

APPENDIX 3-A
Descriptions of Projects and
Activities Contributing to Existing Conditions
and Expected Conditions

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Appendix 3-A describes the projects and activities contributing to existing conditions, as well as the projects contributing to expected conditions, which have been considered in the environmental effects assessment for RBT2.

3-A 1 PROJECTS CONTRIBUTING TO EXISTING CONDITIONS

Projects that have been or were being carried out as of April 2014 and have contributed to existing conditions in the RBT2 assessment area include the following:

- B.C. Ferries Tsawwassen Terminal (**Section 3-A 1.1**);
- Westshore Terminals (**Section 3-A 1.2**);
- Deltaport Terminal and Deltaport Third Berth (DP3) Project (**Section 3-A 1.3**);
- Deltaport Terminal, Road and Rail Improvement Project (DTRRIP) (**Section 3-A 1.4**);
- Roberts Bank Rail Corridor Program (RBRC) (**Section 3-A 1.5**);
- Highway 17 (South Fraser Perimeter Road) (**Section 3-A 1.6**); and
- BP Cherry Point Refinery (**Section 3-A 1.7**).

An overview description of each of these projects is presented below. Refer to **Figure 3-9 Projects Contributing to Existing Conditions** for project locations.

3-A 1.1 B.C. Ferries Tsawwassen Terminal

The B.C. Ferries Tsawwassen Terminal in Delta, B.C. is located on approximately 22.3 ha of land on Roberts Bank and is accessed via a 3-km-long man-made causeway. Ferry service to and from Tsawwassen and Swartz Bay on Vancouver Island, and to the Southern Gulf Islands is part of the provincial highway system and represents an important link for the movement of goods and people in southwestern B.C.

Ferry terminal construction, which involved placement of fill to create an offshore island, followed by causeway development, began in 1958 and was completed in 1960. Terminal development occurred within the same timeframe as the extension of an 11-km-long highway, now referred to as Highway 17A and Highway 17, between the south end of the George Massey Tunnel near Ladner and the new ferry terminal. The ferry terminal was expanded in 1976 and 1991. The latter work involved a terminal renovation and expansion, including the development of 8 ha of land on the facility's north side to enlarge parking and loading lane areas.

The B.C. Ferries Terminal presently consists of five berths for roll-on, roll-off vehicle ferries, as well as a large expanse of paved vehicle parking and vehicle loading lanes, several overhead walkways and vehicle on- and off-ramps, a commercial retail building and passenger amenities, a control tower, and landscaped outdoor areas. Ferry service for vehicles and passengers varies depending on the season.

