

City of Burnaby Opposition to the Kinder Morgan Trans Mountain Expansion Project

City Staff Presentation
Public Information Events
2014 April 9 + 15



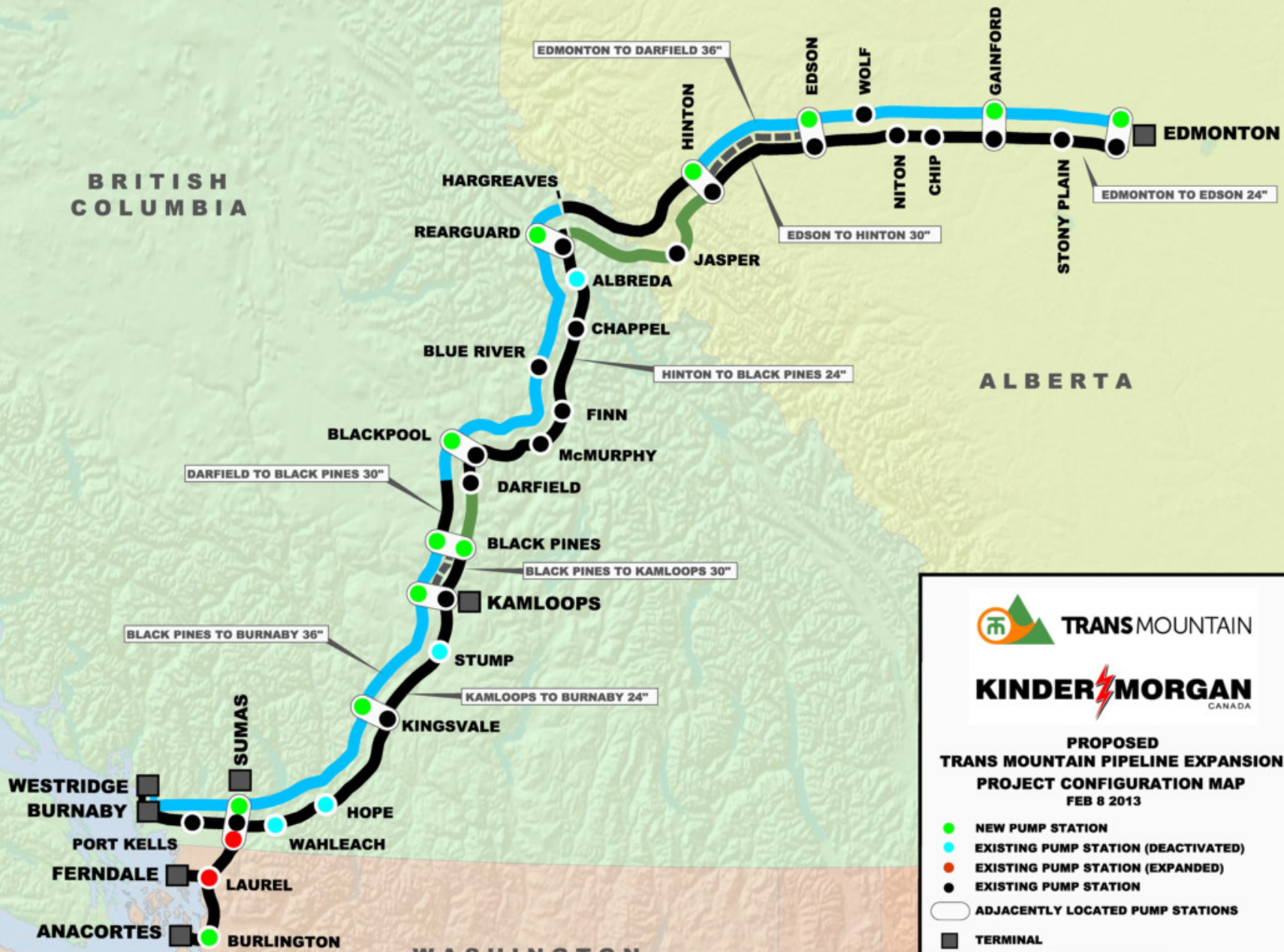
Trans Mountain Expansion Project













BRITISH COLUMBIA

ALBERTA

WASHINGTON



**PROPOSED
TRANS MOUNTAIN PIPELINE EXPANSION
PROJECT CONFIGURATION MAP
FEB 8 2013**

-  NEW PUMP STATION
-  EXISTING PUMP STATION (DEACTIVATED)
-  EXISTING PUMP STATION (EXPANDED)
-  EXISTING PUMP STATION
-  ADJACENTLY LOCATED PUMP STATIONS
-  TERMINAL
-  EXISTING PIPELINE -ACTIVE
-  EXISTING PIPELINE -REACTIVATED
-  NEW PIPELINE
-  EXISTING PIPELINE -INACTIVE

Summary of Kinder Morgan Project Scope

Existing TMPL System

300,000 barrels per day (bpd)

Single pipeline
(158 km “twinning” as part of Anchor Loop Project)

1,150 km pipeline

Light and synthetic crude oil products

Expansion primarily in Edmonton

TMEP

890,000 bpd

Two pipelines (Line 2)

980 km additional pipeline
(reactivation of segments)

Product focus shift to **heavy crude**

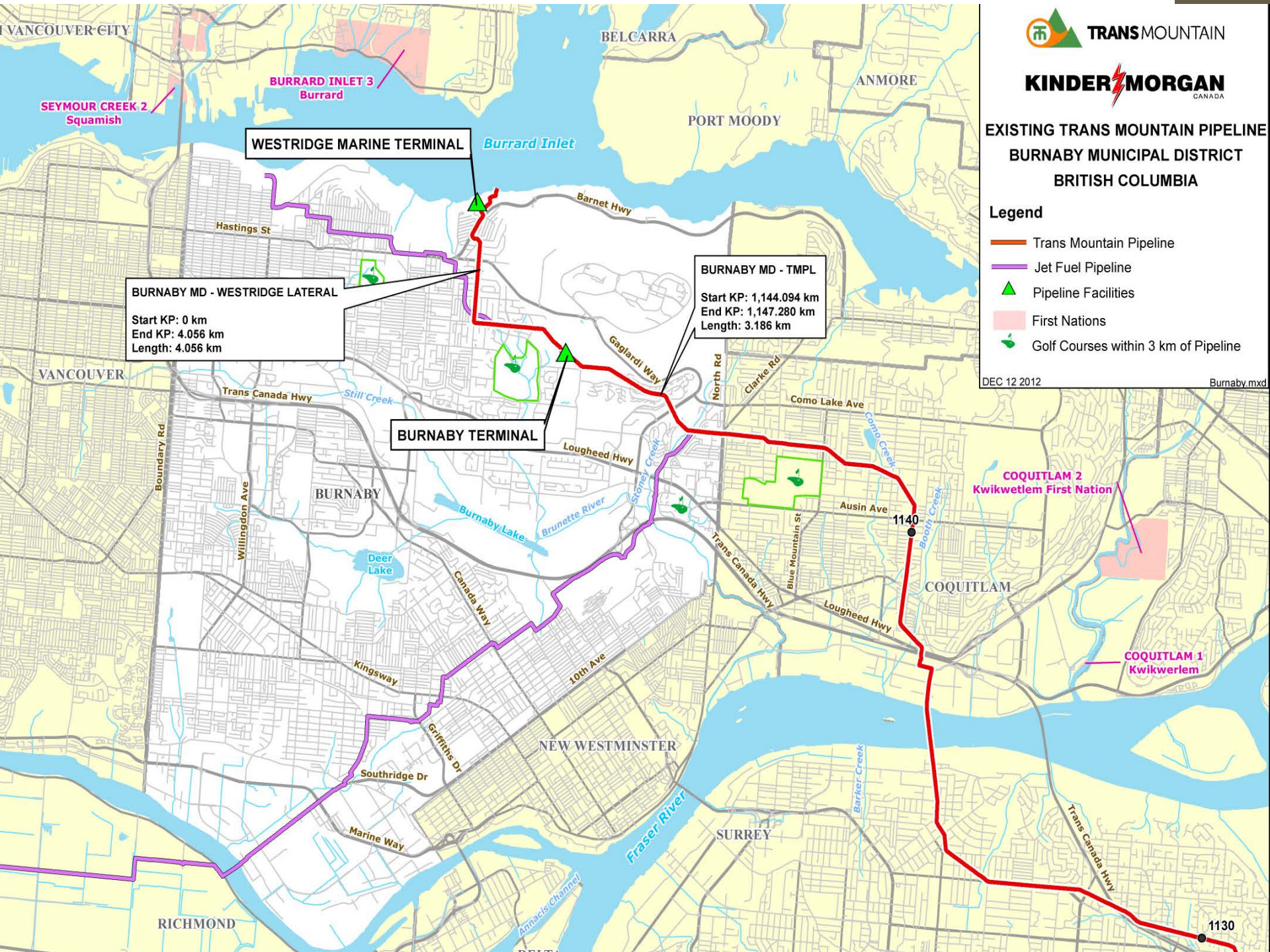
Concentration of oil infrastructure expansion in Burnaby

