- Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on November 14, 2013 in response to K. Harry's email regarding TRFN's review of the draft LOU sent on November 13, 2013. The team member had a few questions and requested to call K. Harry on November 14, 2013 if it was convenient. K. Harry replied to this email on the same date inviting the team member to call anytime on the number provided. Team member replied to this email on the same date indicating that the team member will call K. Harry at 2:00 pm. K. Harry replied to this email confirming the time.	None
11/15/2013	Email- Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on November 15, 2013 to indicate that the team member was running late and would be at K. Harry's office at 9:30 am.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/15/2013	In-Person	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member met with K. Harry of TRFN on November 15, 2013 regarding TRFN's proposed protocol agreements. K. Harry tabled 3 protocol agreements. The protocols were developed by TRFN's Lands Committee and constitute the meaningful engagement TRFN would like to have with KMC. The team member reviewed the protocols in detail and committed to review the protocols further with the AET and return TRFN with a decision.	None
11/21/2013	Email-Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on November 21, 2013 regarding the three protocol agreement projects. Team member indicated that the team member had completed reviewing the projects and was now ready to bring the projects forward to KMC for full approval. K. Harry replied to this email on the same date providing the Workplan as requested.	None
11/28/2013	Email-Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on November 28, 2013 requesting a meeting to develop a capacity agreement Team member provided suggested dates for the meeting.	None
11/29/2013	Email-Incoming	Karen Harry (Administrator)	Georgia Dixon (KMC)	K. Harry emailed a meeting request to team member on November 29, 2013 to arrange a meeting for December 3, 2013.	None
12/3/2013	In-Person	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member met with K. Harry of TRFN on December 3, 2013. The Workplan budget was amended. K. Harry agreed to table Draft 1 with TRFN Chief and Council with a recommendation to approve the amended budget. Action items resulting from the meeting: 1. Team member will finalize an LOU by December 6, 2013; 2. K. Harry will table Draft 1 with TRFN Chief and Council.	None
12/3/2013	Email-Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on December 3, 2013. Further to discussions at a meeting on the same date, the team member attached draft 2 of the LOU for K. Harry's review and approval. K. Harry replied to this email on the same date acknowledging receipt of the attachment.	None
12/4/2013	Email-Incoming	Karen Harry (Administrator)	Georgia Dixon (KMC)	K. Harry of TRFN emailed team member on December 4, 2013 informing the team member that TRFN Chief and Council passed a motion on December 3, 2013 to have the draft LOU executed immediately. Team member replied to this email on the same date indicating that KMC legal is ready to approve the LOU. Team member replied to this email on the same date acknowledging receipt.	None
12/5/2013	Email-Incoming	Karen Harry (Administrator)	Georgia Dixon (KMC)	K. Harry of TRFN emailed the team member on December 5, 2013 requesting the finalized LOU be emailed as soon as possible so that it can be signed by the Chief. Team member responded to this email on the same date attaching the finalized LOU ready for signature.	None
12/6/2013	Email-Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on December 6, 2013 acknowledging receipt of the signed LOU emailed on December 5, 2013. Team member indicated that a fully executed copy of the agreement will be provided to K. Harry.	None
12/12/2013	Email-Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on December 12, 2013 attaching a copy of the fully executed LOU of December 5, 2013. Team member indicated that the original will be sent to TRFN by regular mail.	None
12/16/2013	Letter - Outgoing	Chief Wayne Morris	Ian Anderson (KMC)	Team member sent a letter to Chief W. Morris and notified TRFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/16/2013	Email-Outgoing	Karen Harry (Administrator)	Georgia Dixon (KMC)	Team member emailed K. Harry of TRFN on December 16, 2013 providing a copy of the media release titled "Trans Mountain Files Facilities Expansion Application with the National Energy Board" dated December 16, 2013.	None

APPENDIX A-5-19
TSEYCUM FIRST NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/8/2013	Phone - Outgoing	Chief Vern Jacks	Bob Love (KMC)	Team member called Chief V. Jacks to confirm his attendance in the engagement process with the team.	None
10/8/2013	Phone - Outgoing	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	Team member called K. Bill to follow up to a meeting attended by Chief V. Jacks to inquire whether Chief V. Jacks would be joining Tseycum First Nation (TSFN) in the engagement process with KMC. Team member provided their contact information.	None
10/10/2013	In-Person	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	<p>Team member met with K. Bell to provide an overview of the Project and to present and invitation to a meet and greet with KMC President.</p> <p>Questions/Concerns raised by K. Bell are as follows:</p> <ul style="list-style-type: none"> • If there is a spill on land and it goes into the ocean, does WCMRC respond? Team member advised that WCMRC would respond if the spill were to go into the ocean. • Meet again on Friday, October 11, to provide a presentation. • Elders Advisory committee and community meeting could follow. • Why does the size of the pipe change in the new proposed TMEP? Team member advised that the size of the pipe changed to accommodate the demand for supply of product. • TSFN is willing to talk about the environmental concerns on the marine side. • Will all the environmental studies be shared with FNs? Team member advised that environmental studies can be shared with the First Nations. The studies would be available in the Facilities Application. <p>Team member to send a copy of the TMEP PowerPoint presentation and the draft capacity agreement.</p>	None
10/11/2013	Phone - Incoming	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	<p>Team member called to confirm arrangements for a presentation to TSFN.</p> <p>Discuss arrangements to include the other WSANEC Nations in the meet and greet.</p>	None
10/11/2013	In-Person	Henrietta Charlie (Councillor), Josephine Joe(Councillor), Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	<p>Team member met with K. Bell, H. Charlie, J. Joe and L. Sellars to provide an overview of the Project and the NEB process, and to invite Council to a meet and greet.</p> <p>Questions/Concerns discussed include:</p> <ul style="list-style-type: none"> • Tseycum hears a lot about their Douglas treaty rights. How is the TMEP addressing the treaty rights? Team member advised that the federal government is responsible for accommodating the Douglas treaty rights. • Who is the Transport Canada Committee? Team Member advised that the TERMPOL committee is comprised of representatives from Transport Canada, Department of Fisheries and Ocean, and the Ministry of Environment. • Send K. Bill an email regarding TERMPOL. • Tseycum wants to review the draft capacity agreement. • Who reviews the TMEP? Team member advised that the TMEP will be reviewed by the National Energy Board once the Facilities Application to the NEB in December 2013. The review will take approximately two years. • Is there an NEB filing guide? Team member advised there is an NEB filing guide. • Transport Canada should be there too. • Where would the equipment for spill response be located? Team member advised that there is spill response equipment located in Duncan and in Esquimalt. Team member advised that a system wide review of spill response was underway and that there may additional spill bases established to enhance the regime. • Where is the Canadian monitoring system of tankers located? Team member advised that there is a Vessel Traffic System in place to closely monitor tanker movements. On the south coast, the VTS are located in Tofino and Vancouver. • TSFN wants to see the location of WCMRC and the where the pilots get on board a tanker. • What is the capacity to respond to a small spill and big spill? Team member advised that currently, the regulations require a capacity response to 10,000 tonnes. • Who is the proper agency to call in the event of a spill on land (Vancouver Island)? Team member advised that it would be the provincial Ministry of Environment would be the agency to call. • Interested in spill response training. • Access to training? Team member advised that there could be access to training as part of an Mutual Benefits Agreement. • The public needs to be aware of the connection to the Douglas Treaty. • Even a minor spill has an effect on the environment. • How many litres does each tanker compartment hold? Team member did not have that information. • Liability? Team member advised that liability and compensation for oil spills were regulated by <i>Canada Shipping Act and Marine Liability Act</i>. The system operated on a polluter pays principle. There were funds established in the amount of about \$1.3 billion to respond to a spill. • What is the size of the pipe? Team member advised that the size of the existing pipe was two feet and the new pipe would be about three feet in diameter. • Can TSFN get a share of the pipeline revenue. Team member advised that currently there were no plans to provide a share of revenue to marine First Nations. <p>• TMUS – Tseycum would have a traditional territory description and what waters Tseycum uses.</p>	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				Action items: Team member to provide a copy of the NEB filing guide. Tseycum requested a site visit to the Incident Command System.	
10/11/2013	Email- Outgoing	Henrietta Charlie (Councillor)	Georgia Dixon (KMC)	H. Charlie emailed team member and provided contact information for M. Harry, Chief of Malahat Nation.	None
10/16/2013	Phone - Attempt	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	Team Member phoned K. Bill and left voice message to discuss meeting arrangements with KMC President.	None
10/16/2013	Phone - Attempt	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	Team Member phoned K. Bill and left voice message to discuss meeting arrangements with KMC President.	None
10/16/2013	Email- Outgoing	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	Team member emailed K. Bill and informed that KMC's president would be available to meet the Chiefs and Councils on October 29, 2013 at the Brentwood Lodge. Team member notified of other team members that planned on attending. Team member inquired if the TSFN Chief and Council would be available for this date.	None
10/22/2013	In-Person	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	K. Bill was unable to meet with team member due to family emergency. Next meeting with TSFN scheduled for October 29, 2013.	None
10/28/2013	Email- Outgoing	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	Team member emailed K. Bell to confirm the number of attendees for the meet and greet scheduled for October 29, 2013.	None
10/29/2013	In-Person	Josephine Joe (Councillor)	Georgia Dixon (KMC)	Team member advised that President was unable to meet with J. Joe due to illness. Team member advised TSFN about the cancellation. <ul style="list-style-type: none"> • Site visit to Tseycum First Nation – Administrator unavailable. • Team Member advised Josephine Joe, Councilor that KMC President is unable to attend the meet and greet due to illness. 	None
11/15/2013	In-Person	Josephine Joe (Councillor)	Georgia Dixon (KMC)	Team member met with J. Joe to request available dates to meet with KMC President. J. Joe advised Team Member that there would not be likely a date to meet before Christmas. J. Joe requested Team Member to return in the New Year.	None
11/25/2013	Phone - Outgoing	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	Team member phoned K. Bill and spoke to the receptionist, who stated that K. Bill was not available until November 26, 2013 and that Councilor J. Joe was away at meetings for the week. Team member would phone back on November 26, 2013.	None
11/26/2013	Phone - Outgoing	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	Team member phoned K. Bill and spoke with the receptionist, who stated that K. Bill was away from the office. Team member left a voicemail for K. Bill requesting a return call to discuss the Project.	None
12/16/2013	Email- Outgoing	Kristen Bill (Band Administrator)	Georgia Dixon (KMC)	Team member emailed K. Bill KMC's press release (dated December 16, 2013) detailing the submission of the Facilities Application to the NEB for the Project.	None
12/16/2013	Letter - Outgoing	Chief Tanya Jones	Ian Anderson (KMC)	Team member sent a letter to Chief T. Jones and notified TSFN of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-6