3-A 1.2 Westshore Terminals

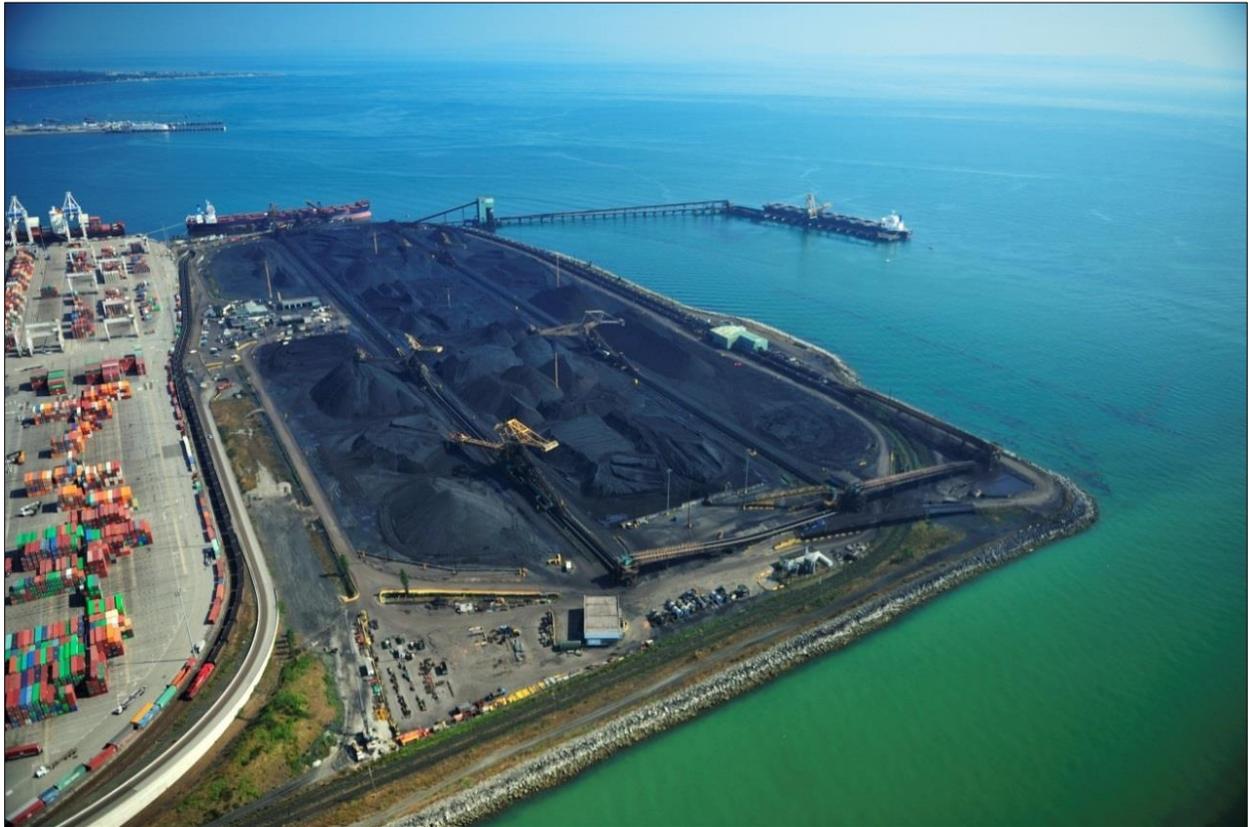
The Roberts Bank coal port facility, known as Westshore Terminals, is operated by Westshore Terminals Ltd. pursuant to a lease with PMV. Road and rail access to and from Westshore Terminals is via Highway 17 and Deltaport Way, and the Roberts Bank Rail Corridor (RBRC), respectively **Figure 3-A1**). The Roberts Bank causeway is located 2.5 km west of and parallel to the B.C. Ferries Terminal causeway.

Westshore Terminals opened in June 1970 following several years of construction, which included placement of fill to create a 20-ha island and a 5-km-long, 30-m-wide causeway across Roberts Bank, connecting the terminal to the mainland. A single rotary coal car dumper, two mobile reclaimers, and one deep-sea dock provided for an annual capacity of 8.5 million tonnes (Mt).

Between 1981 and 1984, the land area at the Roberts Bank facility was expanded to 80 ha. Upon completion of this \$130 million expansion, the Westshore Terminals land area had more than doubled in size to 54 ha, a second deep-sea berth had been added, and a third stacker-reclaimer with a twin-car rotary coal dumper had been installed (SNC-Lavalin 2013). A single rotary dumper was added in 1991 and the original dumper was removed. Equipment replacements and terminal improvements have continued, including, from 2007 to 2009, a \$49 million, three-phase equipment upgrade that increased the terminal's throughput capacity. In 2013, Westshore Terminals shipped 30 Mt of coal (Westshore Terminals Ltd. 2014).

Current facilities at the Westshore Terminals (**Figure 3-A1**) include two rail loops, two twin rotary dumpers, four stacker reclaimers, two deep-sea loading berths, and 7 km of high-speed conveyor systems. A new dust suppression system involving 94 ground-level rain guns, twelve 40-m-high water towers, and related equipment to control dust was installed in 2013. A series of ditches and reservoirs collect rainwater, surface run-off, and other water used on site. Further improvements are planned, as described below (**Section 3-A 3.1**) with reference to the Westshore Terminals Reinvestment Project.

Figure 3-A1 Westshore Terminals, View East, Delta, B.C. (2010)



3-A 1.3 Deltaport Terminal and Deltaport Third Berth Project

In 1990, PMV began construction of the Deltaport Container Terminal on the 80 ha of additional land area created during the 1981 to 1984 expansion of Westshore Terminals (described above). Container handling at Deltaport Terminal began in 1997 with a two-berth operation.

