PORT METRO vancouver

LAND USE PLAN

Draft December 2013

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This Land Use Plan provides a framework for the growth and development of port lands and waters over the next 15-20 years. It has been developed in consultation with First Nations and more than 100 stakeholders, including: governments, tenants, customers, the community and environmental organizations.

PORT METRO vancouver

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Message from the Chairman of the Board

"A port isn't just a local thing. It brings the world to you and takes your things to the world. So it requires a global perspective."

Land Use Plan consultation participant

Graphic / Image 3

Message from the CEO

Graphic / Image 4

1.0 Introduction

1.1 Port Metro Vancouver

Positioned on the southwest coast of British Columbia, Port Metro Vancouver is Canada's largest and busiest port, a vibrant gateway for domestic and international trade and tourism, and a major economic force that strengthens the Canadian economy.

As the fourth largest tonnage port in North America, Port Metro Vancouver consists of 28 major marine cargo terminals and connects with three Class 1 railroads, providing a full range of facilities and services to the international and domestic shipping community.

This Land Use Plan articulates Port Metro Vancouver's ongoing commitment to good stewardship of port lands and waters, and demonstrates the Port's responsiveness to social, environmental and economic trends that will impact the Gateway and the broader community.

MISSION

To lead the growth of Canada's Pacific Gateway in a manner that enhances the well being of Canadians and inspires national pride.

VISION

To be recognized as a world class gateway by efficiently and sustainably connecting Canada with the global economy, inspiring support from our customers and from communities locally and across the nation.

1.1.1 Port Metro Vancouver Mission and Vision

A mission and vision provide a thoughtfully articulated 'compass' to guide operations, planning and development. Port Metro Vancouver's mission and vision serve to guide the Port today and looking forward.

1.1.2 Legislative Context

The Vancouver Fraser Port Authority, the legal name for Port Metro Vancouver (the Port), was amalgamated in January 2008 by the Government of Canada in accordance with the *Canada Marine Act* and is accountable to the Federal Minister of Transport. Port Metro Vancouver is responsible for the operation and development of the port, specifically the navigable waters, real property and immovables within the jurisdiction of the combined former Fraser River Port Authority, North Fraser Port Authority and the Vancouver Port Authority.

The *Canada Marine Act* was established, amongst other things, to promote the success of Canadian ports for the purpose of contributing to the competitiveness, growth and prosperity of the Canadian economy. This legislation establishes the authority and responsibilities of the Port to fulfill its mandate, part of which is a requirement that the Port has a detailed land use plan that contains objectives and policies for the physical development of the real property and other assets it manages, taking into account relevant social, environmental and economic matters and zoning bylaws that apply to neighbouring lands. The legislation also establishes the requirements for notification and the adoption of a land use plan, requirements that Port Metro Vancouver exceeded through the consultation and engagement activities undertaken during development of this Plan. The Port's Letters Patent identifies the uses the Port may consider approving on its lands and waters.

The Port's jurisdiction under the Letters Patent borders 16 municipalities and one treaty First Nation in Metro Vancouver, and is located within the asserted traditional territories of several First Nations. This jurisdiction covers hundreds of kilometres of shoreline and extends from Point Roberts at the Canada/US border through Burrard Inlet to Port Moody and Indian Arm, and from the mouth of the Fraser River eastward to the Fraser Valley, north along the Pitt River to Pitt Lake, and the North, South and Middle Arms of the Fraser River.

The Port's jurisdiction is a mix of navigational authority throughout this area and jurisdiction over real property in Burrard Inlet, Indian Arm, lands and waters east of the provincial bed of the Fraser River, and various federal holdings in the North, South and Middle Arms of the Fraser River. Until the end of December 2014, Port Metro Vancouver holds a Head Lease with the Province of British Columbia which conveys authority over the use of waters and foreshore lands associated with the provincial bed of the Fraser River. After 2014, the Province will resume responsibility for managing these areas of the River.

1.2 National and International Context

The Port is a major North American Gateway for Asia-Pacific trading and an important generator of jobs, taxes and economic value for the Canadian economy. The Port's trading partners have access to the most diverse port in North America, operating across five business sectors: automobiles, breakbulk, bulk, container and cruise. The Port facilitates trade with more than 160 world economies, and handles nearly 130 million tonnes of cargo each year. Approximately 93 percent of the Port's total volume serves Canadian import and export markets.

Since 2006, the Governments of Canada and British Columbia, working with industry, have invested over $9 billion in Asia-Pacific Gateway and trade infrastructure projects. Almost $22 billion has been invested by the provincial government in overall transportation infrastructure in British Columbia. These initiatives are building regional, provincial and national competitive advantages by getting goods to market faster with less of an impact on local communities.

Working with federal and provincial governments through the Asia-Pacific Gateway and Corridor Initiative, and together with local communities, the Port will deliver major new projects that will continue to benefit the regional, provincial, and national communities.

1.3 Regional Context

The Port's mandate is to facilitate Canada's trade in a safe and environmentally responsible manner. Port Metro Vancouver understands that local communities not only want to benefit from port activity, they also want the port to be a good neighbour. Through ongoing collaboration with local communities, the Port is able to facilitate Canada's largest gateway to the Asia-Pacific region in a sustainable manner while continuing to generate prosperity and jobs for thousands of families – not just in the Lower Mainland, but also across British Columbia and Canada.