ABORIGINAL GROUPS – NON-BOUNDARY SPECIFIC

A-6-01: BC Métis Federation
A-6-02: Métis Nation of BC

APPENDIX A-6-01
BC MÉTIS FEDERATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/5/2013	In-Person	Cynthia Kolada (Policy Analyst)	Norman Marcy (KMC), Ellen Frisch (KMC)	<p>Team members met with C. Kolada and 17 BC Metis Federation (BCMF) members at the Victoria Comfort Inn to discuss KMC's Pipeline Project Proposal:</p> <ul style="list-style-type: none"> - C. Kolada introduced the topic of the Kinder Morgan Pipeline Project Proposal to the attendees, described the Letter of Understanding (LOU) between BCMF and TMP to engage with Metis citizens, and provided copies of the LOU. - Questions were asked regarding the government's role in the decision making process, whether KMC has received approvals for construction, risk level comparisons between different modes of oil transportation. - Team member indicated that the comments and results of the BCMF's engagement would not be included in the initial filing of the Project application with the NEB but would be included in the planned supplemental filings in the spring and fall of 2014. - Team member presented an overview PPT of the project and engagement to the meeting - Questions were asked regarding the difficulty in detecting leaks and pipeline quality control and concern was raised over the 60 year-old pipe. BCMF members discussed diminished environmental protection regulations for the coastline and concerns that the BC coast would not be protected and that KMC has no response procedures. Team member responded that that KMC is very transparent about incidents and spills along the pipeline; equipment and the pipe is inspected regularly, maintenance is good and integrity programs are in place, detected problems are addressed in a timely fashion. - Questions were asked regarding the size of leaks that can be detected, size of pressure drop before pipeline shutdown, operating procedures along the line, detecting problems with "pigs", pre-operational testing, maintenance schedule publishing, durability of the old pipeline, removal of contaminated soil, pipe inspection during snow cover, consideration of fiber optic thermal detection systems, two pilots on ships and pilot shortage, incident insurance and liability for spills, employment numbers during pipeline operation and construction and the number of First Nation personnel involved, safest method of moving petroleum, spill response, and training opportunities. <p>Team members committed to providing risk statistics for trucking and rail and providing a map of marine shipping route to BCMF.</p>	None
10/6/2013	Email-Outgoing	Cynthia Kolada (Policy Analyst)	Norman Marcy (KMC)	Team member emailed C. Kolada and attached a map showing the shipment routes within the marine corridor.	None
10/11/2013	Email-Outgoing	Cynthia Kolada (Policy Analyst)	Norman Marcy (KMC)	Team member emailed C. Kolada and provided risk statements from the US Department of Transportation (USDOT) supporting the statement that pipelines are the safest way of moving oil over land as requested by BCMF. Team member noted that both the USDOT and Canadian Transportation Safety Board support the statement that pipelines are the safest mode of transportation.	None
10/12/2013	Email-Incoming	Cynthia Kolada (Policy Analyst)	Norman Marcy (KMC)	C. Kolada emailed team member and informed they would be sending out the map of the shipping routes within the marine corridor that day and would send the statistics regarding the safety of oil transportation by pipeline as well.	None
10/16/2013	Email-Incoming	Keith Henry (President)	Norman Marcy (KMC)	K. Henry emailed team member and requested sponsorship by KMC for the upcoming Trial of Louis Riel event.	None
10/31/2013	Email-Outgoing	Leona Shaw (Natural Resources Consultation Coordinator)	Norman Marcy (KMC)	Team member emailed L. Shaw and informed of having prepared a PowerPoint presentation with hard copies for an upcoming meetings in Kamloops (November 2, 2013), Valemount (November 3, 2013) and Victoria (October 05, 2013). Team member requested logistics for three upcoming meetings.	None
11/2/2013	In-Person	Cynthia Kolada (Policy Analyst)	Norman Marcy (KMC)	Team member met with C. Kolada of BCMF on November 02, 2013 at the Kamloops Holiday Inn. C. Kolada apologized for the lack of attendance and assured team member that considerable efforts had been made to invite participation from BCMF in Kamloops.	None
11/3/2013	In-Person	Cynthia Kolada (Policy Analyst), Edna McClain, Morris Turmell, Judy Turmell	Norman Marcy (KMC)	Team member met with C. Kolada, M. Turmell, J. Turmell, E. McClain and another member of BCMF to discuss the LOU that has been reached between BCMF and TMEP. Team member gave a PowerPoint presentation about existing pipeline operations, safety integrity spill response, Project proposal and stages of the Project. Attendees also discussed local job/business opportunities related to the Project. Action item: C. Kolada review and collate what is heard at all Metis Federation community sessions and provide a report to BCMF executive to consider and forward to KMC.	None
11/12/2013	Email-Incoming	Cynthia Kolada (Policy Analyst)	Norman Marcy (KMC)	C. Kolada emailed team member to provide logistical details for a meeting scheduled for November 16, 2013.	None
11/21/2013	Email-Incoming	Keith Henry(President)	Regan Schlecker (KMC), Norman Marcy (KMC)	K. Henry emailed team members and notified of receipt of LOU installment. K. Henry also noted the methods of application for aforementioned installment.	None
12/16/2013	Letter - Outgoing	Keith Henry(President)	Ian Anderson (KMC)	Team member sent a letter to K. Henry and notified BCMF of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Phone - Outgoing	Cynthia Kolada (Policy Analyst)	Norman Marcy (KMC)	Team member left a message for C. Kolada to advise that the Facilities Application has been filed with the NEB and that was available on the Trans Mountain website (transmountain.com).	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
12/17/2013	Phone - Outgoing	Keith Henry (President)	Norman Marcy (KMC)	Team member called K. Henry to advise that the Facilities Application has been filed with the NEB and that it available on the Trans Mountain website (transmountain.com). K. Henry indicated the engagement report was now completed and being reviewed and approved by executive and partner communities. K. Henry expects to be able to provide the report by mid-January and advised that there will be some specific recommendations for KMC to consider in the report.	None
12/20/2013	Phone - Incoming	Chief A. Phillips	Norman Marcy (KMC)	Chief A Phillips returned call to team member inquiring about timeline of Facilities Application that was filed with NEB. Chief A. Phillips inquired about the duration of the Enbridge Northern Gateway process and wondered if the NEB would take as long for the KMC Trans Mountain project. Team member indicated the timing would be made clear by NEB in February, 2014. Chief reminded team member that present extension agreement was signed and returned to KMC. Confirmed, document was received and signed November 29, 2013.	None

APPENDIX A-6-02
MÉTIS NATION OF BC

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/9/2013	Email-Incoming	Leona Shaw (Natural Resources Consultation Coordinator)	Norman Marcy (KMC)	L. Shaw e-mailed team member to confirm that the planning for sessions with Metis Nation of British Columbia (MNBC) communities is in process, some dates needed to be confirmed and a tentative schedule would be set up shortly.	None
10/17/2013	Email-Incoming	Leona Shaw (Natural Resources Consultation Coordinator)	Norman Marcy (KMC)	Team member emailed L. Shaw and indicated they would be available at the provided dates,. Team member inquired if L. Shaw would organize meetings with other Metis communities near the project alignment as well. Team member requested notification regarding even logistics once available.	None
10/31/2013	Email-Outgoing	Leona Shaw (Natural Resources Consultation Coordinator)	Norman Marcy (KMC)	Team member emailed L. Shaw to confirm the schedule and locations of community meetings set for November 21, 23 and 26, 2013.	None
11/4/2013	Email-Incoming	Leona Shaw (Natural Resources Consultation Coordinator)	Norman Marcy (KMC)	L. Shaw emailed team member in response to his email of October 31, 2013 and provided logistical details for community meetings scheduled for November 21, 23 and 26, 2013.	None
11/7/2013	Email-Outgoing	Leona Shaw (Natural Resources Consultation Coordinator)	Norman Marcy (KMC)	Team member emailed L. Shaw to advise that he is making arrangements to attend community meetings scheduled for November 21, 23 and 26, 2013.	None
11/13/2013	Email-Outgoing	Leona Shaw (Natural Resources Consultation Coordinator)	Norman Marcy (KMC)	Team member emailed L. Shaw to arrange a meeting in person or over the phone to confirm arrangements for upcoming meetings.	None
11/13/2013	Phone - Incoming	Leona Shaw (Natural Resources Consultation Coordinator)	Norman Marcy (KMC)	L. Shaw called team member to confirm logistical information for three upcoming meetings scheduled for November 21, 23 and 26, 2013. L. Shaw advised that a large turnout is expected for the Vernon session on November 23, 2013 and potentially for November 26, 2013.	None
11/21/2013	In-Person	Leona Shaw (Natural Resources Consultation Coordinator) Les Mitchell (President of Fraser Valley Métis Association) Community Members	Norman Marcy (KMC)	Team member met with L. Shaw, L. Mitchell, P. Werk, C. Peterson, B. Stephanson, E. Kelly, C. Kelly, G. Biggar, G. Ingram, B. Gladue, R. Hunt and two other MNBC community members and gave a presentation on the Project. Team member answered questions from attendees and provided handouts about the Project, safe pipeline operations, emergency response, diluted bitumen and corrosion.	None
12/23/2013	Email-Incoming	Leona Shaw (Natural Resources Consultation Coordinator)	Norman Marcy (KMC)	L. Shaw emailed team member to confirm receipt of an earlier email sent by the team member which advised that TMEP had filed a facilities application with the NEB.	None