Commercial Basis for the Expansion

- Export
- Open Season 2011 - 2012
 - 13 shippers with firm service transportation agreements for 15- and 20-year terms
 - Total contracted volume under these agreements: 707,500 bpd of the proposed 890,000 bpd

For comparison, 20% of the existing capacity of the TMPL meets 80 – 90% of B.C.'s gasoline and diesel needs

**What does the Kinder Morgan
Trans Mountain Expansion Project
Mean for Burnaby?**



**EXISTING TRANS MOUNTAIN PIPELINE
BURNABY MUNICIPAL DISTRICT
BRITISH COLUMBIA**

Legend

- Trans Mountain Pipeline
- Jet Fuel Pipeline
- Pipeline Facilities
- First Nations
- Golf Courses within 3 km of Pipeline

DEC 12 2012

Burnaby.mxd

WESTRIDGE MARINE TERMINAL

BURNABY MD - WESTRIDGE LATERAL

Start KP: 0 km
End KP: 4.056 km
Length: 4.056 km

BURNABY MD - TMPL

Start KP: 1,144.094 km
End KP: 1,147.280 km
Length: 3.186 km

BURNABY TERMINAL

**COQUITLAM 2
Kwikwetlem First Nation**

**COQUITLAM 1
Kwikwetlem**

VANCOUVER CITY

BELCARRA

ANMORE

PORT MOODY

**SEYMOUR CREEK 2
Squamish**

**BURRARD INLET 3
Burrard**

VANCOUVER

BURNABY

NEW WESTMINSTER

SURREY

COQUITLAM

RICHMOND

1140

1130

Proposed Pipeline Infrastructure through Burnaby

Pipeline Infrastructure

EXISTING PIPELINE

PROPOSED PIPELINES

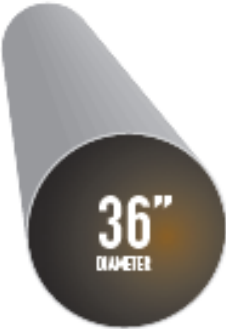


300,000
BARRELS
PER DAY



350,000
BARRELS
PER DAY

+



540,000
BARRELS
PER DAY

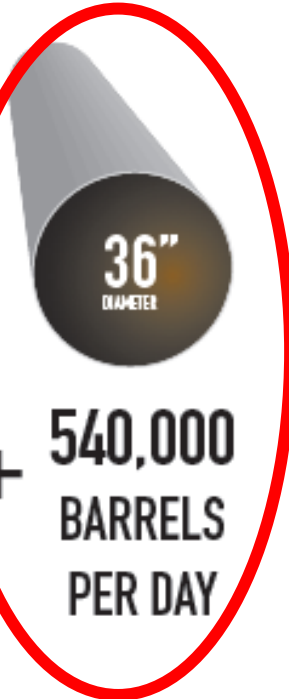
= 890, 000 bpd

Existing pipeline
(Line 1)

Pipeline Infrastructure

EXISTING PIPELINE

PROPOSED PIPELINES



300,000
BARRELS
PER DAY

350,000
BARRELS
PER DAY

+

540,000
BARRELS
PER DAY

= 890, 000 bpd

Proposed pipeline
(Line 2)

Product Being Carried through Burnaby

EXISTING PRODUCT



PROPOSED PRODUCT

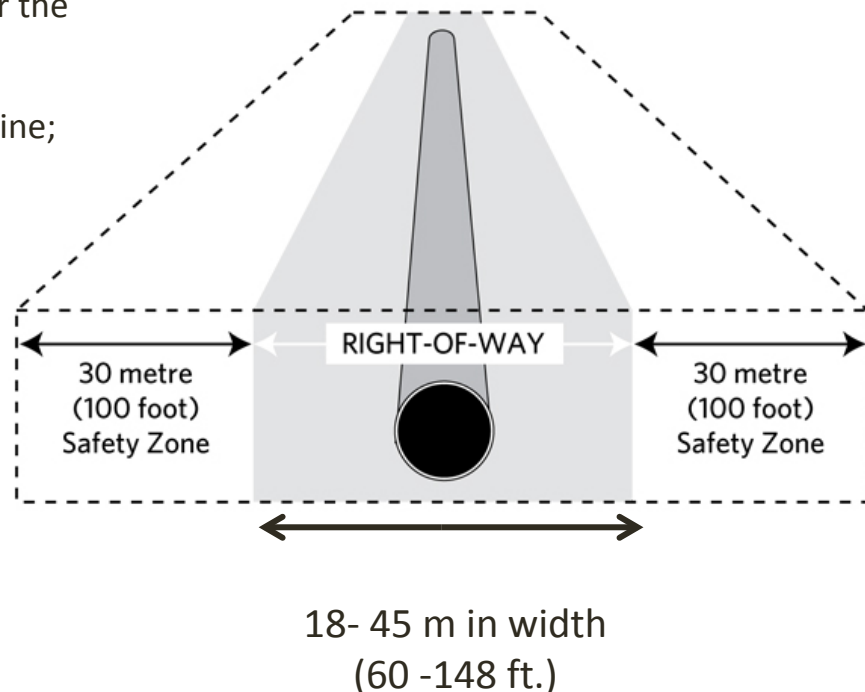
- Focus shift to **heavy crude**
- **Line 2** (540,00 bpd)
dedicated to heavy crude
- KM may also use the existing **Line 1** (350,000 bpd) for the shipment of **heavy crude** at lower capacity

Oil Pipelines through Private and Public Properties

- What is in a pipeline right-of-way?