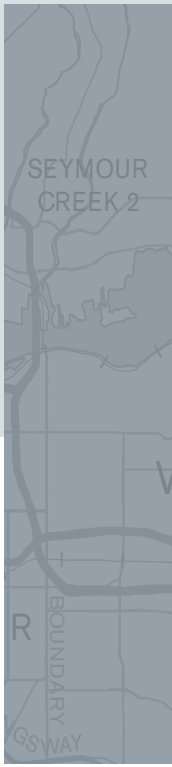
Port Metro Vancouver has been a driving force in the growth of Metro Vancouver, providing employment opportunities to local residents and enabling many of the region's businesses to flourish. In turn, regional growth provides port businesses with an accessible and trained labour force as well as necessary ancillary services.

The plans of local governments, First Nations and regional agencies such as Metro Vancouver and TransLink provide important considerations and context to Port Metro Vancouver's land use planning and development decision-making. While the Port's Land Use Plan applies exclusively to lands and waters managed by the Port, the Plan provides an opportunity to communicate the Port's interests to other authorities having jurisdiction over the balance of the region's land use. Only through communication and collaboration among all jurisdictions will the vision for sustainable growth be achieved.

Figure 1: Regional Context

2.0 Purpose of Land Use Plan

This Land Use Plan provides a framework for the growth and development of port lands and waters over the next 15 to 20 years. It identifies the types of uses appropriate on land and water across the Port's jurisdiction while maintaining flexibility to respond to business needs, market trends and emerging issues.



Graphic / Image 5

THE GOALS

- Port Metro Vancouver manages port growth and activity in support of Canada's trade while preparing for anticipated transitions in the global economy.
- Port Metro Vancouver is a leader in ensuring the safe and efficient movement of port-related cargo, traffic and passengers throughout the region.
- Port Metro Vancouver is a global leader among ports in the environmental stewardship of the lands and waters it manages.
- Port activity and development is a positive contributor to local communities and First Nations.
- Port Metro Vancouver is a leader in communication and engagement in support of the use and development of port lands and waters.

THE PLAN

- **Communicates the Port's long term land use policy directions;**
- **Guides land utilization and future growth opportunities;**
- **Assists port tenants and customers in identifying areas to locate or expand their operations and investments;**
- **Facilitates coordination of land use and transportation planning with neighbouring communities and government agencies;**
- **Provides neighbouring residents and communities with greater clarity about activities and uses that may occur on port lands, and how their interests will be considered in the planning process;**
- **Provides First Nations with clarity about land use and development activities on Port Metro Vancouver lands and waters adjacent to their reserves and within their asserted traditional territories;**
- **Illustrates the Port's ability to accommodate future growth in a socially, environmentally and economically sustainable manner.**

The Plan's goals, objectives and policy directions (Section 6.0) will guide strategic planning and development decision-making in the port going forward.

The seven Planning Areas described in Section 7.0 support area specific land use management, further guided by market trends.

Section 8.0 describes the Plan's land and marine designations, each with a specific intent and list of uses. These designations assist in the orderly development and management of areas within Port Metro Vancouver's jurisdiction, and provide clarity on long term development patterns for port customers, stakeholders and future investors in the Asia-Pacific Gateway.

Implementation and monitoring is addressed in both Section 10.0 and Appendix B, including implementation measures (actions) that demonstrate Port Metro Vancouver's commitment to acting on the directions established by the Plan.

3.0 Port 2050 and Sustainability

Figure 2: Anticipated Future

3.1 Port 2050 Vision: Anticipated Future

In 2011, Port Metro Vancouver completed a strategic visioning initiative called Port 2050. During this year-long initiative, the Port engaged representative stakeholders with an interest in Port Metro Vancouver's future.

The scenario that emerged from this initiative was the "Anticipated Future", representing near term and longer term outcomes respectively. This is an outlook that involves considerable growth across cargo sectors in the coming years, with an eventual transition to a scenario where social, environmental and economic imperatives are equally considered in all measures of success. Sustainable production and consumption patterns under this future scenario would likely result in changes to global shipping and trade patterns, which would affect the Gateway. This transition will be closely monitored by the Port and its partners to anticipate and act on emerging trends, and to inform future amendments to this Land Use Plan.

3.2 Sustainable Gateway Definition

Port Metro Vancouver launched the Sustainability Vision initiative in 2013 to explore what a sustainable Gateway looks like, and to assist the Port in preparing for its anticipated future.

This initiative relies upon collaboration with government, communities, First Nations, port customers, supply-chain partners, and non-government organizations. It builds on the Port 2050 work and helps to shape the concurrent development of the Land Use Plan. Port Metro Vancouver's definition of a sustainable gateway will inform the overall vision for the Port, which guides our planning and decision-making.