APPENDIX A-7**ASSOCIATIONS, COUNCILS AND TRIBES**

A-7-01: Cowichan Nation Alliance
A-7-02: Maa-Nulth First Nations
A-7-03: Nicola Tribal Association
A-7-04: Nuu-chah-nulth Tribal Council
A-7-05: Sencot'en Alliance
A-7-06: St'at'imc Chiefs Council
A-7-07: Stk'emlupsemc te Secwepemc Nation
A-7-08: Ts'elxweyeqw Tribes Management Limited
A-7-09: Tsilhoqot'in National Government

APPENDIX A-7-01
COWICHAN NATION ALLIANCE

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/09/2013	Email- Outgoing	Randy Neufeldt	Ellen Frisch (KMC)	Team member emailed Randy Neufeldt and extended an invitation to the Aboriginal Engagement team meeting scheduled on October 10, 2013 to review the status of engagement, next steps in the consultation process and further plan KMC's marine strategy pre- and post-application filing.	None
10/09/2013	Email- Outgoing	Randy Neufeldt	Ellen Frisch (KMC)	Team member emailed R. Neufeldt to enquire if the draft flow chart had been updated and if the document was a subtext to review with Cowichan Nation Alliance (CNA). Team member wrote that the flowchart would help CNA members to connect with KMC's legacy funding and support members' participation in development of protection strategies. Team member noted that marine traditional work could directly inform regional protection strategies as well as be integrated into the provincial database.	None
10/09/2013	Email- Outgoing	Randy Neufeldt	Ellen Frisch (KMC)	Team member emailed R. Neufeldt to relay that CNA would be meeting on October 22, 2013, in Duncan. Team member suggested that it would be a good opportunity for R. Neufeldt to introduce WCMRC, discuss the FOSET program and open a dialogue regarding the type of resources that were within the CNA community (i.e. vessels, captains, mates). Team member noted that such a presentation would support later Project dialogues concerning legacy opportunities and assistance in evaluating CNA human, resource and training needs.	None
10/15/2013	Email- Outgoing	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	<p>Team member emailed E. Gaunt and confirmed a CNA meeting on October 22, 2013 at the CNA office. Team member suggested that the training team lead member and R. Neufeldt from Western Canada Marine Response Corporation (WCMRC) attend the meeting, offering additional dates to accommodate the CNA members' schedules.</p> <p>E. Gaunt emailed team member and confirmed that the meeting should take place on an alternative date of October 31, 2013.</p> <p>Team member emailed E. Gaunt and suggested the meeting on October 31, 2013 should include an additional team member to discuss a pipeline routing location and R. Neufeldt from WCMRC.</p> <p>E. Gaunt emailed team member and enquired if KMC would require a private meeting with CNA.</p>	None
10/23/2013	Email- Outgoing	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	Team member emailed E. Gaunt to confirm the meeting on October 31, 2013 during which Lower Mainland pipeline routing, training and spill response infrastructure planning would be discussed.	None
10/24/2013	Email- Incoming	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	E. Gaunt emailed team member and confirmed meeting details for the October 31, 2013 meeting.	None
10/26/2013	Email- Outgoing	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	Team member confirmed with E. Gaunt the meeting attendees and agenda topics for the October 31, 2013 meeting at the CNA offices.	None
10/30/2013	Email- Outgoing	Randy Neufeldt	Ellen Frisch (KMC), John MacLeod (KMC)	Team member wrote to thank R. Neufeldt to thank R. Neufeldt for attending the CNA meeting and discussed meeting logistics such as routing maps and a projector.	None
10/30/2013	Email- Outgoing	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	Team member emailed E. Gaunt and confirmed that a meeting with the CNA at the CNA offices would take place on October 31, 2013.	None
10/31/2013	In-Person	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	<p>Team member met with CNA representatives A. Grove, D. James, H. Reid, R. Jordon, R. Sauder, J. Smith and E. Gaunt on October 31, 2013 to discuss Lower Mainland Routing in the CNA Territory, Project archaeological studies within the proposed corridors, WCMRC Pilot Spill Response Program and TERMPOL studies. Action items from the meeting included:</p> <ul style="list-style-type: none"> - KMC to provide the length of each Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL) study to assist CNA in determining which reports to be selected for review - TERA/KMC to provide CNA notice of future AIAs occurring in the Lower Mainland, particularly the Coquitlam River Watershed - Hwlitsum First Nation to be consulted on all work in the Coquitlam River Watershed - KMC to provide names of archaeologists being used in this region - KMC to report on number of spills on the TMPL in 2012 - KMC to clarify CBC news report citing 270 oil spills in BC. KMC noted all TMEP spills are reported to the NEB and identified on the TMEP website. As of 10/31/2013, it was 81 spills since 1961. - CNA to pass team member's contact information to P. Sam at Coast Salish Employment and Training System (CSETS) - CNA to notify TERA if there is any interest in sending participants for archaeological fieldwork. <p>The next meeting was tentatively scheduled for November 20, 2013.</p>	None
11/07/2013	Phone - Outgoing	Helen Reid (Referrals Coordinator)	Ellen Frisch (KMC)	Team member phoned H. Reid to identify Cowichan Tribe (CT) and CNA participant representatives for Archaeology field work commencing during the week of November 18, 2014 in the Hope and Coquihalla region. H. Reid directed team member to contact D. Hinkely for all Archaeology work in the future. H. Reid would contact E. Gaunt to determine the best way to engage CNA in the upcoming study.	None
11/07/2013	Email- Outgoing	Eamon Gaunt (Resource Lead)	Wanda Lewis (TERA), Clare Peacock (TERA), Ellen Frisch (KMC)	Team member emailed E. Gaunt, J. Smith, R. Sauder, D. James, H. Reid, R. Jordan, and A. Grove to state that TERA Archaeology crews potentially could begin field work during the week of November 18, 2013. Team member was responsible for contacting CNA to determine participant information.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				A. Grove emailed team member and volunteered a participant from HWFN to partake in the Archaeology Study during the week of November 18, 2013 in Hope. A. Grove requested a phone call to discuss financial and logistics information.	
11/17/2013	Email- Outgoing	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	Team member emailed E. Gaunt and confirmed a follow-up conference call to discuss legacy agreements with CNA members on November 20, 2013.	None
11/19/2013	Email- Outgoing	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	Team member emailed E. Gaunt to confirm the details of the meeting with CNA members on November 20, 2013.	None
11/26/2013	Phone - Attempt	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	E. Gaunt left a voicemail to confirm if the meeting November 27, 2013 was to occur.	None
11/27/2013	Email- Incoming	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	Due to scheduling confusion, CNA met without KMC and advised on next available dates.	None
11/27/2013	Email- Outgoing	Eamon Gaunt (Resource Lead)	Ellen Frisch (KMC)	Team member reminded CNA members of upcoming opportunity to comment on TERMPOL studies after they affirmed October 31st interest in doing so. Funding is available and timing will be tight. The list of TERMPOL studies was attached. Team member will be away in December and wanted to initiate as much as possible pre-holidays.	None
11/30/2013	Phone - Incoming	Helen Reid (Referrals Coordinator)	Ellen Frisch (KMC)	H. Reid phoned team member to confirm that topics scheduled for a conference call on November 20, 2013 would be discussed at a meeting tentatively scheduled December 5, 2013. Meeting dates in January 2014 would be confirmed at a later date.	None
12/03/2013	Email- Incoming	Ruth Sauder (Penelakut)	Ellen Frisch (KMC)	R. Sauder emailed team member on December 3, 2013 to discuss meeting time options. Team member confirmed meeting at 1:30 pm on December 11, 2013 at Cowichan and discussed attendees.	None
12/05/2013	In-Person		Brandy Mayes (TERA), Tess Espey (TERA)	One CNA Archaeological assistant participated in an Archaeological Impact Assessment from December 5-13, 2013.	Socio-Econ. Terrestrial - Heritage Resources - Archaeology
12/05/2013	Email- Incoming	Melissa Bellamy (Cowichan Tribes Treaty Manager)	Ellen Frisch (KMC)	M. Bellamy emailed team member and confirmed a CNA working group meeting on December 11, 2013 at CT.	None
12/11/2013	Email- Incoming	Melissa Bellamy (Cowichan Tribes Treaty Manager)	Ellen Frisch (KMC)	M. Bellamy emailed team member the details for the meeting scheduled December 11, 2013.	None
12/11/2013	In-Person	David Robbins (Woodward & Company) Alan Grove (Hwlitsum) Jack Smith (Community Consultant Halalt), Ronda Jordan (Stz'uminus), Ruth Sauder (Penelakut)	Ellen Frisch (KMC)	Meeting with CNA members to discuss status of MTRU Studies and considerations for mutual benefit approach Topics Discussed -Contaminated Sediments: Want remediation plan in the event of a spill to address contamination -Spills - Environmental Impact - Role of Transport Canada -Emergency Spill Response – CNA wants improved spill response regime immediately not waiting until project approval. Spill response concerns: -CNA noted concerns about no spill response plans available now for CNA communities. --BC Nuka report identifies shortcomings in spill response now; equipment, human resources, locations and size of tankers with poor weather and sea conditions. -Impacts of spill are catastrophic in the marine environment. CNA had nominated a Hwlitsum FN member to participate in field studies, however, Burnaby work had subsequently been put on hold to undertake other work outside of the CNA territory. There have been no other permits applied for within the CNA territory. Discussion of TERMPOL Reports: KMC highlighted that they would be mailed on a disk to CNA members in mid-December upon their release. CNA noted concern that Transport Canada had not been engaged to date and requested a workshop. January 10 was set as the date.	None
12/12/2013	Email- Incoming	Eamon Gaunt (Resource Lead) Ruth Sauder (Penelakut)	Ellen Frisch (KMC)	Team Member wrote to report on CNA's confirmation of request for a TERMPOL workshop and the proposed date of January 10. Due to availability an alternative date in January was identified	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
		Melissa Charlie (Administrator) Alan Grove (Hwlitsum) Melissa Bellamy (Cowichan Tribes Treaty Manager) Ronda Jordan (Stz'uminus)			
12/13/2013	Email- Outgoing	Eamon Gaunt (Resource Lead) Ruth Sauder (Penelakut) Melissa Charlie (Administrator) Alan Grove (Hwlitsum) Melissa Bellamy (Cowichan Tribes Treaty Manager) Ronda Jordan (Stz'uminus)	Ellen Frisch (KMC)	Team member emailed M. Bellamy, E. Gaunt, R. Jordan, R. Sauder, M. Charlie, A. Grove to confirm a follow-up meeting with M. Bellamy on January 17, 2014 at which KMC and Transport Canada would lead a workshop on TERMPOL studies.	None