Written Permission/Permit Required for works within the Safety Zone:

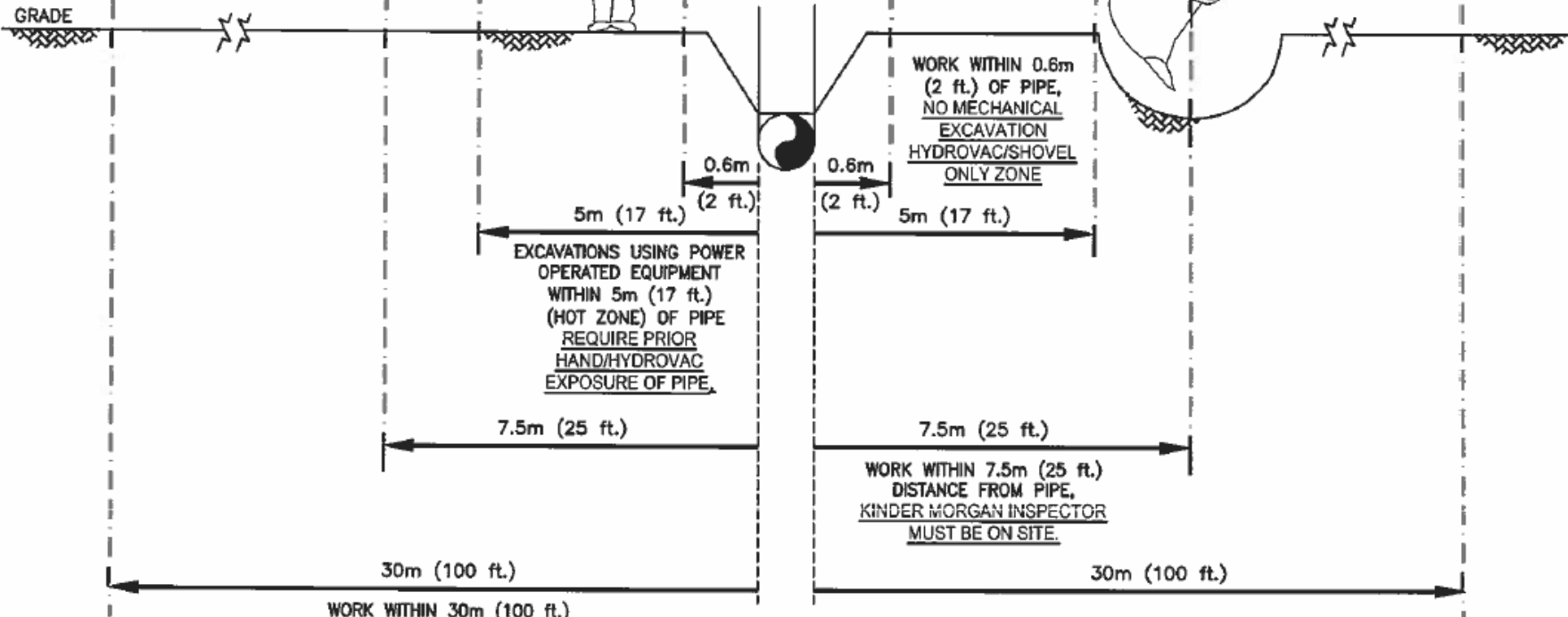
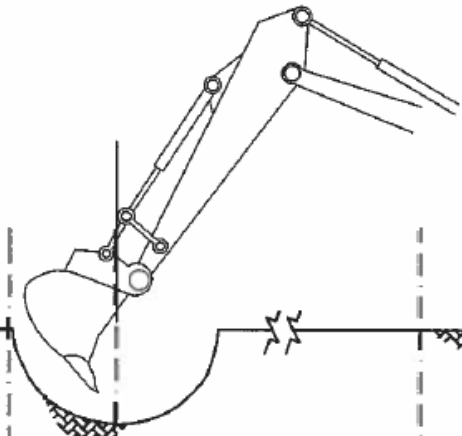
- Operating vehicles or mobile equipment over the right of way where a roadway does not exist;
- Reducing the depth of soil covering the pipeline;
- Ploughing below 30 cm (1 foot);
- Ground levelling;
- Installing drainage systems;
- Augering;
- Fencing; etc.



NOTE:

ALL SITUATIONS REQUIRING A VARIANCE TO THIS PROCEDURE MUST BE AUTHORIZED BY A KINDER MORGAN PIPELINE PROTECTION SUPERVISOR.

KINDER MORGAN
INSPECTOR



WORK WITHIN 0.6m
(2 ft.) OF PIPE,
NO MECHANICAL
EXCAVATION
HYDROVAC/SHOVEL
ONLY ZONE

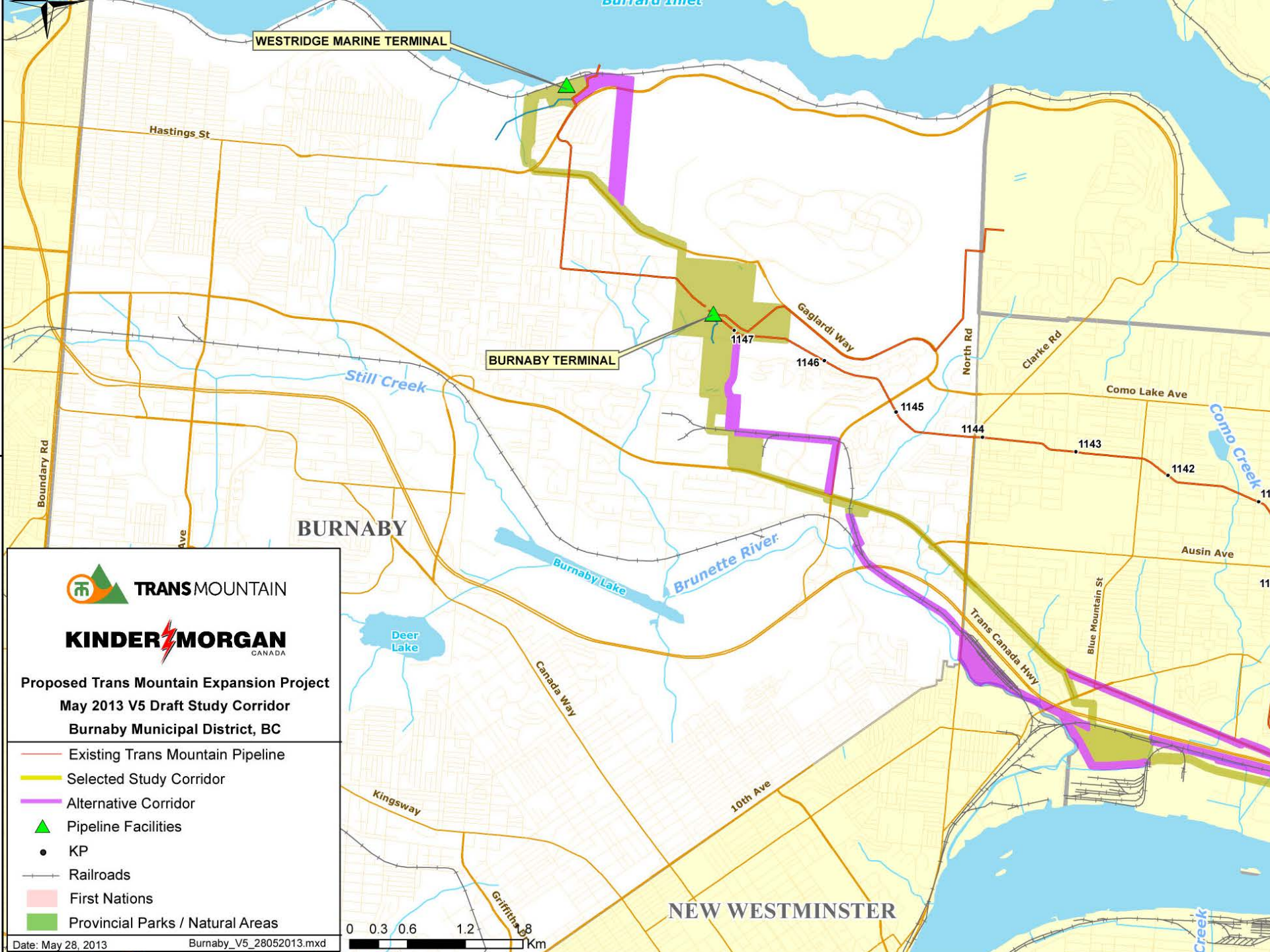
EXCAVATIONS USING POWER
OPERATED EQUIPMENT
WITHIN 5m (17 ft.)
(HOT ZONE) OF PIPE
REQUIRE PRIOR
HAND/HYDROVAC
EXPOSURE OF PIPE.