The DP3 Project, completed in 2010, increased the Deltaport Terminal land area to 85 ha and the annual terminal capacity from 1.2 million to 1.8 million TEUs. In addition, DP3 included the following:

- Development of a tug basin, ship access channel and turning basin, and terminal services and infrastructure;
- Rail track and road improvements along the Roberts Bank causeway; and
- Creation of new fish and wildlife habitat along the east causeway portion of Deltaport Way.

Figure 3-A2 shows the orientation of the Deltaport Terminal, relative to Westshore Terminals.

Figure 3-A2 Deltaport Terminal (including the Deltaport Third Berth) View Southwest, Delta, B.C. (2010)



Note: DP3 in foreground; Westshore Terminals in background

Port Metro Vancouver prepared a Proposed Habitat Compensation Plan for DP3 that identified technically feasible compensation measures to prevent the net loss of fish and wildlife habitat in the Roberts Bank area.

Previous reports describing the environmental changes associated with DP3 include the project's Comprehensive Study Report under the *Canadian Environmental Assessment Act (CEAA)* and the Environmental Assessment Certificate Application under the British Columbia *Environmental Assessment Act (BCEAA)*. An overview of habitat compensation options considered for DP3 to address no net loss of fish habitat was presented in a report prepared by G.L. Williams & Associates Ltd. (2006).

The DP3 Adaptive Management Strategy provided for an annual monitoring program to facilitate the identification, management, prevention, and mitigation of effects to the inter-causeway ecosystem due, directly or indirectly, to DP3 construction. The Adaptive Management Strategy was developed in conjunction with and approved by Fisheries and Oceans Canada (DFO) and Environment Canada. A final report was prepared by Hemmera in 2012, which describes the results of studies undertaken following DP3 construction, documenting environmental conditions on Roberts Bank with respect to coastal geomorphology, surface water quality, sediment quality, eelgrass, benthic invertebrates, and coastal seabirds.

Deltaport Terminal, operated by Global Container Terminals (GCT), pursuant to a lease with PMV, currently provides 10 high-speed Super Post-Panamax dock gantry cranes, a modern fleet of container-handling equipment, and an 8-track, on-dock rail intermodal yard (TSI Terminal Systems Inc. 2014).

3-A 1.4 Deltaport Terminal Road and Rail Improvement Project

As a part of its Container Capacity Improvement Program, PMV is working with the Province of B.C., including BCR Properties, Ltd., a subsidiary of the British Columbia Railway Company, a Crown Corporation, and Global Container Terminals, to implement DTRRIP. This project will increase the terminal's container capacity through improvements to existing port infrastructure. Project components include:

- DTRRIP Overpass - an overpass on the existing Roberts Bank causeway to separate road and rail traffic. Under construction since March 2013, the overpass opened in fall 2014 and consists of elevated roadways connecting Deltaport Way to Roberts Bank Way (North and South) east of the Deltaport intermodal yard, and entirely within the footprint of the existing Roberts Bank causeway;
- Terminal Improvements - reconfiguration of rail tracks, additional container-handling equipment, and modernisation of equipment at the Deltaport container terminal. Improvements include the addition and realignment of rail tracks to increase the capacity of the intermodal yard within the existing footprint;
- Railway Improvements – Placement of additional rail track within the existing railway corridor and immediately adjacent lands; and
- Road Improvements on and adjacent to Deltaport Way – road works to improve the movement of container trucks at Deltaport include weigh-in motion scales, and a vehicle access control system gate.

A screening-level environmental assessment pursuant to *CEAA* was initiated for DTRRIP in October 2011. In July 2012, when the *Canadian Environmental Assessment Act, 2012* (*CEAA 2012*) came into force, *CEAA* was repealed. Since the DTRRIP scope did not include any activities described within the regulations associated with *CEAA 2012* (i.e., *Regulation Designating Physical Activities*) it was no longer subject to review under *CEAA 2012*. Port Metro Vancouver continued the environmental assessment review and public participation process in order to meet the requirements of *CEAA 2012* and PMV's own Environment Policy. In November 2012, DTRRIP was authorised to proceed.