APPENDIX A-7-02
MAA-NULTH FIRST NATIONS

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
09/30/2013	Letter - Outgoing		Howard Heffler (KMC)	Team member sent a letter to Maa-Nulth First Nations which described the Trans Mountain Expansion Project, provided links to additional information about the Project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that Maa-Nulth First Nations may have about the Project.	None

APPENDIX A-7-03
NICOLA TRIBAL ASSOCIATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	In-Person	Community Member	Camilla Castellon (TERA)	One NTA archaeological assistant participated in an Archaeological Impact Assessment from October 3 - 12, 2013.	Socio-Econ. Terrestrial - Heritage Resources - Archaeology
10/3/2013	Email-Outgoing	Beth Coutlee (NRT Referrals)	Sondra Baker (TERA)	Team member emailed NTA and provided a notification letter for Archeological Geotechnical Borehole Drilling fieldwork (Permit No. 2013-26) from October 14 - 22, 2013.	None
10/8/2013	In-Person		Rob Scott (KMC), Jeff Smith (KMC), Steve Kasstan (TERA), Jamie Andrews (KMC)	Team members met with community members of NHIB, SHIB and NNIB to discuss the TMEP project Team members presented the TMEP project and the operation side of it. Community members asked questions which were answered by team members regarding the following: - pipeline operation and specifications - how to fix a leak Another team member presented the field studies that TERA is involved in and community members asked questions on: - how much oil would be spilled with a major leak - how much oil was spilled in Burnaby - what would happen if there were an earthquake - what happens to the habitat trees - compensation for bands -income from participating in field studies	None
10/10/2013	Email-Outgoing	Leona Bob (Researcher), Janice Tom (GIS/Document Management Technician)	Jamie Andrews (KMC)	Team member emailed L. Bob and requested status of maps sent. J. Tom emailed team member and notified that PDFs were approved and maps would be couriered.	None
10/10/2013	Email-Outgoing	Beth Coutlee (NRT Referrals), Evan Hall (Field Technician/Referrals)	Sondra Baker (TERA)	Team member emailed B. Coutlee and E. Hall and informed them that Archaeology crew 5 would be returning to NTA area from November 4 – 13, 2013 to confirm findings from a previous study.	None
10/29/2013	Email-Outgoing	Beth Coutlee (NRT Referrals), Evan Hall (Field Technician/Referrals)	Clare Peacock (TERA)	Team member emailed B. Coutlee and E. Hall to inform of the upcoming Archeological Crew 5 shift from November 4 – 13, 2013 and team contact information.	None
10/31/2013	Email-Outgoing	Rick Yellow Horn (Executive Director)	Jamie Andrews (KMC)	Team member emailed R. Yellow Horn and suggested an upcoming meeting for November 7, 2013	None
11/1/2013	Phone - Incoming	Rick Yellow Horn (Executive Director)	Jamie Andrews (KMC)	R. Yellow Horn called team member and the following was discussed: - Upcoming meeting between KMC and NTA confirmed for November 19, 2013 - concern and attention between communities about leaks and environmental impacts. - TLU progress; bulk of interviews have been completed. - Team member offered to be of assistance; R. Yellow Horn mentioned issues with the maps and their purpose. - Team member to confirm upcoming meeting with attendees.	None
11/1/2013	Email-Outgoing	Rick Yellow Horn (Executive Director)	Jamie Andrews (KMC)	Team member emailed R. Yellow Horn to confirm upcoming meeting details for November 19, 2013.	None
11/17/2013	Email-Outgoing	Rick Yellow Horn (Executive Director)	Jeff Smith (KMC), Jamie Andrews (KMC)	Team member emailed R. Yellow Horn a reminder for the scheduled meeting with team members on November 29, 2013 from 11-2 pm.	None
11/18/2013	Email-Outgoing	Beth Coutlee (NRT Referrals), Evan Hall (Field Technician/Referrals)	Clare Peacock (TERA)	Team member emailed B. Coutlee and E. Hall to provide B. Coutlee and E. Hall with logistical and contact information for the upcoming TMEP Archaeological Crew 5 for November 4- 13, 2013.	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
11/22/2013	Email- Outgoing	Beth Coutlee (NRT Referrals)	Clare Peacock (TERA)	Team member emailed B. Coutlee to inform B. Coutlee the Archaeological Crew 5 fieldwork was postponed until spring due to weather conditions. B. Coutlee responded on November 22, 2013 thanking team member for the update.	None
11/28/2013	Letter - Outgoing	Beth Coutlee (NRT Referrals)	Paul Anderson (TERA)	Team member emailed B. Coutlee and attached a memo that provided the TEK results of the NTA participation on the biophysical field studies for the TMEP. Team member included an introduction to the TMEP and thanked NTA community members who participated in the biophysical field studies. Team member provided information regarding issues/concerns and potential mitigation identified during the aquatic, wildlife, vegetation, wetland and archaeology assessments.	None
11/28/2013	Email- Outgoing	Rick Yellow Horn (Executive Director)	Jeff Smith (KMC)	Team member emailed R. Yellow Horn and asked if R. Yellow Horn would be available phone call November 29, 2013 at 1pm. R. Yellow Horn emailed team member and indicated that R. Yellow Horn was unavailable at 1pm but could call team member later on November 29, 2013. Team member emailed R. Yellow Horn and provided a contact phone number and indicating that team member would be available until 5pm.	None
12/4/2013	Phone - Outgoing	Rick Yellow Horn (Executive Director)	Jeff Smith (KMC)	Team member called R. Yellow Horn and indicated that NTA Chiefs would continue to provide updates on the TLU to the NTA Field Board. Team member indicated the need to receive the final TLU reports as soon as possible for inclusion in the supplemental filings. R. Yellow Horn indicated that the environmental monitoring and emergency response are major interests of the NTA. Team member offered to do a presentation regarding the KMC MBA approach to the Chiefs associated with Te'mexw research.	None
12/10/2013	Email- Incoming	Leona Bob (Researcher)	Jamie Andrews (KMC)	L. Bob emailed team member a list of researchers from NTA that will participate in the TLU Study on specific dates.	None

APPENDIX A-7-04
NUU-CHAH-NULTH TRIBAL COUNCIL

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/09/2013	Email- Outgoing	Florence Wylie (Executive Director)	Ellen Frisch (KMC)	Team member e-mailed F. Wylie to check if Nuu-Chah-Nulth Tribal Council (NCTC) Chiefs would be interested in receiving a presentation of the TMEP.	None
10/10/2013	Email- Incoming	Florence Wylie (Executive Director)	Ellen Frisch (KMC)	F. Wylie emailed team member and noted KMC's request for a project meeting will be forwarded to the Board of Directors for review and requested logistics information in order to plan for a suitable meeting location.	None
10/17/2013	Email- Incoming	Clarissa Ginger (Executive Assistant)	Ellen Frisch (KMC)	C. Ginger emailed team member to invite KMC for a project presentation on October 25, 2013. C. Ginger requested verification of the proposed meeting.	None
10/21/2013	Email- Outgoing	Clarissa Ginger (Executive Assistant)	Ellen Frisch (KMC)	Team member emailed C. Ginger to confirm the location of the NCTC Executive Council meeting scheduled for October 25, 2013.	None
10/21/2013	Email- Outgoing	Florence Wylie (Executive Director)	Ellen Frisch (KMC)	Team member emailed F. Wylie to confirm KMC's attendance at the NCTC Executive Committee meeting scheduled for October 25, 2013.	None
10/23/2013	Email- Incoming	Clarissa Ginger (Executive Assistant)	Ellen Frisch (KMC)	C. Ginger emailed Team Member to provide logistics details for the NCTC Executive Council meeting scheduled for October 25, 2013. Team member replied and provided an electronic copy of the PowerPoint presentation to be delivered by KMC at the meeting.	None
10/23/2013	Email- Outgoing	Florence Wylie (Executive Director)	Ellen Frisch (KMC)	F. Wylie emailed Team Members to provide details for the NCTC Executive Committee meeting scheduled for October 25, 2013.	None
10/25/2013	In-Person	Deb Foxcroft (President), Ken Watts (Vice President) Florence Wylie (Executive Director) Simon Read (CHS Director of Operations) Clarissa Ginger (Executive Assistant)	Gary Youngman (KMC), Ellen Frisch (KMC) Randy Nuefeldt (WCMRC)	Team members met with D. Foxcroft, K. Watts, F. Wylie, and C. Ginger from NCTC to discuss the TMEP: - Team member presented the TMEP Project Update PPT - R. Nuefeldt, Regional Operations Lead for Western Canada Marine Response Corporation (WCMRC) provided an overview of WCMRC and offered a more detailed presentation at a later date The following questions were addressed: - What is being sought from NCTC? - What FNs has KMC engaged with to date? - Has KMC met with the Makah? - KMC inquired about how NCTC and Maa-Nulth Treaty FNs are organized and relate to each other. - NCTC Executive would update the Tribal Council as a whole and determine next steps - NCTC is interested in learning more about spill response opportunities. - NCTC has a recently commissioned Tsunami Debris Working Group which may have interest in learning more.	None
11/13/2013	Email- Outgoing	Deb Foxcroft (President)	Gary Youngman (KMC)	Team Member emailed D. Foxcroft regarding the TERMPOL process and notified of KMC's intent to file the Facilities Application to the NEB in mid-December. Team Member advised that in addition to completing environmental studies, KMC has been working with Transport Canada to complete studies which focus on the safety of tankers entering Canadian waters, navigating through channels, approaching and berthing at a marine terminal and loading and unloading processes. Team Member stated that KMC is providing the opportunity for NCTC to review and comment on the technical studies over the next 2-3 months, and aggregate comments will be considered in the TERMPOL process. Team Member requested that NCTC respond by November 30, 2013 if interested in receiving the studies.	None
11/14/2013	Email- Outgoing	Clarissa Ginger (Executive Assistant), Florence Wylie (Executive Director)	Ellen Frisch (KMC)	F. Wylie emailed team member to follow-up on meeting of October 25, 2013. Team member wrote to inquire if there had been any further discussion at the Chief's level or working group level (Tsunami debris group) about a potential project discussion in the coming months or weeks.	None
11/20/2013	Letter - Outgoing	Clarissa Ginger (Executive Assistant)	Theresa Lane (KMC)	Team member emailed C. Ginger a copy of the TERMPOL study letter originally mailed to NCTC on November 13, 2013.	None
12/16/2013	Letter - Outgoing	Deb Foxcroft (President)	Ian Anderson (KMC)	Team member sent a letter to D. Foxcroft to notify NCTC of the Facilities Application Filing with the National Energy Board (NEB) on December 16, 2013. Team member provided a URL to the Application's location on the TransMountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None