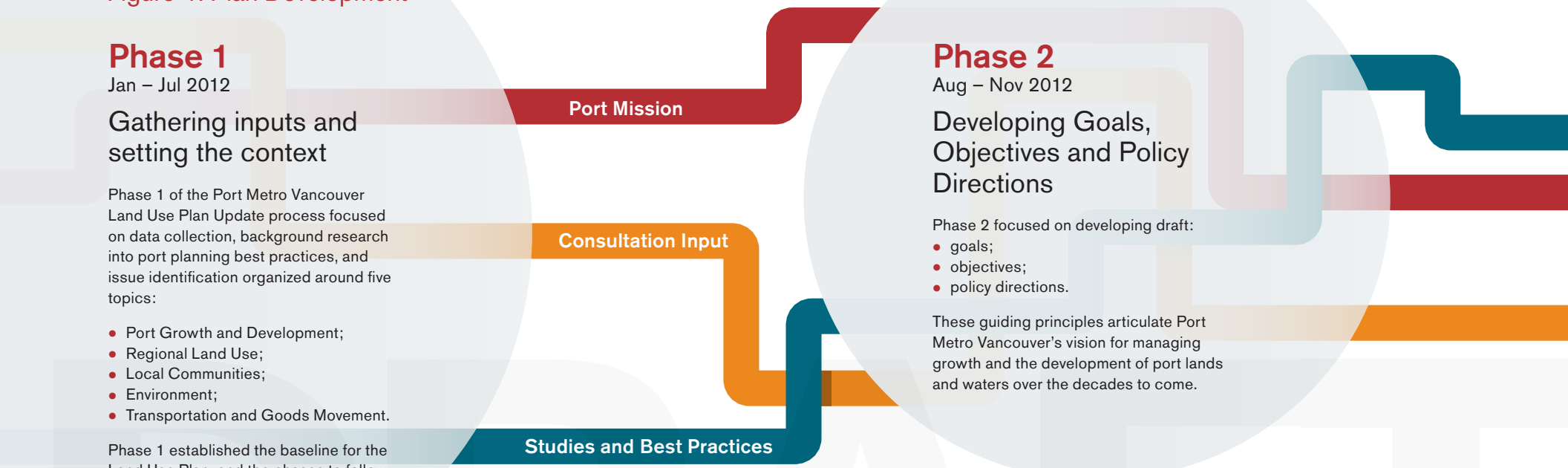
Figure 3: Strategic Framework

4.0 Land Use Plan Update Process

Since 2008, Port Metro Vancouver's Land Use Plan has been a consolidation of the land use plans of the former Vancouver Port Authority, North Fraser Port Authority and the Fraser Port Authority.

One of the primary objectives of updating Port Metro Vancouver's Land Use Plan was to create a unified Plan with clear and consistent policies and designations across the Port's jurisdiction. In addition, the Land Use Plan was intended to reflect the Port's mission, vision and strategic priorities, and be developed through a consultative process that involved local governments, agencies, customers/stakeholders, the public and First Nations. Summaries of the consultation processes and outcomes for each phase of the Land Use Plan update process are available at portmetrovancouver.com/landuseplan.

Figure 4: Plan Development



Phase 1

Jan – Jul 2012

Gathering inputs and setting the context

Phase 1 of the Port Metro Vancouver Land Use Plan Update process focused on data collection, background research into port planning best practices, and issue identification organized around five topics:

- Port Growth and Development;
- Regional Land Use;
- Local Communities;
- Environment;
- Transportation and Goods Movement.

Phase 1 established the baseline for the Land Use Plan, and the phases to follow further informed the process.

Phase 2

Aug – Nov 2012

Developing Goals, Objectives and Policy Directions

Phase 2 focused on developing draft:

- goals;
- objectives;
- policy directions.

These guiding principles articulate Port Metro Vancouver's vision for managing growth and the development of port lands and waters over the decades to come.

4.1 Plan Development

The Land Use Plan update process has been implemented for over two years in four phases between 2012 and 2014, starting from background research and concept development to preparation of the final Plan. The process allowed for extensive consultation in each stage, including communicating the results of consultation activities along the way.

Phase 3

Dec 2012 – Dec 2013

Refining Plan Policies and Updating Land Use Designations

Phase 3 was implemented in several stages and provided the opportunity to:

- review and update the draft goals, objectives and policy directions;
- update the land and water use designations and associated mapping;
- seek stakeholder feedback on the above;
- develop proposed implementation measures.

This material formed the basis for development of the draft Land Use Plan document, which was then referred out for extensive public consultation in Phase 4.

Phase 4

Jan 2014 – Completion

Finalizing the Plan

The final phase - Phase 4 - involves:

- finalizing the proposed Land Use Plan;
- meeting the consultation requirements of the *Canada Marine Act* prior to its adoption by the Port Metro Vancouver Board of Directors.

The Plan development and consultation process undertaken by Port Metro Vancouver far exceeds the *Canada Marine Act* requirements and provides a high level of confidence that the adopted Plan will:

- reflect current best practices;
- align with the Port's mission and vision;
- incorporate the social, environmental and economic values critical to its success.

A summary of the consultation process in Phase 4 will be available at portmetrovancouver.com/landuseplan.

Graphic / Image 6

5.0 Plan Context

5.1 History of the Port

For more than a century, the Port has played a vital role in fostering trade and providing significant employment and economic benefits for the region and the country. The Port's potential was recognized in 1864 when the first export cargo of lumber and fence pickets left Moodyville on the North Shore destined for Australia aboard the *Ellen Lewis*.

Long before establishment of the Port, the Metro Vancouver area was home to the Coast Salish Peoples. Archaeological records indicate the presence of Aboriginal People in the region from 8,000 to 10,000 years ago.

By the early 1900s, as Canada's economy grew and rail operations expanded, the Port rapidly established a reputation for its geographic location, its modern facilities, its well trained and educated work force, and its ability to strengthen the regional and national economies through trade and business development.

More recently, from 1952 to 2014, the Port managed the provincial bed of the Fraser River on behalf of the Province of British Columbia through a series of leasing agreements.

Today, Port Metro Vancouver, host communities and First Nations are working together to take advantage of the opportunities a thriving port can offer. Building on these relationships and the energy and innovation they bring, the Port will continue to pursue investments, strategies and initiatives that set the stage for strong and sustainable growth in trade to the benefit of all Canadians.

5.2 Environmental Stewardship

Port Metro Vancouver is committed to the efficient and reliable movement of goods and passengers through the port while integrating environmental stewardship initiatives into all areas of port operations. By strengthening partnerships and encouraging innovation, the Port can improve its performance in a sustainable manner.