Construction of the DTRRIP overpass has been underway for more than a year and has therefore contributed to existing conditions in the Project assessment area up to April 2014. As it is anticipated that construction of the overpass and other DTRRIP components will be completed by 2016, this construction and the project's operations will contribute to expected conditions prior to the anticipated commencement of RBT2 in 2018.

3-A 1.5 Roberts Bank Rail Corridor Program

Trains bound for the Roberts Bank terminals travel through the Tsawwassen First Nation (TFN) community and the municipalities of Delta, Surrey, White Rock, City of Langley, and Township of Langley along the RBRC (RBRC n.d.). The corridor, which connects the Roberts Bank terminals with the international rail network, consists primarily of a single rail track and approximately 66 road-rail crossings (i.e., 12 overpasses, 38 public street-level crossings, and 16 private street-level crossings) (TransLink 2014). By 2021, increases are anticipated in the number and length of trains, and the volume of daily vehicle crossings along the 70-km-long RBRC due to overall growth in marine terminal throughput and increasing population (TransLink 2014).

The RBRC Program, which involves 9 projects to improve rail operation and road network efficiency, is sponsored by 12 funding partners representing local, regional, provincial, and federal governments, as well as private industry. The projects include eight overpasses and one new railway siding. In addition, a Railway Crossing Information System is planned to complement these projects by providing up to nine signs located at decision points on major roads in the cities of Langley and Surrey and in the Township of Langley to help drivers make informed choices when planning their route around railway crossings. The signs will provide information regarding the status of at-grade crossings, allowing drivers to minimise travel delays by rerouting to one of the new overpass crossings.

Three of the RBRC's program components were completed as of April 2014, as follows (TransLink 2014):

- 41B Street Rail Overpass at Deltaport Way – Completed in December 2011 to minimise traffic delays and train whistling in the area and facilitate any potential future expansion of the Gulf Rail Yard for staging and building of trains bound for Deltaport Terminal;
- 80th Street Rail Overpass - Completed in June 2012 to minimise traffic delays while providing direct access to Boundary Bay Airport and the surrounding industrial lands. The project included repaving of 72nd Street and 80th Street and installation of a new signalised intersection at Ladner Trunk Road and 72nd Street and an advanced warning system on Ladner Trunk Road; and
- 232nd Street Overpass - Completed in March 2014 to connect communities north of Highway 1, including the eastern section of Walnut Grove and Fort Langley, with other parts of Langley. A street-level crossing of the Canadian Pacific Railway (CP Rail) tracks was replaced by a two-lane overpass, allowing for the potential westward extension of Canadian National Railway Company's Rawlison rail siding into CP Rail's Page Subdivision. The overpass eliminates the requirement for train whistling between Glover Road and River Road, increases public safety, and reduces traffic delays.

The remaining RBRC program components, under construction during EIS preparation and scheduled for completion in late 2014, are described below with respect to projects contributing to expected conditions.

3-A 1.6 Highway 17

Led by the B.C. Ministry of Transportation and Infrastructure and completed in December 2013, Highway 17 (formerly known as South Fraser Perimeter Project) is a 40-km, four-lane highway that extends from the BC Ferries Terminal in southwest Delta to 176th Street (Highway 15) in Surrey, with connections to Highways 1, 15, 17A, 91, and 99. The new highway facilitates the separation of local and regional traffic and reduces regional traffic on the local and municipal road network.

The South Fraser Perimeter Road Project was subject to a harmonised provincial and federal environmental review. The Application for an Environmental Assessment Certificate under BCEAA and Screening-level Environmental Assessment Report under CEAA recommended mitigation to address species-specific and site-specific effects to wildlife values, including wildlife values on agricultural land, connectivity between upland, forest, and river, wetland

areas, Burns Bog, provincially Red- and Blue-listed plant communities¹, and sensitive species (i.e., barn owl, sandhill crane). Residual effects were anticipated with respect to air quality, wildlife, vegetation, fisheries, and noise.

3-A 1.7 BP Cherry Point Refinery, Washington State, U.S.A.