WORK WITHIN 7.5m (25 ft.)
DISTANCE FROM PIPE,
KINDER MORGAN INSPECTOR
MUST BE ON SITE.

WORK WITHIN 30m (100 ft.)
GROUND DISTURBANCE SAFETY ZONE,
MUST BE VERIFIED BY A
KINDER MORGAN INSPECTOR
30 METRE (100 FOOT)
GROUND DISTURBANCE
SAFETY ZONE PERMIT REQUIRED

NO.	DATE	REVISION
3	11/03/01	GENERAL REVISION
2	10/01/20	COMBINED DRAWINGS CE8001 AND CE8002 INTO ONE DRAWING
1	08/02/14	REVISED AND APPROVED
0	07/12/13	ISSUED

DRAWN MH	PIPELINE PROTECTION ZONES MINIMUM STANDARDS				SHEET SIZE 8 1/2 X 11
CHECKED DH					SCALE NTS
APPROVED DH	PIPELINE TYPICAL				DATE 07/11/06
DRAWING NUMBER					
AFE	WBS	FACILITY ID.	DOCUMENT No.	SHT.No.	REV.
—		— M000 — CE8001			3



WESTRIDGE MARINE TERMINAL

Hastings St

BURNABY TERMINAL

Still Creek

BURNABY

Burnaby Lake

Brunette River

Deer Lake

Canada Way

Kingsway

10th Ave

NEW WESTMINSTER

Griffiths St

Gagardi Way

North Rd

Clarke Rd

Como Lake Ave

Como Creek

Ausin Ave

Blue Mountain St

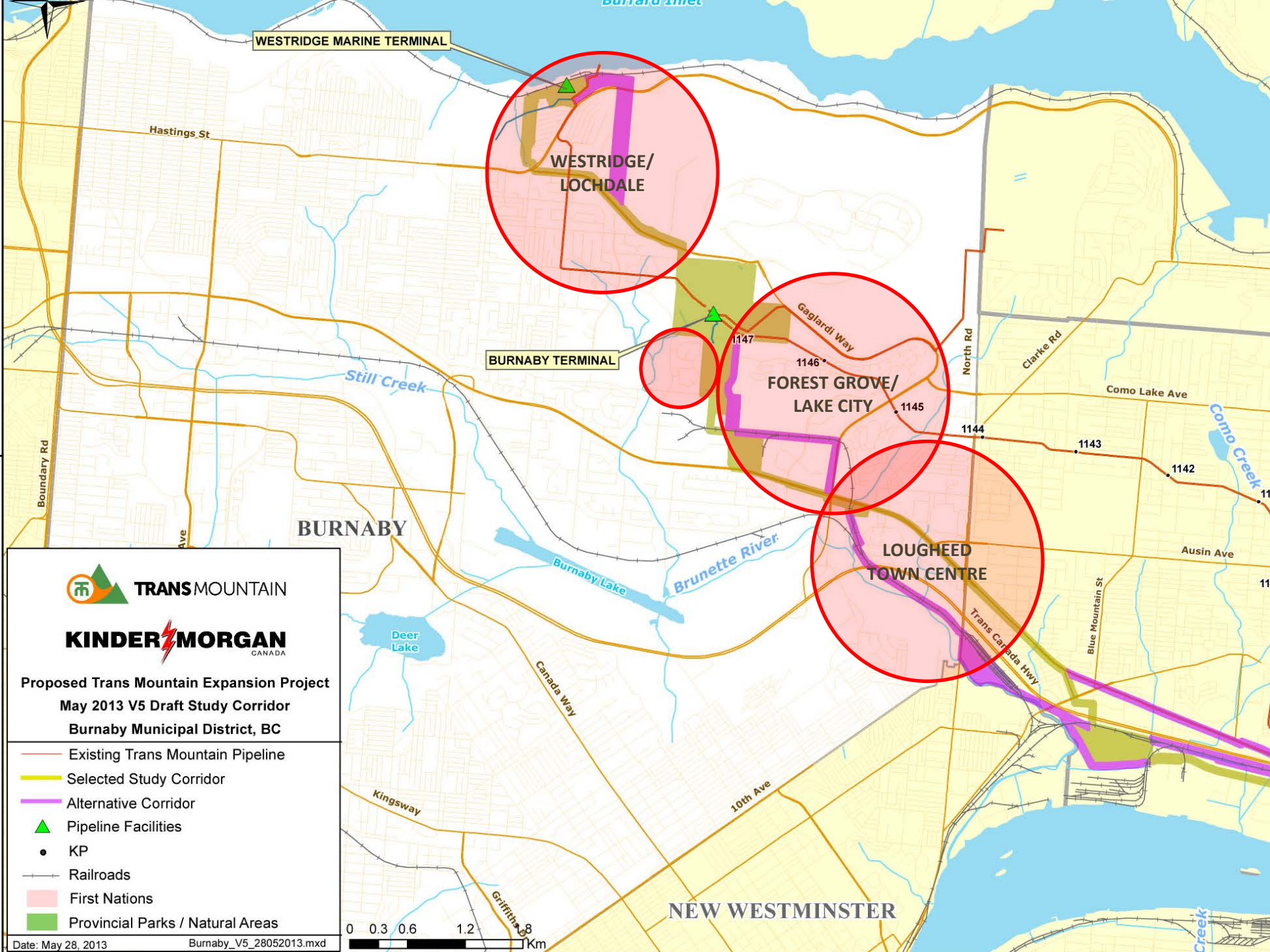
Trans Canada Hwy



Proposed Trans Mountain Expansion Project
May 2013 V5 Draft Study Corridor
Burnaby Municipal District, BC

- Existing Trans Mountain Pipeline
- Selected Study Corridor
- Alternative Corridor
- ▲ Pipeline Facilities
- KP
- Railroads
- First Nations
- Provincial Parks / Natural Areas