Environmental Review

The Port is more than cranes, cargo, terminals, ships and international trade. It is also recognized globally as a naturally beautiful and clean harbour complemented by innovative environmental leadership. The port is home to hundreds of species of fish, crustaceans, birds and marine mammals. Port Metro Vancouver recognizes that both human and marine life depend on the protection of the physical environment.

In recognition of the need for sound environmental stewardship, all physical works and activities conducted within Port Metro Vancouver's jurisdiction must undergo an environmental review carried out by the Port that meets the requirements of the *Canadian Environmental Assessment Act (CEAA) 2012* and the Port's Environment Policy.

Port Metro Vancouver staff with expertise in environmental science, biology, air quality and energy management conduct reviews of all activities affecting port land and water as well as the local airshed.

On projects of significant scope, the Port seeks advice from environmental regulatory agencies to ensure that proponents receive the best advice and direction for mitigating project environmental impacts.

In addition, new development within Port jurisdiction is required to appropriately avoid or mitigate potential adverse impacts on fish or wildlife habitat. Projects that do impact or reduce habitat areas are subject to habitat offsetting requirements, typically administered through Fisheries and Oceans Canada.

Creating marine habitats is one way that the Port works to lessen its impact on the marine environment and its inhabitants. In 1995 the Port built a reef under the waves at Cates Park, now inhabited by octopus, rock fish, crabs, anemones and shrimp.

Environmental Initiatives

Port Metro Vancouver is leading the way for other ports to address air quality and environmental concerns by focusing on technology and operational efficiencies to reduce impacts, as well as to enhance the surrounding environment. More specifically, the Port has initiated a number of programs, often in partnership with other agencies, that work to address the numerous environmental components of a healthy ecosystem, including the following:

Graphic / Image 7

Air Action Program

In 2008, Port Metro Vancouver introduced the Air Action Program to improve management of air emissions. Working with the Port's stakeholders, other Pacific Coast ports, the marine industry and government agencies, the Air Action Program focuses on reducing emissions from ocean going vessels, cargo handling equipment, rail and truck sectors. It is a multi-faceted approach that includes a variety of programs:

Corporate emissions: In 2010, Port Metro Vancouver was able to reduce emissions associated with energy use at its head office by 3.4 tCO_2 through energy conservation measures. The Port also invested in 1,265 tonnes of BC-based carbon offsets through the Pacific Carbon Trust to mitigate remaining emissions from corporate activities.

Shore Power: In 2009, Port Metro Vancouver became the first port in Canada, and the third in the world, to install shore power facilities for cruise ships. This system enables cruise ships to shut off their diesel-powered engines and connect to the land-based hydroelectric grid while docked at Canada Place. By 2020, it is anticipated that the majority of container vessels calling on the Port will be shore-power enabled, suggesting that there will be a requirement to provide terminal-side infrastructure to allow these vessels to plug-in and remain competitive.

Non-Road Diesel Emissions Initiative: This program aims to reduce the emissions of non-road diesel equipment on port property through a program which charges a fee to terminal operators who continue to operate out-of-date equipment. When terminal operators upgrade to new, cleaner equipment, most of the fees paid will be reimbursed. This program is similar to Metro Vancouver's Non-Road Diesel Emissions Initiative.

Northwest Ports Clean Air Strategy: Port Metro Vancouver is working with the Port of Seattle and Port of Tacoma to reduce port-related air emissions in the Georgia Basin/ Puget Sound airshed through the Northwest Ports Clean Air Strategy. The Port also collaborates with national and international stakeholders to ensure the programs have lasting effects.

EcoAction Program: The Port promotes emissions reduction targets for ocean-going vessels that enter the port by offering financial recognition for those who excel in environmental stewardship. Vessels may qualify for one of three levels of harbour rates based on their implementation of one of the emission-reduction options within a given category. The reduced rates, Bronze, Silver and Gold, are designed to provide a wide variety of technology and fuel options to vessels in order to promote and build awareness around a number of alternative emission reduction practices.

Blue Circle Awards: Marine carriers that participate in the EcoAction Program are eligible to receive the Blue Circle Award. Introduced in 2010, this award recognizes marine carriers that have achieved the highest reduction in operational emissions.

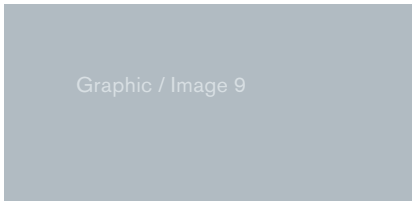
Landside Emmissions Inventory: By developing an inventory of emissions from cargo handling equipment, trucks, rail and other tenant activities, Port Metro Vancouver works with customers and tenants to identify opportunities to conserve energy, reduce emissions and promote clean energy technologies.

Truck Licensing Program: In 2008, the Port introduced stringent environmental requirements into the Container Truck Licensing Program. These focus on phasing out older trucks and setting mandatory opacity and idling limits. The Port continues to work with truck operators to reduce container truck emissions and bring the fleet up to the equivalent particulate matter emissions of a 2007 truck or newer by 2017.

Graphic / Image 8

Energy Action Program

Port Metro Vancouver's Energy Action Program focuses on using reliable, clean energy for its operations. The Port continues to explore opportunities for energy conservation and implementation of alternative or renewable energy to support operations and reduce air emissions. Studies are conducted to investigate energy efficiency, electrification, hybridization, integrated resource management and other practices or technologies at key terminals. By improving our understanding of these opportunities the Port is better positioned to work with partners and develop a more sustainable Gateway.