APPENDIX A-7-05
SENCOT'EN ALLIANCE

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
09/30/2013	Letter - Outgoing		Howard Heffler (KMC)	Team member sent a letter to the Sencot'en Alliance which described the Trans Mountain Expansion Project, provided links to additional information about the Project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that the Sencot'en Alliance may have about the Project.	None

APPENDIX A-7-06
ST'AT'IMC CHIEFS COUNCIL

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
09/30/2013	Letter - Outgoing		Howard Heffler (KMC)	Team member sent a letter to the St'at'imc Chiefs Council which described the Trans Mountain Expansion Project, provided links to additional information about the Project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that the St'at'imc Chiefs Council may have about the Project.	None

APPENDIX A-7-07

STK'EMLUPSEMC TE SECWPEMC NATION

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/3/2013	Email-Outgoing	Travis Marr	Sondra Baker (TERA)	Team Member emailed T. Marr and attached a notice for an upcoming Commencement of the Geotechnical Borehole Program; this program commenced October 14, 2013 within Stkemlupsemc Te Secwepemc's (SSN) consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013 and was scheduled: • October 14 – October 22, 2013	None
10/3/2013	Fax	Travis Marr	Wanda Lewis (TERA)	Team Member faxed T. Marr a notice for an upcoming Commencement of the Geotechnical Borehole Program; this program commenced October 14, 2013 within SSN's consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013 and was scheduled: • October 14 – October 22, 2013	None
10/3/2013	Letter - Outgoing	Travis Marr	Wanda Lewis (TERA)	Team Member mailed T. Marr a notice for an upcoming Commencement of the Geotechnical Borehole Program; this program commenced October 14, 2013 within SSN's consultative area as outlined in the Heritage Inspection Permit No. 2013-0165 issued July 3, 2013 and was scheduled: • October 14 – October 22, 2013	None
10/16/2013	Email-Outgoing	Travis Marr	Ellen Frisch (KMC)	Team member emailed T. Marr and discussed scheduling a walk through the existing utility right of way in Lac du Bois Protected Area with the Nation's Chiefs and their staff as well as BC Parks, Trans Mountain staff and environmental experts.	None
10/16/2013	Phone - Attempt	Travis Marr	Ellen Frisch (KMC)	Team member phoned T. Marr and attempted to leave a message but was advised they did not have voicemail and were away on personal leave and would not be returning on October 17 2013.	None
10/28/2013	Email-Outgoing	Travis Marr	Margaret Mears (KMC), Jason Smith (TERA), Stephanie Snider (Lizette Parsons Bell & Associates), Russ Thompson (IPP), Brian Wikeem (TERA)	Team member thanked T. Marr for attending the recent field tour of the Lac du Bois Protected Area. Team member further attached the minutes taken at the event as well as the electronic copies of the documents that were distributed at the tour, and requested them to review and inform her of any corrections or additions. Team member also informed that Kinder Morgan Canada (KMC) was notified that BC Parks had approved the Stage 1 Boundary Adjustment application for five parks, including the Lac du Bois Protected Area. KMC is now proceeding with the detailed studies and consultations required by the Stage 2 application to assess the full impact of the proposed project.	Routing - Existing Pipelines, Routing - Forestry Rights, Routing - Future Land Use, Routing - Other, Socio-Econ. Terrestrial - Economic Benefit/Impact, Socio-Econ. Terrestrial - Infrastructure and Services, Terrestrial - Invasive Species, Terrestrial - Soils, Terrestrial - Species at Risk/of Concern, Safety - Pipeline Integrity
10/29/2013	Email-Incoming	Jim McGrath	Margaret Mears (KMC)	J. McGrath emailed team member to touch base on the status of the projects moving forward. J. McGrath noted that the rate sheet that was sent looked fine and noted trying to confirm next steps on the project from SSN's end.	None
10/29/2013	Email-Outgoing		Ellen Frisch (KMC)	Team member emailed T.Marr to inform that BC Parks and KMC had identified November 15, 2013 as preferred date for next tour of Lac du Bois Protected Area. Team member proposed meeting at local venue to review maps and info and indicated KMC would provide lunch and transportation. KMC requested info regarding items of specific interest to SSN and expressed desire for individuals with traditional knowledge to be present.	None
10/29/2013	Email-Outgoing	Travis Marr	Kate Stebbings (Consultant), Margaret Mears (KMC), Jason Smith (TERA), Stephanie Snider (Lizette Parsons Bell & Associates), Russ Thompson (IPP)	Team member re-sent the attached files, stating that she had extracted the single map related to Lac du Bois.	None
10/29/2013	Email-Outgoing	Travis Marr	Ellen Frisch (KMC)	Team member emailed T. Marr and informed that BC Parks, key experts and the KMC team had been canvassed regarding the availability for the next Lac du Bois Protected area tour. Team member provided dates for the tour. Team member provided tour logistics. Team member requested information on the general sense of participation from SSFN leadership, staff and others.	None
10/31/2013	Email-Outgoing	Jim McGrath	Margaret Mears (KMC)	Team member emailed J. McGrath and notified that field work for this season is complete. Team member noted not having heard back from SSN on KMC's proposal. Team member inquired if J. McGrath had heard anything about progress on the proposal. Team member informed that the	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				next step would be approval of the proposal and then planning the work.	
11/4/2013	Phone - Outgoing	Travis Marr	Ellen Frisch (KMC)	Team member phoned T. Marr to discuss SSN's position on the proposed tour of Lac Du Bois Grasslands Protected Area. T. Marr was to confirm the tour with team member on November 5, 2013. Team member noted that a presentation of the park could also be given for those unable to complete a physical tour.	None
11/5/2013	Phone - Outgoing	Travis Marr	Ellen Frisch (KMC)	Team member phoned T. Marr and discussed the proposed tour of Lac Du Bois Grasslands Protected area. T. Marr noted that Chief and Council had not responded regarding tour scheduling and T. Marr resolved to call team member on November 7, 2013 to confirm the tour.	None
11/7/2013	Phone - Attempt	Travis Marr	Ellen Frisch (KMC)	Team member phoned T. Marr and left a voicemail message requesting an update on the status of the proposed Lac Du Bois Grassland Protected Area tour.	None
11/14/2013	Email-Outgoing	Travis Marr	Ellen Frisch (KMC)	Team member emailed T. Marr to acknowledge the lack of interest in a driving tour of the Lac Du Bois Grasslands Protected Area from Joint Council and staff members at that time. Team member noted that there could be renewed interest in the new year and suggested that a date when Chief, Council and technical staff were available for a field visit could be established to allow planning of timing and required information.	None
12/16/2013	Email-Outgoing	Travis Marr	Regan Schlecker (KMC)	Team member emailed T. Marr and notified SSN of the Project's filing with the NEB. Team member included the press release (dated December 16, 2013) of the filing for SSN records. T. Marr responded to confirm receipt of Project filing email and press release.	None