WESTRIDGE MARINE TERMINAL

Hastings St

WESTRIDGE/
LOCHDALE

BURNABY TERMINAL

Still Creek

BURNABY

Burnaby Lake

Brunette River

Deer Lake

Canada Way

Kingsway

10th Ave

NEW WESTMINSTER

Gagardi Way

FOREST GROVE/
LAKE CITY

North Rd

Clarke Rd

Como Lake Ave

Como Creek

Ausin Ave

LOUGHEED
TOWN CENTRE

Trans Canada Hwy

Blue Mountain St



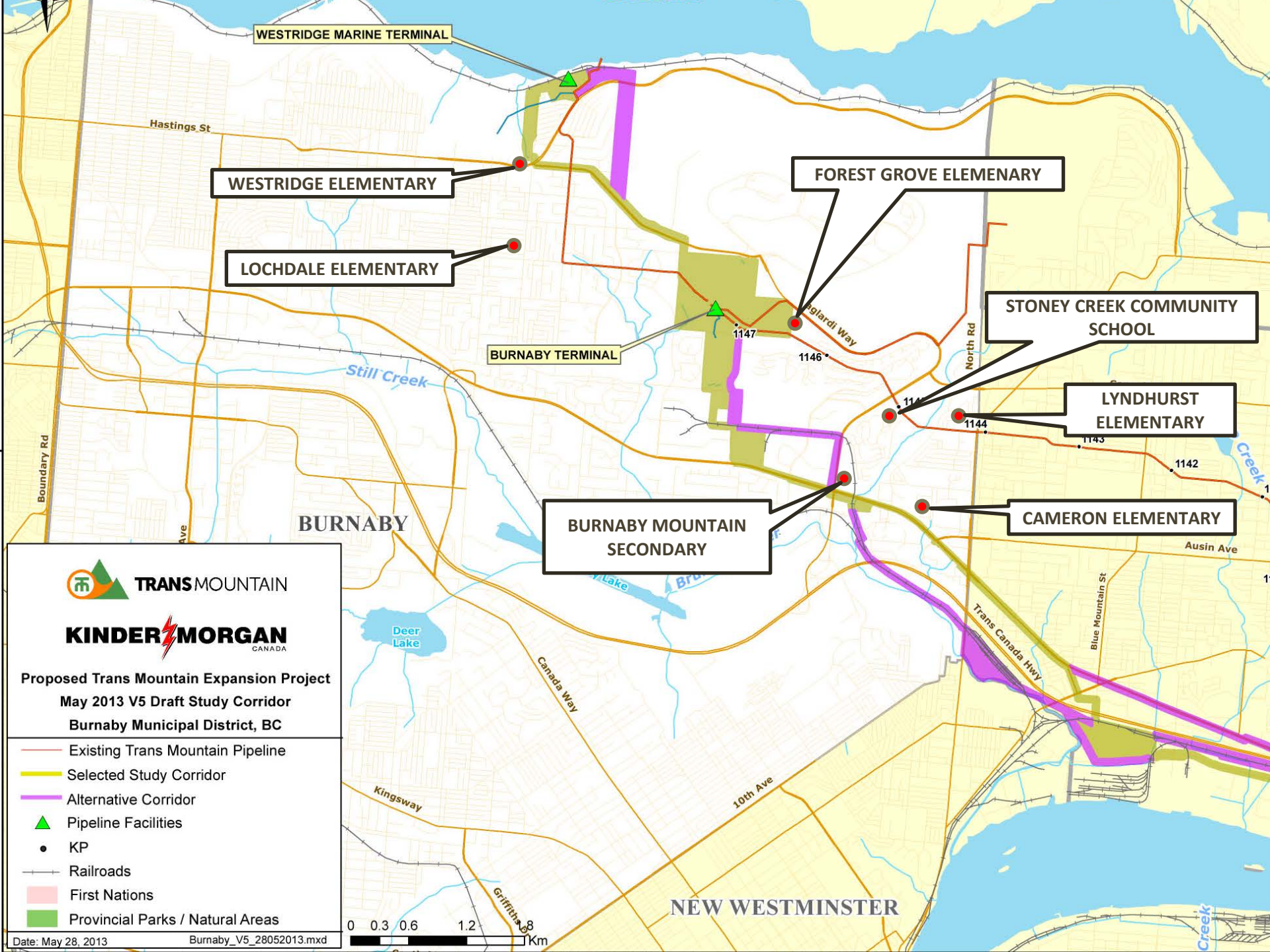
TRANSMOUNTAIN



Proposed Trans Mountain Expansion Project
May 2013 V5 Draft Study Corridor
Burnaby Municipal District, BC

- Existing Trans Mountain Pipeline
- Selected Study Corridor
- Alternative Corridor
- ▲ Pipeline Facilities
- KP
- Railroads
- First Nations
- Provincial Parks / Natural Areas