Site Remediation

Port Metro Vancouver uses a combination of remediation and risk management approaches to address sites that have been contaminated through past activities. Depending on the condition and expected future use of the site, affected sites are treated with a variety of remedial techniques that may include on-site treatment, removal and disposal of contaminants at appropriate facilities, or containment on site.

Port tenants are required to appropriately maintain their sites to prevent contamination by employing best practices for their operations. Environmental testing at the beginning, end and at other times during a tenant's lease, when appropriate, ensures sites are monitored for contamination and any contamination is addressed to meet regulatory and additional Port requirements.

Habitat Offsetting

New development in the port is required to appropriately mitigate potential adverse impacts on fish or wildlife habitat. Projects that do impact or reduce habitat areas are subject to habitat offsetting requirements, typically administered through Fisheries and Oceans Canada (illustrated in Appendix A).

There are a number of ways project proponents provide habitat compensation, including:

- Artificial reefs constructed from natural rock, concrete blocks and pile cut-offs create habitat for a variety of marine life.
- Habitat benches made from natural rock are constructed at elevations ideal for fish habitat such as kelp, rockweed and barnacle tidal zones.
- Habitat enhancement areas provide new habitat to compensate for other losses.
- Gabions are wire baskets of cobble (rounded rocks) that are stacked in the intertidal area. They optimize surface areas and spaces between rocks to provide habitat for kelp, algae and juvenile fish.
- Refugia are large openings inside berth structures, such as those at Centerm and Deltaport, which provide additional marine hiding areas or "refuge" from predator species.

FREMP / BIEAP

The Fraser River Estuary Management Program (FREMP) and the Burrard Inlet Environmental Action Program (BIEAP) Environmental Review Committee provided an intergovernmental model of coordinated environmental management, establishing important interagency communications and achieving significant outcomes for its partners and the sustainability of Burrard Inlet and the Fraser River Estuary ecosystems. These committees were comprised of representatives from Environment Canada, Fisheries and Oceans Canada, Transport Canada, British Columbia Ministry of Environment, Metro Vancouver and Port Metro Vancouver.

In March 2013, the BIEAP-FREMP office closed and the "single window" external project environmental review is now undergoing a transition. Port Metro Vancouver is assisting in this transition and supports the development of a new coordinated review mechanism with partner agencies. In the interim, Port Metro Vancouver continues to apply the FREMP habitat colour coding system as an important input to development review (Appendix A).

Flood Management

Studies indicate that climate change will result in local sea level rise between 20 and 60 centimetres over the next hundred years. Climate change is also expected to increase severe weather events which could lead to more frequent incidences of flooding along the Fraser River. If not appropriately addressed, these two factors will significantly affect port operations and infrastructure, much of which is low lying and would be at risk of submersion. This issue is not unique to the port. Rather, all low lying waterfront lands in the region are at risk of being affected, which is best addressed through coordinated efforts across jurisdictions.

Sea level rise and flood management require a cohesive, collaborative and coordinated regional approach. The Port is working with the Fraser Basin Council, along with local, provincial and federal partners to develop a Business Plan for a Regional Flood Management Strategy for the Lower Mainland. The Port is also a member of the Joint Program Committee for Integrated Flood Hazard Management pursuing new studies and models to attempt to better define the possible impact of sea level rise and severe storm scenarios. This is a multi-party, consensus-based committee that brings together about 30 federal, provincial and local government agencies and organizations to address flood risks in an integrated way.

The Port is also working with regional partners to collect and analyze data to better understand and manage flood risks in a coordinated manner as part of the Port's flood management program. In addition, the Port has an infrastructure asset management program that is designed to maximize the long-term use of assets in a cost-effective manner, while reducing the risks of failure of assets which could have financial, safety, and environmental implications.

Graphic / Image 11

5.3 Communities and First Nations

Port Metro Vancouver's jurisdiction borders 16 municipalities and one treaty First Nation, and is located within the asserted traditional territories of several other First Nations. While the Port's mandate is to facilitate trade in the best interest of all Canadians, it is important to maintain positive working relationships with its neighbours who rely on port lands and waters for a wide range of activities.

5.3.1 Communities

Port Metro Vancouver has developed a number of avenues to engage with communities, ranging from community meetings and open houses, the PortTalk online forum and designated municipal liaisons.

Port Metro Vancouver has established several Community Liaison Committees as a formal mechanism for dialogue and communication. These committees bring together residents, local government officials, First Nations, industry and Port representatives to identify concerns and recommend potential solutions related to operations and development. These committees deal with issues such as container truck operations, rail noise and land use. Members have been key in creating programs – such as the North Shore Rail Noise Steering Committee - to address the impact of operations on the community.

In East Vancouver, the Burrardview Community Association, CP Rail and the City of Vancouver participate with Port Metro Vancouver on the East Vancouver Port Lands Liaison Group, focusing on issues related to port operations and development in that community. The work of this group has resulted in the East Vancouver Port Lands Plan, adopted by both the City of Vancouver and Port Metro Vancouver. The Plan strives to address compatibility issues between industrial and residential land uses in this area.

The North Shore Waterfront Liaison Committee and the Port Community Liaison Committee in Delta are mechanisms for dialogue and communications about port-related issues with those communities. Both committees have been instrumental in bringing about changes to operational matters such as truck traffic management and rail whistling.