Operating since 1971 and situated approximately 11 km south of the Canada-U.S.A. border, BP's Cherry Point Refinery in Blaine, Washington processes more than 34 million litres of crude oil per day, primarily to produce transportation fuels. Crude oil is delivered to the site by tanker, as well as by pipeline. Finished products are transported offsite by pipeline, marine barge, or tanker and truck. The facility's contribution to existing conditions in the RBT2 assessment area was considered with respect to air quality (see **Section 9.2 Air Quality**).

3-A 2 ACTIVITIES CONTRIBUTING TO EXISTING CONDITIONS

Activities that have been or were being carried out as of April 2014 and have contributed to existing conditions in the RBT2 assessment area include the following:

- Aboriginal fishing and shellfish harvest (**Section 3-A 2.1**);
- Aboriginal hunting (**Section 3-A 2.2**);
- Aboriginal plant gathering (**Section 3-A 2.3**);
- Aboriginal cultural use (**Section 3-A 2.4**);
- Agriculture (**Section 3-A 2.5**);
- Boundary Bay Airport (**Section 3-A 2.6**);
- Commercial fishing (**Section 3-A 2.7**);
- Land-based transportation (**Section 3-A 2.8**);
- Marine vessel traffic (**Section 3-A 2.9**); and
- Outdoor recreation and tourism (**Section 3-A 2.10**).

An overview description of each of these activities is presented below:

¹ Refer to **Section 10.0 Biophysical Setting** for provincially listed species definitions.

3-A 2.1 Aboriginal Fishing and Shellfish Harvest

Aboriginal fishing and marine harvest activities for food, social and ceremonial purposes are long-standing activities in the Roberts Bank area (see **Section 16.0 Ongoing Productivity of Commercial, Recreational, and Aboriginal Fisheries** and **Section 32.2.4 Potential or Established Aboriginal and Treaty Rights and Related Interests, Current Use of Lands and Resources for Traditional Purposes Assessment, Existing Conditions**).

3-A 2.2 Aboriginal Hunting

A description of Aboriginal hunting activities in the Roberts Bank area is provided in **Section 32.2.4**.

3-A 2.3 Aboriginal Plant Gathering

A description of Aboriginal plant-gathering activities in the Roberts Bank area is provided in **Section 32.2.4**.

3-A 2.4 Aboriginal Cultural Use

A description of Aboriginal cultural use activities in the Roberts Bank area is provided in **Section 32.2.4**.

3-A 2.5 Agriculture

Lands in B.C. with agricultural potential are protected in the Agricultural Land Reserve, a provincial zone in which agriculture is recognised as the priority use. As of 2010, more than half of the lands within the municipal boundaries of the Corporation of Delta were contained in the Agricultural Land Reserve.

3-A 2.6 Boundary Bay Airport

Owned by the Corporation of Delta and operated under lease by Alpha Aviation Inc., the Boundary Bay Airport consists of two runways, an air-traffic control tower and a terminal complex that operate seven days per week, year-round. The airport is located on Boundary Bay, approximately 12.5 km northeast of the Roberts Bank terminals. Air traffic involves more than 200,000 takeoffs and landings per year (Boundary Bay Airport 2014). General aviation operations include flight training schools and flying clubs that provide flying lessons and aircraft rentals. The Boundary Bay Airport's contribution to existing conditions in the RBT2 assessment area was considered with respect to air quality (**Section 9.2 Air Quality**) and coastal birds (**Section 15.0 Coastal Birds**).

3-A 2.7 Commercial Fishing

Commercial fishing activities in the Roberts Bank area include salmon and crab harvesting. The commercial salmon fishery targets sockeye salmon primarily and pink salmon occasionally. Fisheries and Oceans Canada's licensing areas vary by gear type for commercial salmon fishing; the Roberts Bank area lies within the boundaries of Salmon Gillnet Area E and Salmon Seine Area B.

Waters in the vicinity of Roberts Bank lie within the southernmost part of DFO's Area I crab management area, which extends northwards to the English Bay, Howe Sound, and Sunshine Coast areas. There are 32 crab licences in Area I, 29 of which are commercial licences (limited entry and vessel-based) and three of which are communal commercial licences (Aboriginal groups). Dungeness crab is the main target species.

3-A 2.8 Land-Based Transportation

Land-based transportation infrastructure and use has contributed to existing conditions in the Project's assessment area. The use of and vehicle volumes associated with this infrastructure is provided in **Appendix 4-D Roberts Bank Traffic Data Matrix**.