WESTRIDGE MARINE TERMINAL

Hastings St

WESTRIDGE ELEMENTARY

LOCHDALE ELEMENTARY

BURNABY TERMINAL

FOREST GROVE ELEMENARY

STONEY CREEK COMMUNITY SCHOOL

LYNDHURST ELEMENTARY

CAMERON ELEMENTARY

BURNABY MOUNTAIN SECONDARY

BURNABY

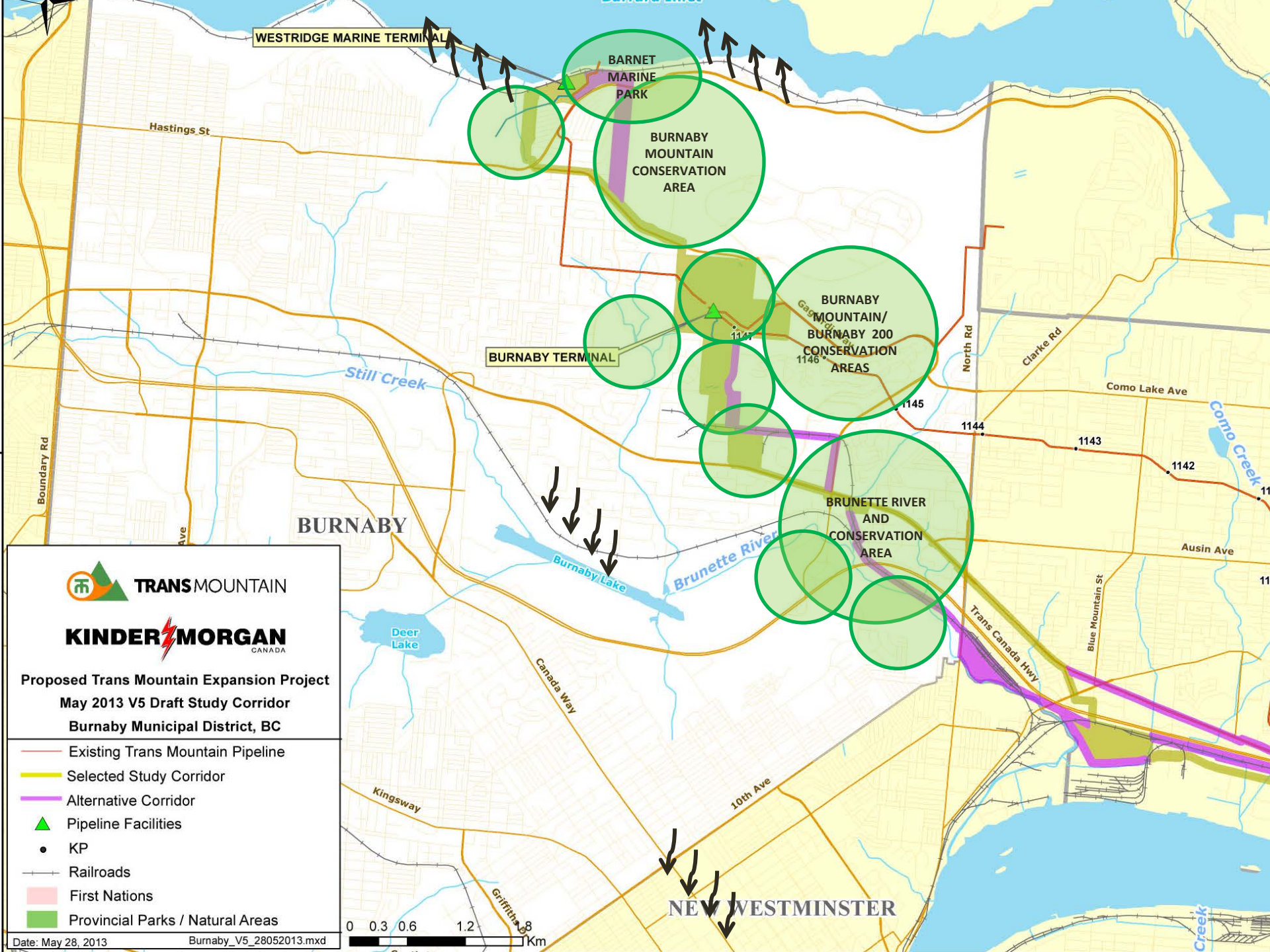
NEW WESTMINSTER



Proposed Trans Mountain Expansion Project
 May 2013 V5 Draft Study Corridor
 Burnaby Municipal District, BC

- Existing Trans Mountain Pipeline
- Selected Study Corridor
- Alternative Corridor
- ▲ Pipeline Facilities
- KP
- Railroads
- First Nations
- Provincial Parks / Natural Areas





WESTRIDGE MARINE TERMINAL

BARNET MARINE PARK

BURNABY MOUNTAIN CONSERVATION AREA

BURNABY TERMINAL

BURNABY MOUNTAIN/ BURNABY 200 CONSERVATION AREAS

BRUNETTE RIVER AND CONSERVATION AREA

BURNABY

NEW WESTMINSTER



Proposed Trans Mountain Expansion Project
 May 2013 V5 Draft Study Corridor
 Burnaby Municipal District, BC

- Existing Trans Mountain Pipeline
- Selected Study Corridor
- Alternative Corridor
- ▲ Pipeline Facilities
- KP
- Railroads
- First Nations
- Provincial Parks / Natural Areas



Westridge Neighbourhood

Proposed Distribution Lines from the Burnaby Mountain Terminal to the Westridge Marine Terminal

Two additional distribution lines (30 " pipes) proposed through the Westridge Neighbourhood

Net Impact to the Westridge Neighbourhood:

3 distribution lines through the existing residential neighbourhood via two separate pipeline corridors