APPENDIX A-7-08

TS'ELXWEYEQW TRIBES MANAGEMENT LIMITED

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
10/2/2013	Email- Outgoing	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	Team member and K. Ardell exchanged several emails to conform the logistics of a meeting on October 8, 2013.	None
10/8/2013	In-Person	Keri Ardell (TST - Project Coordinator), Otis Jasper (President)	Max Nock (KMC), Jamie Andrews (KMC)	<p>Team members met with O. Jasper and K. Ardell of TTML to discuss: ICA, SUMAS, SGES, and Grass Indenture.</p> <p>ICA:</p> <ul style="list-style-type: none"> - Milestone 2 and 4 may need to be paid out as soon as possible as they are in the process of being completed. - C. Oloriz (HEG) is meeting with TTML on Wednesday October 9, 2013 to discuss new dates for deliverables in connection to the ICA. - Milestone 1 has been completed and O. Jasper will contact C. Oloriz (HEG) about the Preliminary Interests submission. - The indicator report and the baseline report should be completed and submitted prior to December 16 Facility Application Filing. - The Final report will not be complete for the initial Facility Application Filing. <p>SUMAS:</p> <ul style="list-style-type: none"> - Sumas is to be added to the LOA for capacity funding purposes - O. Jasper is working with the Bands to confirm the most effective way for them to engage with KMC regarding the project. O. Jasper will advise KMC. <p>SGES:</p> <ul style="list-style-type: none"> - O. Jasper explained need for clarification regarding the fact that it was KMC who awarded the contracts to TERA and TRITON and not TTML awarding the contracts to TRITON. - There was a miscommunication where communities that are owners of SGES were under the impression that because of TTML agreement that SGES could not be involved in the work on behalf of two communities that requested to have them do work. It is unclear as to whether the work was related to community engagement or other work. The two communities are not party to our LOA or our ICA. <p>Grass Indenture:</p> <ul style="list-style-type: none"> - O. Jasper will discuss the issue with affected bands and determine a critical path for discussions. J. Hall would most likely be the negotiator on this Indenture Issue. - Until the SGES issue is resolved, the Grass Indenture Issue cannot move forward. <p>Discussion:</p> <ul style="list-style-type: none"> - O. Jasper would like to put forward a formalized list of questions for KMC response. 	None
10/17/2013	Email- Outgoing	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell and inquired about new dates for the ICA completion.	None
10/23/2013	Email- Incoming	Cara Brendzy SRRMC - Project Archaeologist/ GIS Specialist), Otis Jasper (President)	Jamie Andrews (KMC)	<p>O. Jasper emailed team member and forwarded communication from C. Brendzy regarding issues with TERA on ICA field work:</p> <ul style="list-style-type: none"> - TERA is unable to share their PDF map book with FNs due to their KM contract - TERA works weekends and TTML does not normally <p>C. Brendzy seemed confident that these issues could all be overcome.</p> <p>O. Jasper committed to having a follow up conversation with C. Brendzy.</p>	None
11/5/2013	Email- Incoming	David Schaepe (SRRMC - Director / Senior Archaeologist)	Max Nock (KMC)	<p>D. Schaepe emailed team member to provide an agenda and location for the meeting scheduled November 6, 2013 at the Stó:lō Resource Centre.</p> <p>Team member emailed D. Sharpe confirmation of attendance for the meeting scheduled November 6, 2013 at the Stó:lō Resource Centre.</p>	None
11/14/2013	Email- Incoming	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	K. Ardell emailed team member the Integrated Cultural Assessment Indicators Report and invited questions or discussion.	None
11/15/2013	Email- Outgoing	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell to confirm receipt of the Integrated Cultural Assessment Indicators Report.	None
11/18/2013	Email- Outgoing	Otis Jasper (President)	Regan Schlecker (KMC)	Team member emailed O. Jasper on November 18, 2013. Team member invited O. Jasper and TTML Leadership to attend an upcoming Chilliwack Chamber of Commerce event on November 28, 2013. Team member stated that G. Toth (Senior Project Director, KMC) would be sharing details on timing, types of jobs and procurement opportunities that will be available for the Chilliwack area if the Project proceeds and how businesses can prepare to capture local economic opportunities. O. Jasper and other TTML representatives who are interested in attending were invited to contact the team member by November 22, 2013 to reserve seating. Details about the location and time of the event were provided.	None
11/26/2013	Email- Outgoing	Keri Ardell (TST - Project Coordinator), Otis Jasper (President)	Max Nock (KMC)	<p>Team member emailed O. Jasper minutes from the previous meeting and suggested another meeting on November 28, 2013, assuming that team member and O. Jasper had made enough progress on previously-identified action items.</p> <p>Team member emailed O. Jasper and K. Ardell to indicate unavailability to meet on November 28, 2013. Team member suggested a conference call or a</p>	None

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
				rescheduling of the meeting.	
11/29/2013	Email-Outgoing	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell a proposed agenda for upcoming meeting on December 4, 2013 or December 5, 2013. Team member confirmed contacting M. Nock (KMC) to set meeting time.	None
12/2/2013	Email-Incoming	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	K. Ardell emailed team member requested to meet on December 9, 2013 and enquired about team members' availability. Team member emailed K. Ardell and enquired about preferred location for the meeting.	None
12/3/2013	Email-Incoming	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	K. Ardell emailed team member and enquired if a meeting could be scheduled for December 9, 2013 or December 10, 2013. K. Ardell also attached information and invoices for the first 3 ICA milestones. Team member emailed K. Ardell to request additional meeting dates. Team member acknowledged receipt of the ICA milestone information.	None
12/4/2013	Email-Incoming	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	K. Ardell emailed team member suggested a meeting on December 12, 2013. Team member emailed K. Ardell and confirmed a meeting on December 12, 2013. Team member invited a phone conversation regarding ICA milestone funds. K. Ardell emailed team member and outlined ICA milestones: 1) Scoping meetings and review of existing documentation 2) Workshops 3) Indicator reports 4) Data collection/field program involving SRRMC. K. Ardell noted that December 12, 2013 meeting time had not yet been confirmed but that team member was to be notified when the time was approved.	None
12/5/2013	Email-Outgoing	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell to acknowledge that the December 12, 2013 meeting time was not yet confirmed by TTML and to request that team member be informed as soon as the meeting was confirmed.	None
12/9/2013	Email-Outgoing	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	Team member emailed K. Ardell to schedule a meeting on December 12, 2013. K. Ardell emailed team member to request an immediate phone call.	None
12/9/2013	Email-Outgoing	Keri Ardell (TST - Project Coordinator), Otis Jasper (President)	Jennifer Hooper (Consultant)	Team member emailed K. Ardell and O. Jasper a copy of G. Toth's (KMC) presentation to the Chilliwack Chamber of Commerce, made on November 27, 2013.	None
12/16/2013	Email-Outgoing	Otis Jasper (President)	Regan Schlecker (KMC)	Team member emailed O. Jasper and notified TTML of the Project's filing with the NEB. Team member included the press release (dated December 16, 2013) of the filing for TST records.	None
12/16/2013	Letter - Outgoing	Willy Hall (President)	Ian Anderson (KMC)	Team member sent a letter sent a letter to W. Hall and notified TTML of the Facilities Application Filing with the NEB on December 16, 2013. Team member provided a URL to the Application's location on the Trans Mountain website. Team member noted the NEB would hold a public engagement process, which would include a hearing on the Application prior to a formal decision on the Project. Team member included the NEB's website URL for further information on this process.	None
12/17/2013	Phone - Incoming	Keri Ardell (TST - Project Coordinator)	Jamie Andrews (KMC)	K. Ardell phoned team member to discuss recently submitted invoices and to confirm the proposed agenda for the meeting scheduled December 18, 2013.	None
12/19/2013	Email-Incoming	Otis Jasper (President)	Max Nock (KMC)	O. Jasper emailed team member to confirm that SFN would participate in the TTML LOU process. Team member emailed O. Jasper and noted that TTML would work with SFN to determine LOA costs still owing to SFN. Team member noted that KMC would also consider the revised proposed CFA and discuss payment options.	None

APPENDIX A-7-09
TSILHOQOT'IN NATIONAL GOVERNMENT

Event Date	Event Type	Community Contacts	Team Members	Details	Concerns
09/30/2013	Letter - Outgoing	Crystal Verhaeghe (Executive Director)	Howard Heffler (KMC)	Team member sent a letter to C. Verhaeghe which described the Trans Mountain Expansion Project, provided links to additional information about the Project, supplied the information for further Kinder Morgan contact and asked to discuss any questions or concerns that the Tsilhoqot'in National Government may have about the Project.	None

APPENDIX B – PROJECT ENGAGEMENT LETTERS



Trans Mountain Expansion Project

✉ Email: info@transmountain.com | ☎ Phone: 1.866.514.6700 | 🌐 Website: www.transmountain.com | @TransMtn

November 13, 2013

Dear Chief

Re: Trans Mountain Expansion Project and First Nation input in Transport Canada's TERMPOL Process re: marine issues

I am writing to let you know about the engagement process that Trans Mountain Pipeline ULC has been undertaking with Transport Canada regarding the Trans Mountain Expansion Project (TMEP). This process will be of interest to your First Nation as it addresses studies associated with vessel safety and navigation in the Salish Sea.

We also want to provide you with early information so that you can acquire and review copies of several studies that will come out of this process. As background, Trans Mountain has been engaging with your community over the past months on environmental matters related to the development of our application to the National Energy Board (NEB) pertaining to TMEP.

Trans Mountain intends to submit its application requesting a Certificate of Public Convenience and Necessity to the NEB in mid-December 2013. In support of the application, a number of studies are being undertaken by Trans Mountain's contractors, TERA, and First Nations to inform the NEB in relation to the marine aspects of TMEP. These studies were listed in detail in the Environmental and Socio-Economic Approach (the ESA) document, first circulated in March 2013 and form part of the process of understanding potential environmental and social impacts of the TMEP.



In addition to the environmental assessment process, Trans Mountain has been working with Transport Canada on a “Technical Review Process of Marine Terminal Systems and Transshipment Sites” or TERMPOL. TERMPOL is a voluntary, extensive review process, led by Transport Canada, which focuses on the marine transportation components of a project. TERMPOL examines:

- the safety of tankers entering Canadian waters,
- navigating through channels,
- approaching and berthing at a marine terminal; and
- loading or unloading oil.

TERMPOL recommends the completion of a number of studies by the proponent, Trans Mountain, including a risk assessment. The TERMPOL Review Committee (TRC) is chaired by Transport Canada and includes a number of experts and administrators from different Federal agencies besides Transport Canada. TERMPOL does not have a regulatory role and the outcome of the report is not binding on the proponent or the regulators who have jurisdiction over the project. It does, however, help inform the regulators (National Energy Board and involved federal departments) and the public on the marine safety aspects of the project.

The TRC reviews the various studies prepared and submitted by the proponent and evaluates the potential risks and mitigations associated with the project as well as the adequacy of the marine network system to accommodate the project safely. At the end of the review the TRC prepares a report that is made public. The nature and scope of these studies, prepared for the TERMPOL process, are summarized in the attached summary.

Trans Mountain wishes to provide you with the opportunity to review and comment on the technical studies, and to aggregate these comments to be considered into the TERMPOL process. Trans Mountain expects the various TERMPOL studies to be ready in December 2013 at which time they will be shared with interested First Nations for comment and advice. These studies will form a submission to the TRC and the NEB as part of the Application. The TRC review will inform the NEB hearing process, therefore Trans Mountain is seeking to receive feedback and advice from interested First Nations in the initial 2-3 months of the TERMPOL process to ensure adequate time to consider those comments in the TERMPOL process.