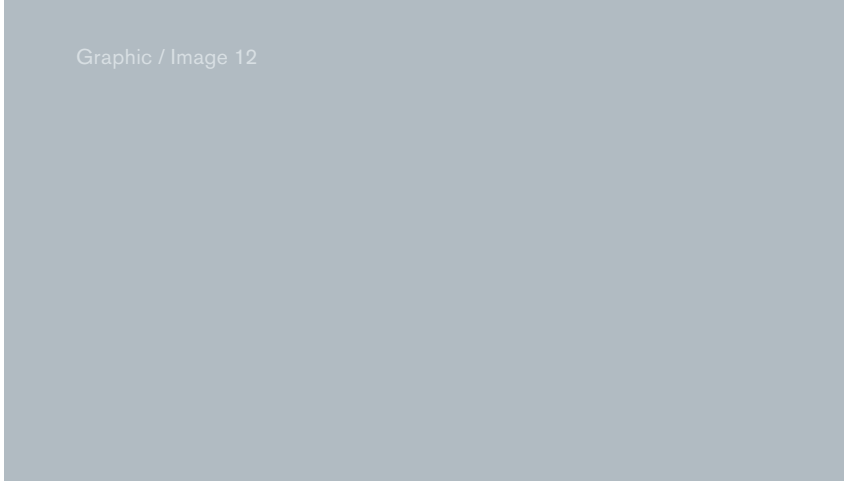
In addition to Port Metro Vancouver's community engagement initiatives and programs, port lands are used for a variety of community purposes, such as Crab Park and New Brighton Park in Vancouver, and public viewing platforms in Queensborough. Projects such as the Lower Level Road also provide opportunities to create or improve community amenities, such as the North Shore Spirit Trail.

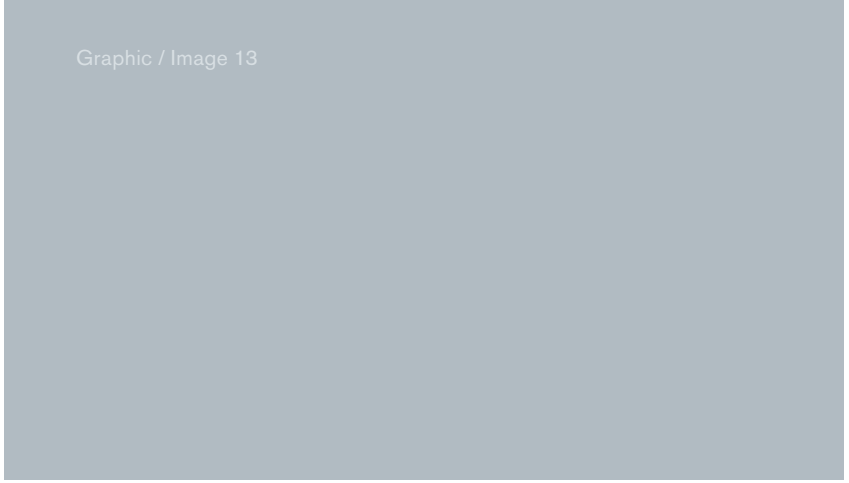
5.3.2 First Nations

The lands and waters managed by the Port fall within the asserted traditional territories of several First Nations and border the Tsawwassen First Nation treaty lands. Over thousands of years these First Nations have acquired an intimate knowledge of this region and its rich natural resources. First Nations harvested and preserved a great variety of foods, maintained villages and camps, and administered complex trade networks in the region.

With this in mind, it is important to note that the Crown has a legal duty to consult with First Nations on projects that have the potential to adversely impact Aboriginal or Treaty rights. Port Metro Vancouver has been delegated authority to manage federal lands by the *Canada Marine Act*, and therefore conducts consultation on behalf of the Crown. First Nations are also invited to participate in Community Liaison Committees, which provide an opportunity for First Nations to present and discuss their concerns related to operations and development.

Figure 5: Terminal and Off Dock Facilities





5.4 Major Facilities and Assets

The Port consists of 28 major marine cargo terminals and connects with three Class 1 railroads, providing a full range of facilities and services to the international and domestic shipping community.

The 28 deep-sea and domestic marine terminals service the following business sectors:

5.4.1 Automobiles

Port Metro Vancouver handles approximately 400,000 vehicles annually through the Vancouver Gateway, making us one of the top three ports on the West Coast of North America for vehicle transshipment. As the most efficient Gateway for Canadian destined automobiles from Asia, Port Metro Vancouver has two auto terminals that supply dealerships across Canada. These terminals can also handle additional cargo, such as heavy rolling machinery and equipment.

Automobile Terminals

- Wallenius Wilhelmsen Logistics (WWL) auto terminal is located on Annacis Island in the Fraser River in Delta.
- Fraser Wharves is an auto terminal located on the north side of the Fraser River in Richmond.

5.4.2 Breakbulk

Port Metro Vancouver is the Pacific Northwest's major consolidation centre for breakbulk cargo such as forest products, steel and machinery. In 2012, breakbulk cargo represented approximately 13 per cent of the port's annual throughput. All of the Port's international breakbulk cargo is handled through two terminals.

Breakbulk Terminals

- Fraser Surrey Docks is a multi-purpose marine terminal located on the deep sea shipping channel of the Fraser River. It handles containers as well as bulk and breakbulk products.
- Located on the North Shore of Burrard Inlet, the Lynnterm facility is the consolidation centre for forest and steel products, steel and breakbulk in the Pacific Northwest. It handles wood pulp and paper, lumber, panel products, logs, steel products, project cargo and machinery.