Pipeline Study Corridors through the Westridge Neighbourhood



Reproduced Map January 2014



Kinder Morgan supplied Map March 30 2014

Burnaby Mountain Terminal



7185 Shellmont Street | 189 acre site

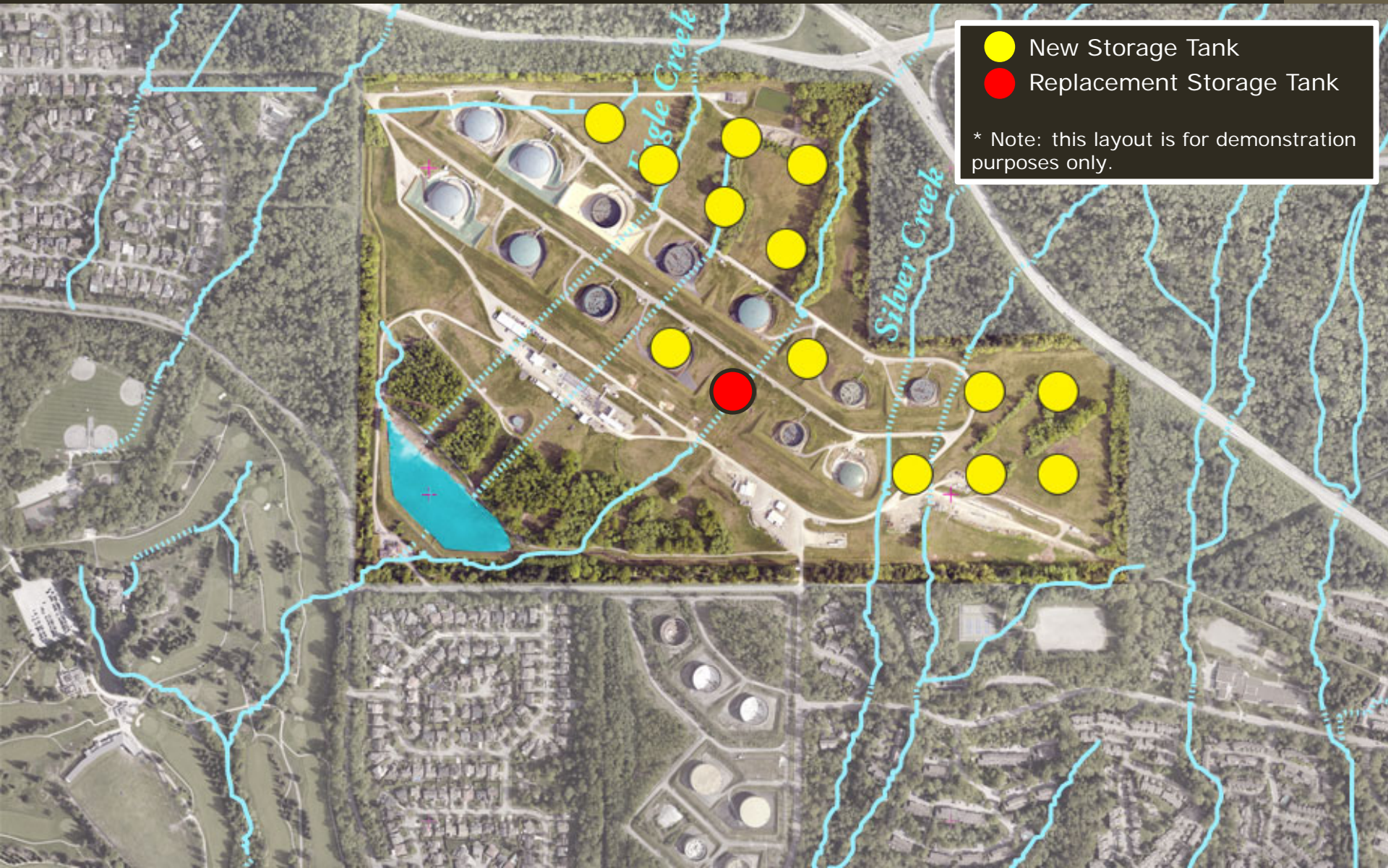


13 tanks | 125,000 bbl – 130,000 bbl | Capacity: 1.7 million bbl



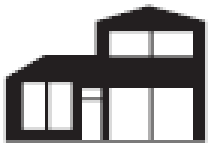
2 local watersheds

Conceptual Burnaby Mountain Terminal Expansion



14 new storage tanks | 250,000 bbl – 325,000 bbl | Capacity: 5.6 million bbl

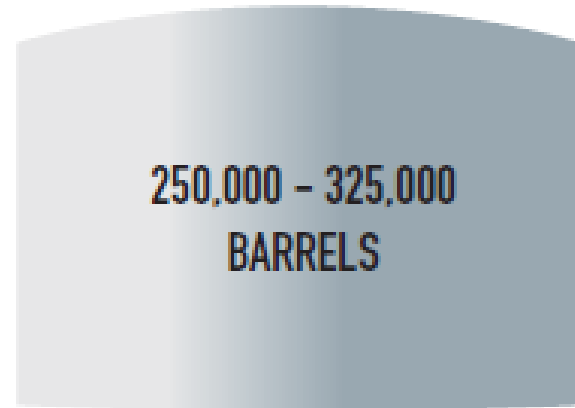
Storage Tank Capacity



House



Existing Oil
Storage Tanks



Proposed Oil
Storage Tanks

Distribution of the TMEP Storage Capacity

Summary of TMEP Storage Tank Capacity

Burnaby	Sumas	Kamloops	Edmonton*
<ul style="list-style-type: none">• 13 tanks• 1.7 mil. bbl	<ul style="list-style-type: none">• 6 tanks• 715,000 bbl	<ul style="list-style-type: none">• 2 tanks• 160,768 bbl	<ul style="list-style-type: none">• 35 tanks• 8.0 mil. bbl
+ 14 tanks (one replacement)	+ 1 tank	no tanks proposed	+ 5 tanks (one replacement)
26 tanks 5.6 mil. bbl	7 tanks 890,000 bbl	2 tanks 160,768 bbl	39 tanks 9.25 mil. bbl

* *Edmonton Terminal Expansion Project – 15 new storage tanks (one replacement tank) approved under separate application to the NEB in 2008, and amended in 2011 for additional capacity*

20 new tanks distributed between the existing
terminals

=

**72 storage tanks total with a capacity of
15.8 million barrels**

For comparison 3 Aframax tankers can load
approximately **1.7 million** barrels

Westridge Marine Terminal



7065 Bayview Drive | 15 acre site, plus 26.5 acre water lot



Photo Credit: Stephen Rees

Existing Westridge Marine Terminal



Conceptual Westridge Marine Terminal Expansion - 3.5 acre foreshore expansion



Conceptual Westridge Marine Terminal Expansion - 3.5 acre foreshore expansion



KM visual representation of the proposed Westridge Marine Terminal Expansion

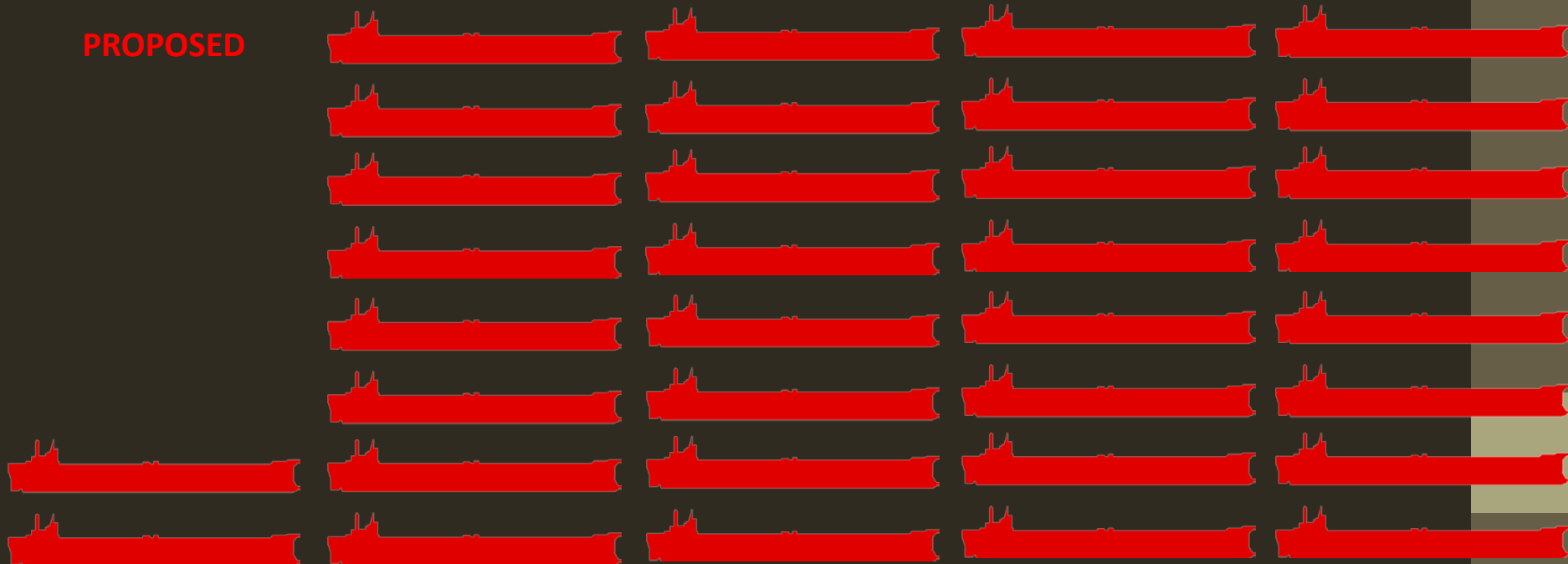
Westridge Marine Terminal Activity

- From 8 tankers per month to 34 tankers per month
- Each tanker transporting between 550,000 – 580,000 bbl

EXISTING



PROPOSED



City of Burnaby Opposition

**Burnaby is the wrong place to
expand oil pipelines**

given the urban transformation and
significant population growth of
the City and broader Metro
Vancouver region since the early
1950s



1955



2012



Highlighted Concern

Land Spills and Accidents

Despite Kinder Morgan's assurances to safely operate the Trans Mountain Pipeline System, **spills do happen**

KM's Trans Mountain Track Record (2005 – Present)

Is this What Kinder Morgan Means by Operating the Trans Mountain Pipeline “Safely” for 60 years?