3-A 2.9 Marine Vessel Traffic

Commercial vessel traffic transiting waters within PMV jurisdiction, including Roberts Bank, includes the following vessel types:

- Container ships;
- General cargo ships;
- Crude oil and product tankers;
- Chemical, gas, and bulk carriers;
- Tank and cargo barges;
- Ferries;
- Fishing vessels;
- Tugs; and
- Cruise ships.

Annual ship traffic at Roberts Bank in 2012 comprised 15,626 vessel movements (one-way movements), including 540 movements for Westshore Terminals, 538 movements for Deltaport Terminal, and 14,548 B.C. Ferries movements (see **Section 4.0 Project**

Description, Figure 4-27 Ship Traffic – Annual Ship Movements for 2012 and 2030). Detailed information regarding marine vessel traffic near Roberts Bank, including route descriptions and approach characteristics, is provided in **Appendix 30-A Marine Vessel Incidence Prediction Inputs to the Quantitative Risk Assessment**.

3-A 2.10 Outdoor Recreation and Tourism

Existing marine-based recreational and tourism activities in the Roberts Bank area include sailing, kayaking, windsurfing, kiteboarding, motor boating, crab harvesting, salmon fishing, ecotours, and whale watching. The latter activities are focused on southern resident killer whales, as well as transient killer whales and humpback whales.

Existing land-based recreational activities in the Roberts Bank area include walking, cycling, bird watching, nature study, photography, use of recreational areas such as parks, and hunting of migratory birds. The latter activity also occurs from boats.

3-A 3 PROJECTS CONTRIBUTING TO EXPECTED CONDITIONS

Projects that will have been carried out prior to RBT2 commencement in 2018 and will contribute to expected conditions in the RBT2 assessment area include the following:

- Westshore Terminals – Terminal Infrastructure Reinvestment Project (**Section 3-A 3.1**);
- DTRRIP (**Section 3-A 3.2**);
- RBRC Program (**Section 3-A 3.3**);
- Tsawwassen Mills and Power Centre Project and Tsawwassen Commons Project (**Section 3-A 3.4**);
- Tsawwassen Gateway Logistics Centre Project and Container Examination Facility (**Section 3-A 3.5**);
- TFN Sewage Treatment Plant Project (**Section 3-A 3.6**);
- Tsawwassen Springs Development (**Section 3-A 3.7**);
- Tsawwassen Shores Development Phases 1 and 2 (**Section 3-A 3.8**);
- Neptune Coal Handling Capacity Expansion Project (**Section 3-A 3.9**);
- Pacific Coast Terminals Expansion and Improvement Project (**Section 3-A 3.10**);
and
- Richardson International Grain Storage Capacity Project (**Section 3-A 3.11**).

An overview description of each of these projects is presented below. Refer to **Figure 3-10 Projects Contributing to Expected Conditions** for project locations.

Since the nature and level of existing activities is not anticipated to change prior to 2018, only projects (not activities) were considered to have contributed to the expected conditions case.

3-A 3.1 Westshore Terminals - Terminal Infrastructure Reinvestment Project

In spring 2014, Westshore Terminals Ltd. initiated its Terminal Infrastructure Reinvestment Project to be carried out at the existing Westshore Terminals. The *Environmental Impact Assessment for the Terminal Infrastructure Reinvestment Project* (SNC-Lavalin 2013) provides detailed information on the existing facility, the project components to be replaced or installed, potential environmental effects, and the mitigation measures to be used to avoid or reduce these effects. Key project components include the following:

- Relocation and construction of a new consolidated office and shop building;
- Removal of the existing office, shops, and warehouse complex, and expansion of the coal stockpile in the vacated footprint;
- Replacement of the shiploader at berth one;
- Replacement of three stacker-reclaimers;
- Conveyor upgrades; and
- Replacement and upgrade of other equipment to improve operational efficiencies, atmospheric emissions, and dust control.

These activities will allow the terminal's annual throughput capacity to increase by 3 Mt, bringing the terminal's maximum annual capacity to 36 Mt. Project completion is scheduled for 2018.