5.4.3 Bulk

Dry and liquid bulk cargoes account for approximately two-thirds of the Port's annual tonnage. Shipping lines regularly call on the Port because of its diversity and the availability of western Canadian commodities for export. As a result, the Port has frequently-chartered sailings and a full range of cost-effective maritime and transportation services to support a broad selection of cargo.

Bulk Terminals

- Alliance Grain Terminal, located on the south shore of Burrard Inlet, handles grain, specialty crops and grain feed.
- Suncor Energy's Burrard Products Terminal is located in Burnaby and handles petroleum products.
- Canexus is a chemical terminal located on the North Shore of Burrard Inlet that imports bulk sea salt and exports caustic soda and sodium chlorate, used in the bleaching process of paper products.
- The Cargill terminal, located on the North Shore of Burrard Inlet, is a grain terminal operated by Cargill Limited that handles wheat, durum, canola, barley and grain by-products.
- Cascadia is a grain terminal located on the South Shore of Burrard Inlet operated by Viterra Inc., which handles wheat, durum, canola, barley, rye, oats and by-products.
- Fibreco Terminal, located on the North Shore of Burrard Inlet, handles wood chips and wood pellets.
- Fraser Surrey Docks is located north of the Alex Fraser Bridge on the southwest shore of the Fraser River. Fraser Surrey Docks, in addition to breakbulk, handles agricultural products and containers.
- Imperial Oil Terminal is a petroleum terminal located in Burrard Inlet East. It handles gasoline, petroleum distillate, heavy fuel oil, intermediate jet fuel oil, and marine gas oil.
- Kinder Morgan's Vancouver Wharves is located on the North Shore of Burrard Inlet. It handles breakbulk pulp, bulk mineral concentrates liquids, sulphur/fertilizers, specialty agri-products and other dry bulk commodities.
- Kinder Morgan's Westridge Terminal is a petroleum terminal located in Burnaby. It handles crude petroleum, petroleum products, aviation and jet fuel, all transported via the Transmountain pipeline system.
- Lantic Inc. (Rogers Sugar) is located on the South Shore of Burrard Inlet. Lantic Inc. is the leading refiner, processor, distributor and marketer of Rogers Sugar brand products in Western Canada. The terminal handles bulk raw sugar imports.
- Neptune Bulk Terminals is North America's largest multi-product bulk terminal and is located on the North Shore of Burrard Inlet. It handles metallurgical steel-making and thermal coal, phosphate rock, potash, animal feed, canola oil and phosphate rock.
- Pacific Coast Terminals is located in Port Moody. It currently handles sulphur, ethylene glycol and metallurgical coal and is considering handling additional bulk products, such as canola and potash.
- Pacific Elevators is located on the South Shore of Burrard Inlet and is operated by Viterra. It handles canola, flax, peas, and various bulk manufactured agri-forage and by-products.
- Richardson International, located on the North Shore of Burrard Inlet, is an exporter of canola and cereal grains to trading economies along the Pacific Rim. It handles wheat, canola, barley, rye, flax, grain and feed products.
- Shellburn is a petroleum distribution terminal operated by Shell Canada Ltd. and is located in Burnaby. It handles petroleum products such as gasoline, diesel oil and jet fuel.
- Stanovan is a petroleum terminal operated by Chevron Canada Ltd. and is located in Burnaby. It handles petroleum products and chemical products such as gasoline, diesel fuel, and iso octane.
- Univar Canada Terminal is located on the North Shore of Burrard Inlet and is operated by Univar Canada. It handles caustic soda solution and ethylene glycol.
- West Coast Reduction is located on the South Shore of Burrard Inlet, and handles fat and oil products.
- Westshore Terminals is located at Roberts Bank in Delta and is a major coal and coke terminal.

Note: Terminal operators and products can change over time. The above summary reflects terminal conditions as of December 2013.

5.4.4 Container

The Port offers four common-user container terminals with extensive on-dock rail facilities. In 2012, container cargo accounted for approximately 20 per cent of the Port's annual tonnage throughput.

- Centerm, located on the South Shore of Burrard Inlet, operates with six gantry cranes on two berths, on-dock rail facilities and an advanced operating system that tracks cargo real time.
- Vanterm is a container terminal with six gantry cranes located on the South Shore of Burrard Inlet and is operated by TSI Terminal Systems Inc. It handles containerized cargo, project cargo and bulk oils from the adjacent West Coast Reduction facility.
- Deltaport, with ten gantry cranes, is located at Roberts Bank in Delta and handles containerized cargo. Deltaport is currently Canada's largest container terminal with three berths, on-dock rail facilities and the only quad lift crane in North and South America.
- Fraser Surrey Docks is a multi-purpose marine terminal located on the Fraser River. It handles containers as well as bulk and breakbulk products. Growth in container handling at this terminal is constrained by the ability of larger vessels to access this portion of the Fraser River.

Container Handling Facilities

The Vancouver Gateway also offers a network of transload, container handling and warehousing facilities that support major importers and exporters across Canada. These facilities play an integral role in the supply chain supporting container trade.

Transloading Facilities

- Canaan Transport Group Inc.
- Coast 2000 Terminals Ltd.
- Columbia Containers
- Consolidated Fastfrate Inc.
- Euro Asia Transload Inc.
- Global Agriculture Trans-Loading Inc.
- Parrish & Heimbecker, Ltd.
- Ray-Mont Logistics
- Reagle Terminals Inc.
- Ryder Container Terminals
- South Fraser Container Services (2005) Ltd.
- Western Transloading Corp.
- Westran Services Ltd.