2005

- 1,320 bbl of crude oil leaked out of the Sumas Terminal (Abbotsford), polluting Kilgard Creek

2007

- Burnaby Oil Spill (1,572 bbl)

2009

- 1,258 bbl oil leaked from Burnaby Mountain Terminal (contained on-site)

2012

- 692 bbl of oil spilled from ruptured pipeline at Sumas Terminal (Jan.)
- Leak in containment area at Sumas Terminal (April)

2013

- 12 bbl of oil leaked from pipeline outside of Merritt BC
- 25 bbl of oil leak detected outside of Hope BC

Burnaby Oil Spill 2007

- **Where:** Inlet Drive, Burnaby
- **Volume:** 250 m³ (1,572 bbl)
- **Response Time:** 24 minutes
- 50 homes impacted; 250 Burnaby residents evacuated; 1200 m of shoreline along the Burrard Inlet impacted – long term impact to local ecosystems & wildlife
- **Cost of Clean-Up:** undisclosed by KM but estimated at + \$15 M
- Court findings determined Kinder Morgan and 2 contractor companies at fault





TSLEIL-WAUTUTH NATION 2007 BURNABY OIL SPILL

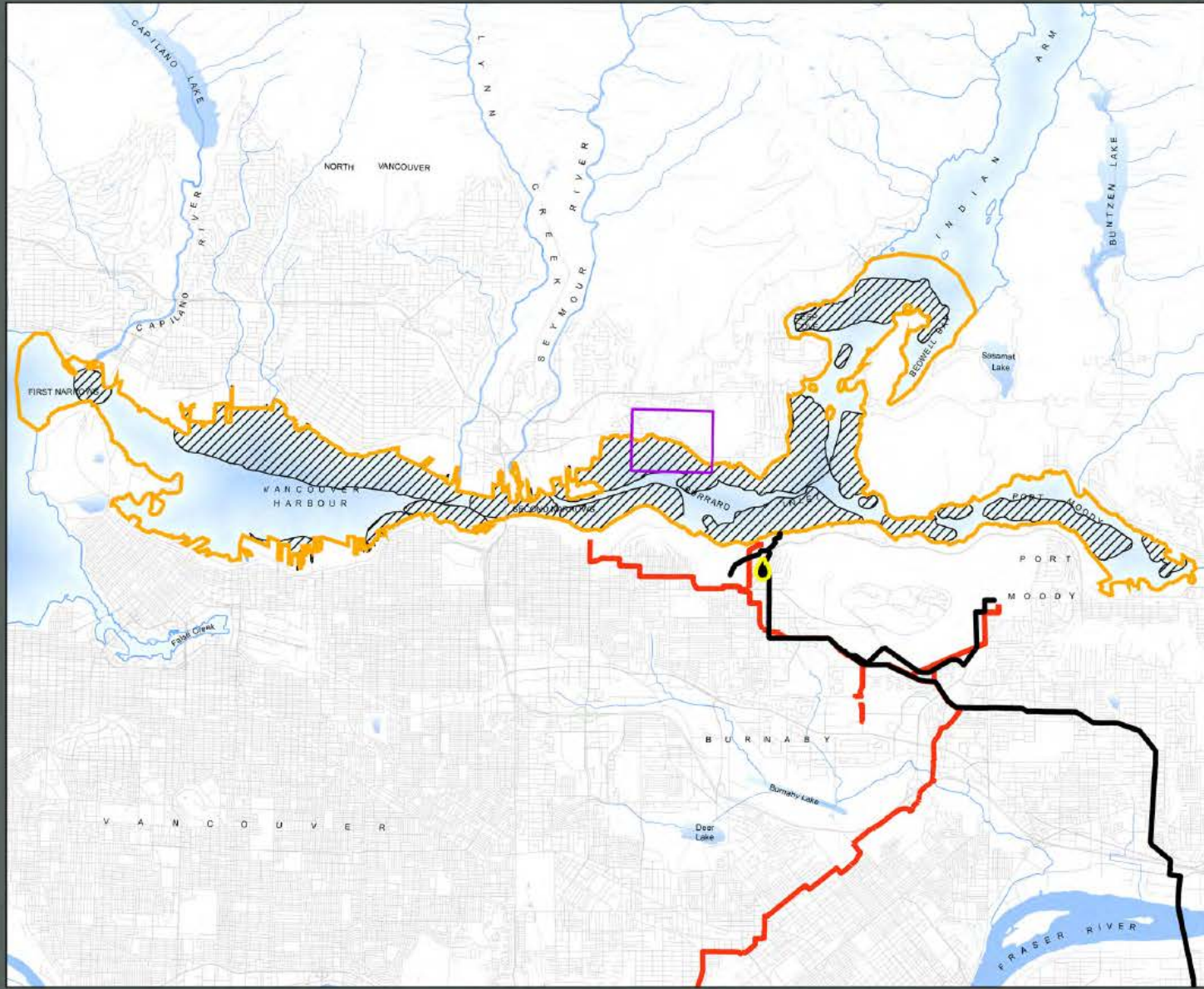
ANALYSIS RESULTS

Legend

-  Tsleil-Waututh Nation Reserve
-  2007 Burnaby Oil Spill Location
-  Approximate Area of Impact from the 2007 Oil Spill Based on Aerial Reconnaissance Reports by Professional Observers*
-  Primary Impact Area**
-  Kinder Morgan Canada Pipeline System
-  Jet Fuel System
-  Trans Mountain System

*Based on analysis of available data.

**It is possible that there was more oil in Burrard Inlet and surrounding areas beyond this defined area; however, it was not recorded.



0 1.25 2.5 Kilometers

This map is a living document and is intended to be amended and refined over time. It is not an expression of the location of Tsleil-Waututh aboriginal title. The data used to produce this map originate from many sources and are presented without prejudice. This map is the property of the Tsleil-Waututh Nation and may not be reproduced without written permission.

Map Produced May 2013 by Tsleil-Waututh Nation.
 Projection: UTM, NAD83, Zone 10
 Map Scale: 1:97,362
 Data sources: Tsleil-Waututh Nation, Government of Canada, Province of British Columbia, Integrated Cadastral Information Society.

Emergency Response

- Kinder Morgan is seeking the use of Burnaby infrastructure and resources, as part of their emergency response plan:
 - Fire Department and other municipal resources as “first-responders” to leaks, spills, fires, and other emergencies
 - Tie into the Curtis-Duthie Water Pump Station as a back-up water feed for the Burnaby Mountain Terminal (among other options)

Highlighted Concern

**Who will pay for the cost
of cleanup within the
Burrard Inlet?**

Kinder Morgan has advised that they are **not responsible for oil spills** that occur within the Burrard Inlet, once the oil tanker has been untied from the Westridge Marine Terminal

Emergency Spill Response - Liability

- Polluter Pay Approach (Responsible Party)
- International Conventions, *Canada Shipping Act* and *Marine Liability Act* set liability at a **\$1.312 billion** limit.

Four - tier approach to provision of funds:

- Western Canada Marine Response Corporation (\$138 M)
- International Oil Pollution Compensation Fund (\$174 M)
- International Oil Pollution Compensation Supplementary Fund (\$840 M)
- Canada's Ship Source Oil Pollution Fund (\$160 M)

Greater than **\$1.3 billion**, the Canadian government would be responsible for the cost of the oil spill clean-up

Points of Clarification

Benefits to Burnaby

Taxes, Not Benefits

The taxes Kinder Morgan pays to the City is **NOT** an extraordinary benefit. **It's business as usual.**

KM taxes (2013): \$ 7.0 M

➤ only **\$4.8 M** is to the City

If the TMEP is approved, an additional \$6.2 M in taxes from KM, only **\$4.4 M** would be to the City

A total of **\$9.2 M** is insignificant when you consider other sources of revenue in the City

Summary: Significant Risks with No Net Benefits for Burnaby

- Kinder Morgan's proposal seeks to only comply with the **regulatory requirements** of the NEB
- Off-setting benefits to the City is currently **not** part of Kinder Morgan's proposal

End