3-A 3.2 Deltaport Terminal Road and Rail Improvement Project

The DTRRIP project construction will continue through 2016, and therefore will contribute to expected conditions prior to Project commencement in 2018.

3-A 3.3 Roberts Bank Rail Corridor Program

The RBRC program and the three program components completed prior to April 2014 are described above with respect to projects contributing to existing conditions. Remaining program components, under construction during EIS preparation and to be completed prior to RBT2 commencement, include the following (TransLink 2014):

- Combo Project (196th Street Overpass, 192nd Street Overpass, and 54th Avenue East-West Connector Projects) – Located in the City of Surrey and the City of Langley, construction of these projects began in early 2012. Each project involves the development of a new overpass that will reduce traffic delays associated with train transits along the RBRC, resulting in reduced vehicle idling and associated emissions.
- Panorama Ridge Whistle Cessation Project – In combination with other initiatives, including the gating of the 148th Street crossing and upgraded protection at a series of rail crossings, this project will contribute to the elimination of train whistling. The project involves the closure of an at-grade rail crossing at 131A Street and a private crossing near 138th Street, access road upgrades, and at-grade crossing improvements, as well as development of an uninterrupted railway siding to extend from Mud Bay eastward to 144th Street.
- 152nd Street Rail Overpass Project – Due to population growth, traffic along 152nd Street between South Surrey and White Rock is expected to double to nearly 40,000 vehicles per day by 2021. This project will contribute to the elimination of train whistling along the RBRC corridor through Surrey.
- Mufford and 64th Avenue at Highway 10 – Construction of an overpass across the CP Rail tracks will eliminate an at-grade rail crossing. Coupled with other improvements to the 64th Avenue corridor, road network connectivity, reliability, and access to Glover Road and Highway 10 will be improved, reducing traffic delays and congestion and improving response times for emergency vehicles.

3-A 3.4 Tsawwassen Mills and Power Centre Project and Tsawwassen Commons Project

The Tsawwassen First Nation Economic Development Corporation, in partnership with Ivanhoe Cambridge, is developing a new shopping centre (48 ha), referred to as the Tsawwassen Mills and Power Centre, on the north side of Highway 17 and 52nd Street in Delta, B.C., northeast of the B.C. Ferries Terminal causeway. The development will include approximately 167,225 m² for retail, office, entertainment, and other uses. The enclosed mall area will be approximately 108,000 m² with the remaining land area to be used for parking (Tsawwassen First Nation Economic Development Corporation 2011).

The Tsawwassen First Nation Economic Development Corporation is also involved in the development of the Tsawwassen Commons, an outdoor retail complex (23 ha) located immediately adjacent to the Tsawwassen Mills and Power Centre. This development, which is being undertaken in partnership with the Property Development Group, will include retail outlets, restaurants, and financial service providers. The total building area in the Tsawwassen Commons will be approximately 53,000 m². A collector road will be built as an access road between the Tsawwassen Mills and Power Centre and Tsawwassen Commons developments.

Environmental and socio-community changes associated with the construction of these developments, which will be carried out between January 2014 and spring 2016, will contribute to expected conditions in the RBT2 assessment area. These changes include but are not limited to loss of agricultural land, and increased atmospheric emissions and noise levels. By 2018, the two shopping centres will have been in operation for approximately two years. It is therefore assumed that changes associated with their operation (e.g., increased atmospheric emissions, noise and light levels, and traffic) will also contribute to the expected conditions temporal case.

3-A 3.5 Tsawwassen Gateway Logistics Centre Project and Container Examination Facility

The Tsawwassen First Nation Economic Development Corporation, in partnership with the Government of Canada and a private partner, is developing a logistics centre on a 135-ha site south of Deltaport Way in Delta, B.C. Under the *TFN Zoning Regulation*, the project lands are zoned for a wide range of industrial land uses (Tsawwassen First Nation Economic Development Corporation 2011).

Work on the Tsawwassen Gateway Logistics Centre, which will include a container storage yard, container examination facility, rail-served warehouse, truck plaza, office space, and utility services, began in June 2010 and is ongoing. The container examination facility, to be operated by the Canadian Border Services Agency, will provide for customs inspection of imported containers arriving at Roberts Bank.