Communities wishing to receive the studies in December 2013 will be requested to provide advice and feedback to Trans Mountain within 2 to 3 months of receiving the studies. Trans Mountain will collect this feedback and provide it to Transport Canada and the TRC for their knowledge and information to take into account when they evaluate the various studies. Depending on the nature of the comments received, Trans Mountain may decide to carry out further work on the studies. Transport Canada has offered to participate in the proponent-lead meetings with First Nations to explain the TERMPOL process, upon request from either Kinder Morgan or participating First Nations.

If your community is interested in receiving the studies and providing comments or advice, please contact me to arrange for distribution and a potential meeting to agree on the process and timing. We appreciate the technical nature of this material and will be available to assist your community in understanding aspects that are of specific interest to the community.

Please respond at your earliest convenience, by November 30, 2013 if you seek to receive the TERMPOL studies.

Sincerely,

Gary Youngman

Lead, Aboriginal Engagement

Attachment

cc.



Summary of TERMPOL Studies

1. Introduction (Termopol Study 3.1) - This introductory section provides a brief overview of the TMEP project and a summary of the Termopol scope as agreed upon with the TRC.
2. Origin, Destination and Marine Traffic Volume Survey (Termopol Study 3.2) -The objectives of this survey are to quantify and describe all marine traffic movement that collectively forms the regional marine traffic network. The purpose is to assess the impact of the proposed shipping traffic on existing and potential future shipping traffic in the region. The traffic data is used as input into the risk analysis elements (Termopol 3.8 and 3.15).
3. Fishery Resources Survey (Termopol Study 3.3) -The objectives of this survey are to identify locations of fish, fish habitat, fishing operations and the customary routes to major fishing grounds. It serves to update the existing database on regional fisheries resources.
4. Offshore Exercise, Exploration and Exploitation Activities Survey (Termopol Study 3.4) - This identifies the geographical locations and frequency of use of military exercise areas involving ships and aircrafts; and the routes used by offshore supply vessels engaged in the offshore exploration and exploitation of oil and gas fields. This study was not required because the movement of military vessels is covered in Termopol 3.2 and there are no offshore oil and gas fields within the project's study area.
5. Route Analysis, Approach Characteristics and Navigability Survey (Termopol Study 3.5) - This study is to assess ship and route safety, the adverse effects of ship accidents and, when applicable, public safety matters associated with tanker traffic. This study is at the heart of the navigation assessment and involves a detailed assessment and description of the route.
6. Special Underkeel Clearance Survey (Termopol Study 3.6) - All relevant factors which may affect underkeel clearance in order to ensure navigation safety is covered as part of this study.
7. Transit Time and Delay Survey (Termopol Study 3.7) - The objective of the "transit time" component of this survey is to determine the safest coastal zone and/or inland waterway speed profile for ships proceeding to and from the proposed marine terminal. The objective of the "delay" component of this survey is to determine the probable causes, locations, durations and the frequencies of delays in the movements of marine traffic



through a ship channel or ship channels connecting the coastal approaches and the proposed marine terminal.

8. Casualty Data Survey (Termopol Study 3.8) - This study researches historical casualty information and is an important component of the risk analysis.
9. Ship Specifications (Termopol Study 3.9) - The objective of this is to document the range of tankers expected to demonstrate that the navigability assessment and terminal design are appropriate for the intended vessels, and that all vessels will be compliance with statutory requirements under the IMO and Canada Shipping Act.
10. Site Plans and Technical Data (Termopol Study 3.10) - This is a technical discussion of the engineering design information relating to the proposed marine terminal together with relevant background data, design criteria, environmental and other site studies.
11. Cargo Transfer and Transshipment Systems (Termopol Study 3.11) - The survey outlines the plans and descriptions of the design ship's cargo containment and transfer systems. It briefly outlines the key features of the marine terminal's cargo handling and transfer system, which will incorporate equipment and instrumentation and procedures that will be to industry best practices. Transshipment of cargo is not considered part of this project and is not covered in this study.
12. Channel, Manoeuvring and Anchorage Elements (Termopol Study 3.12) - Here the suitability of existing channels for the design ship(s) is assessed and it identifies any areas of concern where navigation requires particular attention.
13. Berth Procedures and Provisions (Termopol Study 3.13) - Although specific detailed procedures will only developed later after the terminal design has advanced, the study documents normal or expected berthing and unberthing procedures based on fast time simulation of the design vessel in relation with the design terminal and accepted best practices in the industry.
14. Single Point Mooring Provisions and Procedures (Termopol Study 3.14) - This section is not applicable for the TMEP project.
15. General Risk Analysis and Intended Methods of Reducing Risks (Termopol Study 3.15) - The risk of uncontrolled releases of cargo either en route or at the terminal are assessed together with the fate and behaviour of any oil spilled to the marine environment. Risk mitigation is discussed and detailed in this study.



16. Port Information Book (Termpol Study 3.16) - The Port Information Book is to provide ship's personnel with a comprehensive set of details relevant to the needs of the port of Vancouver. It is based on the Port Metro Vancouver Harbour Operations Manual and would be prepared prior to the facility commencing operations in order to ensure it is up to date.
17. Terminal Operations Manual (Termpol Study 3.17) - A Terminal Site Operations Manual is meant to inform and to guide the crews of ships calling at the marine terminal on specific terminal related items that the vessel would require to know in order to conduct itself safely and responsibly. As with the Port Information Book, this document will be prepared prior to commencement of operations.
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20. Hazardous and Noxious Liquid Substances (Termpol Study 3.20) - This study is not applicable to TMEP.

Trans Mountain Expansion Project

✉ Email: info@transmountain.com | ☎ Phone: 1.866.514.6700 | 🌐 Website: www.transmountain.com | 📱 @TransMtn

December 16, 2013

Chief

Dear Chief and Council,

As part of our ongoing commitment to provide you with timely and accurate information about the proposed expansion of the Trans Mountain Pipeline system, I am pleased to inform you that on December 16, 2013, Trans Mountain Pipelines filed a Facilities Application with the National Energy Board (NEB) for the proposed Trans Mountain Expansion Project.

This application filing follows over a year and a half of engagement with pipeline and marine communities, a detailed environmental and socio-economic assessment, route assessments, and other various marine and terrestrial risk analyses and studies. This filing is a significant milestone in the development of this proposed Project and another step in the on-going engagement we are having with communities. When printed, the Application is over 20,000 pages and up to two metres high when stacked end on end. Please visit our Application website at <http://application.transmountain.com> where you can view an interactive map, read FAQs, and download Application and volume-specific summaries.

The NEB will hold its own public engagement process, including a hearing on the Application before it makes a decision on the proposed Project. Information on how to participate in this process can be found at <http://www.neb-one.gc.ca/clf-nsi/rthnb/pblcprtptn/pblchrng/pblchrng-eng.html>.

We look forward to continued engagement with your community. We are currently reviewing the results of the Environmental and Socio-Economic Assessment as related to the preliminary interests shared by your community and will have a response finalized in January, 2014. If you have any questions or require additional information, please feel free to contact Ellen Frisch at (250) 589-9657 or efrisch@shaw.ca.

Sincerely,



Ian Anderson
President

cc: Gary Youngman, Aboriginal Engagement Lead
Regan Schlecker, Aboriginal Relations Manager

Trans Mountain Expansion Project

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December 16, 2013

Dear Chief

Re: Request for Copies of TERMPOL Studies

Enclosed please find a USB stick containing copies of the Transport Canada TERMPOL studies as they relate to the Trans Mountain Expansion Project for your review. We would appreciate receiving your advice and feedback within two to three months of receipt of the studies.

Should you have any questions or comments, please do not hesitate to contact me at 604-312-9897 or gary_youngman@transmountain.com.

Sincerely,



Gary Youngman

Lead, Aboriginal Engagement

cc. Ellen Frisch

Enclosure



Summary of TERMPOL Studies

1. Introduction (Termopol Study 3.1) - This introductory section provides a brief overview of the TMEP project and a summary of the Termopol scope as agreed upon with the TRC.
2. Origin, Destination and Marine Traffic Volume Survey (Termopol Study 3.2) - The objectives of this survey are to quantify and describe all marine traffic movement that collectively forms the regional marine traffic network. The purpose is to assess the impact of the proposed shipping traffic on existing and potential future shipping traffic in the region. The traffic data is used as input into the risk analysis elements (Termopol 3.8 and 3.15).
3. Fishery Resources Survey (Termopol Study 3.3) - The objectives of this survey are to identify locations of fish, fish habitat, fishing operations and the customary routes to major fishing grounds. It serves to update the existing database on regional fisheries resources.
4. Offshore Exercise, Exploration and Exploitation Activities Survey (Termopol Study 3.4) - This identifies the geographical locations and frequency of use of military exercise areas involving ships and aircrafts; and the routes used by offshore supply vessels engaged in the offshore exploration and exploitation of oil and gas fields. This study was not required because the movement of military vessels is covered in Termopol 3.2 and there are no offshore oil and gas fields within the project's study area.
5. Route Analysis, Approach Characteristics and Navigability Survey (Termopol Study 3.5) - This study is to assess ship and route safety, the adverse effects of ship accidents and, when applicable, public safety matters associated with tanker traffic. This study is at the heart of the navigation assessment and involves a detailed assessment and description of the route.
6. Special Underkeel Clearance Survey (Termopol Study 3.6) - All relevant factors which may affect underkeel clearance in order to ensure navigation safety is covered as part of this study.
7. Transit Time and Delay Survey (Termopol Study 3.7) - The objective of the "transit time" component of this survey is to determine the safest coastal zone and/or inland waterway speed profile for ships proceeding to and from the proposed marine terminal. The objective of the "delay" component of this survey is to determine the probable causes, locations, durations and the frequencies of delays in the movements of marine traffic



through a ship channel or ship channels connecting the coastal approaches and the proposed marine terminal.

8. Casualty Data Survey (Termpol Study 3.8) - This study researches historical casualty information and is an important component of the risk analysis.
9. Ship Specifications (Termpol Study 3.9) - The objective of this is to document the range of tankers expected to demonstrate that the navigability assessment and terminal design are appropriate for the intended vessels, and that all vessels will be compliance with statutory requirements under the IMO and Canada Shipping Act.
10. Site Plans and Technical Data (Termpol Study 3.10) - This is a technical discussion of the engineering design information relating to the proposed marine terminal together with relevant background data, design criteria, environmental and other site studies.
11. Cargo Transfer and Transshipment Systems (Termpol Study 3.11) - The survey outlines the plans and descriptions of the design ship's cargo containment and transfer systems. It briefly outlines the key features of the marine terminal's cargo handling and transfer system, which will incorporate equipment and instrumentation and procedures that will be to industry best practices. Transshipment of cargo is not considered part of this project and is not covered in this study.
12. Channel, Manoeuvring and Anchorage Elements (Termpol Study 3.12) - Here the suitability of existing channels for the design ship(s) is assessed and it identifies any areas of concern where navigation requires particular attention.
13. Berth Procedures and Provisions (Termpol Study 3.13) - Although specific detailed procedures will only developed later after the terminal design has advanced, the study documents normal or expected berthing and unberthing procedures based on fast time simulation of the design vessel in relation with the design terminal and accepted best practices in the industry.
14. Single Point Mooring Provisions and Procedures (Termpol Study 3.14) - This section is not applicable for the TMEP project.
15. General Risk Analysis and Intended Methods of Reducing Risks (Termpol Study 3.15) - The risk of uncontrolled releases of cargo either en route or at the terminal are assessed together with the fate and behaviour of any oil spilled to the marine environment. Risk mitigation is discussed and detailed in this study.



16. Port Information Book (Tempol Study 3.16) - The Port Information Book is to provide ship's personnel with a comprehensive set of details relevant to the needs of the port of Vancouver. It is based on the Port Metro Vancouver Harbour Operations Manual and would be prepared prior to the facility commencing operations in order to ensure it is up to date.
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PART 4 – LANDOWNER RELATIONS UPDATE NO. 1
AUGUST 1 TO DECEMBER 31, 2013

TABLE OF CONTENTS

	<u>Page</u>
1.1 Introduction.....	4-1
1.1.1 Purpose of Landowner Relations Update	4-1
1.1.2 Landowner Relations Program Scope (August 1 to December 31, 2013)	4-1
1.2 Components of the Program	4-1
1.2.1 Notification	4-1
1.2.2 Consultation and Survey Consent	4-2
1.2.3 Corridor Survey Limitations	4-3
1.3 Summary of Outcomes.....	4-4
1.3.1 Overview of Landowner Feedback August 1 to December 31, 2013	4-4

LIST OF TABLES

Table 1.3.1	Landowners and Occupants within the Proposed Pipeline Corridor	4-2
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1.1 Introduction

1.1.1 Purpose of Landowner Relations Update

On December 16, 2013, Trans Mountain filed an Application with the NEB for the Trans Mountain Pipeline Project (TMPEP or the Project). The landowner relations program described in the Application included engagement activities with landowners up to July 31, 2013. The Trans Mountain Landowner Relations Program has been implemented to introduce and discuss the Project to landowners and occupants along the proposed pipeline corridor. This Update provides a summary of the landowner engagement activities and outcomes from August 1 to December 31, 2013, highlighting any additional activities undertaken, and any issues, concerns and questions raised during this time by landowners.

1.1.2 Landowner Relations Program Scope (August 1 to December 31, 2013)

The Landowner Relations Program described in the Application continued from 1 August to December 31, 2013 with a focus on contacting landowners, occupants and Crown tenure holders to provide information about the Project, collect concerns they may have, address questions where possible and gain consent to enter their lands for environmental and routing studies and surveys.

Within the August to December 2013 period, portions of the proposed pipeline corridor have been modified or adjusted and a program has been initiated to notify additional persons potentially impacted by the Project and seek their consent to complete environmental and routing surveys. Communication with those persons has commenced and will continue through 2014.

1.2 Components of the Program

The Landowner Relations Program carried out between August and December 2013 is a continuation of the Program described in the Application. Working with the routing and engineering, environmental teams, the land team has worked to identify any changes in potentially affected lands resulting from routing modifications, and provide project notification and details to any new landowners or occupants potential affected. Land agents have continued to try to obtain survey consent for those lands where landowners have not yet provided their consent, collect issues and concerns and work to provide information to landowners in response to those questions and concerns. These activities are discussed in more detail in the following sections.

1.2.1 Notification

On December 31, 2013, the NEB requested that Trans Mountain send the NEB's Notice of Application to Participate (the Notice) to a number of different parties, including landowners and occupants along the existing Trans Mountain Pipeline (TMPL) system and other interested parties (i.e., landowners and occupants affected by TMPEP, other stakeholders, etc.). Trans Mountain was directed by NEB to sending the Notice starting no earlier than January 15, 2014. Trans Mountain immediately began steps for distribution commencing January 15, 2014 as instructed by the NEB. Additional information on these efforts and their results will be included within a subsequent update.

1.2.1.1 Notification to Landowners or Occupants

Between August 1 to December 31, 2013, no additional Project notifications to landowners or occupants were issued. Trans Mountain focused its efforts on engaging landowners with interests within the proposed pipeline corridor to provide Project information, seek input and obtain survey consent.

1.2.2 Consultation and Survey Consent

In late December 2013, the proposed pipeline corridor was adjusted in discrete locations. These adjustments resulted in the inclusion of some additional landowners and occupants. Work began immediately to identify those within the alternative corridor and prepare for engagement.

To date, along the current preferred corridor, 1313 landowners, and 304 occupants and purchaser’s in Alberta were contacted. In BC, 4029 landowners, and 699 occupants and pending land purchasers were contacted.

Table 1.3.1 below provides updated information for the Application on the numbers of parcels, located in-whole or in-part, within the boundaries of the proposed study corridor.

**TABLE 1.3.1
 LANDOWNERS AND OCCUPANTS
 WITHIN THE PROPOSED PIPELINE CORRIDOR**

	Alberta	BC	Total
Landowners	1313	4029	5342
Occupants and Pending Purchasers	304	699	1003
Total	1617	4728	6345

The Occupants and Pending statistics in Table 1.3.1 above include the number of contacts with occupants and pending land purchasers. This includes both private and Crown occupants. Table 1.3.1 in the Application incorrectly identified this group as Crown Occupants or Crown rights holders only. In addition, the numbers of Landowners above includes private landowners as well as Crown entities. Table 1.3.1 in the Application incorrectly identified this group to be Private Landowners only.

From commencement of the program, comments from landowners and occupants were recorded for each tract of land into a tracking database. Any questions or concerns a landowner raised were documented in the database according to the following categories:

- survey consent comments;
- survey refusal comments;
- construction concerns;
- routing concerns; and

- legacy issues (operations, maintenance, and land matters related to the TMPL).

If the comment did not fit into one of the noted categories, it was documented in the chronology of the file.

Legacy issues stemming from the existing TMPL and operations continue to be forwarded by the land agents to Trans Mountain Operations for action. Where questions or concerns were raised relating to the proposed TMEP, land agents provided a response if the information was available. Where land agents needed to obtain additional information from Trans Mountain to respond to questions raised, the agents undertook to record the issue and respond when the desired information was available.

This approach provided an opportunity to collect information on aspects of the land that could be helpful in defining a route or potential impacts of the Project on the lands as well as to identify issues and potential mitigation measures.

During the period of August 1 to December 31, 2013, the questions, concerns, and issues raised by landowners and occupants fell into the category of issues previously identified in the Application. Most new contacts were with landowners in B.C.

Communication with landowners and occupants is ongoing, and Trans Mountain will continue to address questions and concerns as they arise through the regulatory process and throughout the life of the Project.

1.2.3 Corridor Survey Limitations

1.2.3.1 Landowners and Occupants

During the August to December 2013 period, a number of landowners and occupants continued to refuse to provide consent for surveys. Surveys were not completed on those respective land parcels. The occurrence of refusals remains intermittently distributed throughout the proposed pipeline corridor.

The reasons for refusal when provided by the landowner, continued to vary substantially. Where opportunities existed, an agent revisited the landowner or occupant to provide clarification about the Project, address outstanding issues or determine if circumstances had changed that would allow for survey consent. The efforts to revisit landowners and occupants resulted in only a limited number of additional consents for survey.

Some landowners and occupants consented to survey but restricted survey areas to the TMPL right-of-way only. In those situations, areas between the right-of-way and the boundary of the proposed pipeline corridor were not accessible.

1.2.3.2 British Columbia Provincial Parks

In November, 2013, the Education and Research Park Use permit application was approved for all provincial parks in B.C.. The permit allows entry onto the lands for environmental and routing studies, which will take place in the spring and summer of 2014.

1.2.3.3 *Indian Reserves*

The Aboriginal Engagement section of this Update provides details on the status of engagement with Aboriginal communities affected by the TMEP.

1.3 **Summary of Outcomes**

1.3.1 ***Overview of Landowner Feedback August 1 to December 31, 2013***

During the August 1 to December 31, 2013 period, landowner meetings included discussions about the Project in general as well as requests for consent for Project-specific surveys. The meetings also provided an opportunity for landowners to ask questions and identify concerns regarding the Project.

The questions, issues, or concerns raised by landowners during the August to December 2013 period remained consistent under the following seven main groupings.

- **Compensation and Financial:** regarding compensation for the Project activities on the land and impacts to their business or financial affairs.
- **Environmental and Land Impacts:** regarding environmental impacts due to the Project or land impacts such as access.
- **Land Value:** regarding the impact the Project may have on the land value.
- **Legacy Concerns:** regarding previous interactions or activities with the TMPL.
- **Miscellaneous:** comments that do not readily fit in the headings above.
- **Opposition to the Project:** capturing the landowner's general opposition to the Project.
- **Routing:** regarding where the pipeline will be located.