3-A 3.6 Tsawwassen First Nation Sewage Treatment Plant Project

To be completed in 2015, the TFN Sewage Treatment Plant will be situated on 1.6 ha in the TFN Industrial Park, north of 27b Avenue, in Delta, B.C. As of March 2014, construction was underway and preloading site preparation activities had been completed (TFN 2014). Key

components of the new treatment plant include administration, process and workshop buildings, plus pump stations and associated infrastructure. The project's contribution to expected conditions relates to air quality during construction (see **Section 9.2 Air Quality**) and water quality (see **Section 9.7 Marine Water Quality**). The plant, with a design capacity of approximately 8,000 m³ per day and tertiary treatment capability, will accommodate anticipated growth associated with the commercial, industrial, and residential developments underway and planned for the TFN Lands. It will replace a smaller treatment plant that currently services the Tsawwassen First Nation community.

3-A 3.7 Tsawwassen Springs Development

Under construction since 2012, this 55.4-ha residential development will include 296 condominiums and 194 detached houses on privately owned land located southeast of Highway 17 and west of 52nd Street in Delta, B.C. (Tsawwassen Springs 2014). The development is to include amenities for seniors, a clubhouse, a new golf course, and upgrades to an existing golf course. Buildings will be Leadership in Energy and Environmental Design-certified, and the golf course will be certified under the Audubon Cooperative Sanctuary Society, which requires the provision of wildlife habitats, conservation and protection of water quality, reduced chemical use, protection of environmental quality, and conservation of natural resources. The project is being developed by Shato Holdings and Talisman Homes, and is scheduled for completion in 2016 (Shato Holdings Ltd. 2014).

3-A 3.8 Tsawwassen Shores Phases 1 and 2

This project is a master-planned community (190 ha) on TFN Lands that is being developed by Aquilini Development and Construction Inc. (Aquilini), in partnership with TFN. The new community will consist of 2,200 homes with an estimated population of 5,200 (Aquilini 2014). The master plan provides for a village centre with commercial facilities, a library and community market, administration and community support services, green space, and an elementary school for 400 students. The development is to be constructed on land designated for residential use and commercial enterprise and residential use under the *TFN Land Use Plan* (AECOM 2009). Construction is scheduled for completion in fall and winter 2015 (Aquilini 2014).

3-A 3.9 Neptune Terminals Coal Handling Capacity Expansion

In January 2013, Neptune Terminals received a PMV project permit to increase its capacity to handle metallurgical coal at its existing terminal on the north side of Burrard Inlet in the City of North Vancouver. All work, including the installation of a second railcar dumper, new conveyors to unload coal from trains and additional rail track, replacement of an existing shiploader, and reinforcement of the berth one foundation, is being conducted within the existing facility footprint. The project will increase the terminal's export capacity from 12 Mt to 18 Mt annually (PMV 2014). Upon project completion in spring 2015, approximately one additional ship per week will call on the terminal.

3-A 3.10 Pacific Coast Terminals Expansion and Improvement Project

In April 2014, Pacific Coast Terminals Co. Ltd. signed a long-term contract with K+S Potash Canada General Partnership to provide handling, storage, and ship loading of potash products to be transported by rail from the company's Legacy mine site in Saskatchewan. Modifications and upgrades are underway at the Pacific Coast Terminal on Port Moody Arm, Burrard Inlet, Port Moody, B.C. to provide terminal facilities and capacity.

Project completion is scheduled for fall 2016. The project is expected to result in an increase of approximately two ship calls per week.

3-A 3.11 Richardson International Grain Storage Capacity Project

In May 2013, PMV issued a project permit to Richardson International Limited for the addition of a concrete Grain Storage Annex (capacity for 80,000 t) at the company's Burrard Inlet terminal in the City of North Vancouver to increase grain storage capacity. The terminal currently handles approximately 3 Mt of grain and oilseeds per year and is a major exporter of canola and cereal grains (Richardson International Limited 2013a, b). The increased storage capacity will increase the terminal's handling capacity to more than 5 Mt per year. Richardson International expects to complete project construction by November 2015. The terminal is capable of loading Panamax-sized vessels (65,000 to 70,000 t). No increases to vessel traffic are expected due to this project.

3-A 4 REFERENCES

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