Container Storage and Maintenance Facilities

- Delco Delta Container Ltd. Partnership
- Harbour Link Container Services Inc.
- TDK Metro Terminals

Graphic / Image 14

5.4.5 Cruise

As home port for the Vancouver-Alaska cruise industry, Port Metro Vancouver welcomes hundreds of thousands of passengers annually.

- Canada Place is located on the waterfront in downtown Vancouver, close to shopping, dining, attractions and Stanley Park.
- Ballantyne Pier is located east of Vancouver's city centre, adjacent to the Centerm container terminal. The Ballantyne cruise terminal will close in October 2014 and is expected to be re-purposed for other uses.

5.5 Port Growth

Port Metro Vancouver is a major North American gateway for Canada's Asia-Pacific trading partners and a major generator of jobs, taxes and economic value for the Canadian economy. Across Canada in 2012, ongoing operations at businesses related to Port Metro Vancouver generated approximately 98,800 jobs representing $6.1 billion in wages. Port-related activity was also responsible for a total of $9.7 billion in gross domestic product (GDP) and a total of $20.3 billion in economic output to Canada's economy.

98,800
Jobs

$6.1b
Wages

$9.7b
BC GDP

$20.3b
Contributed to Canada's economy

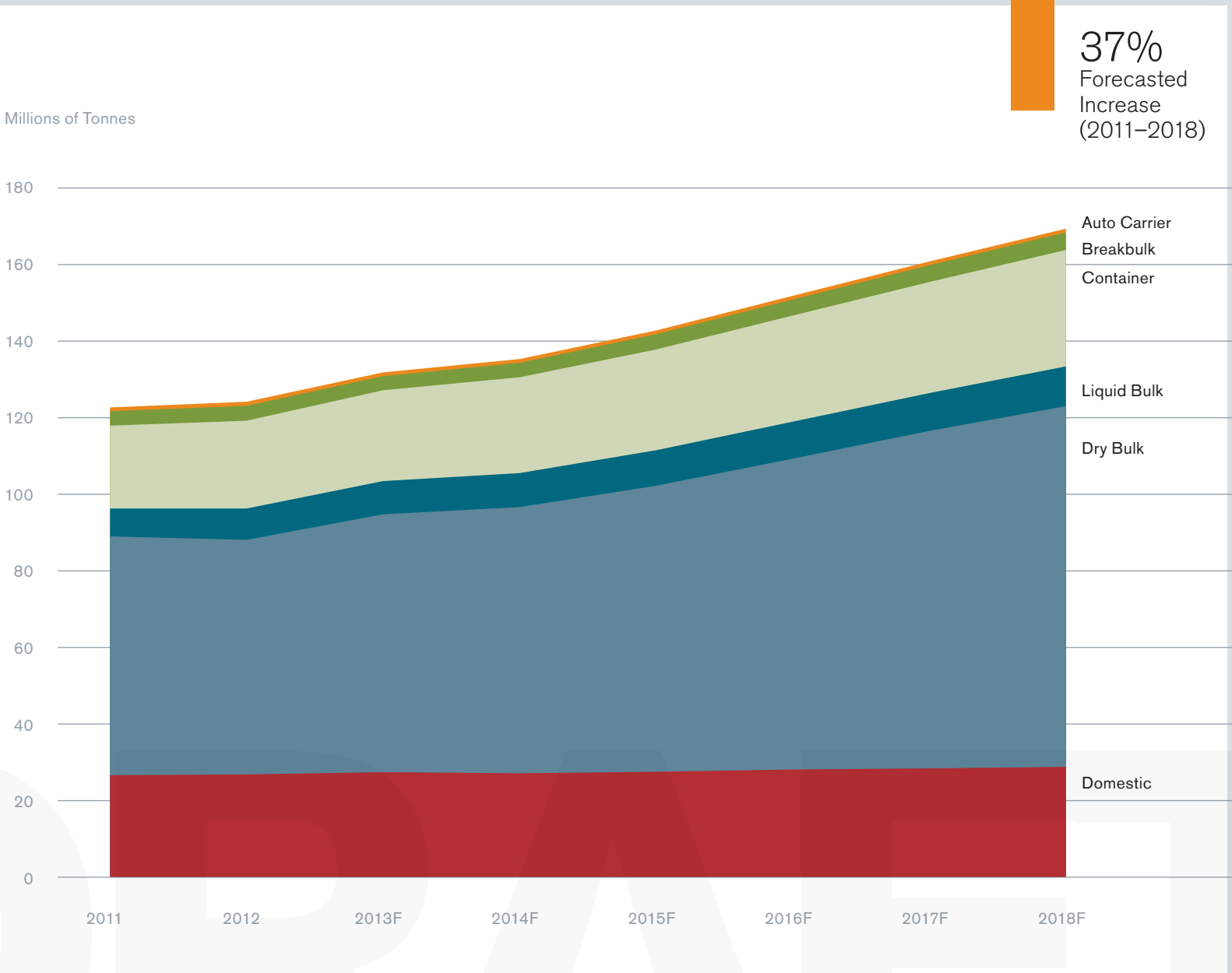
As illustrated in the following table, forecasts indicate growth is anticipated across almost all commodity and business sectors currently handled at the port.

The extent to which Port Metro Vancouver is able to capture and manage the anticipated growth will depend largely on its ability to develop the additional required infrastructure and service capacity within the constraints provided by the Port's physical context, as well as the need to grow in a sustainable manner that respects the interests of surrounding communities. The Land Use Plan provides strategic guidance to ensure that the Port is prepared to accommodate that growth so that Canadians can continue to benefit from the resulting economic activity.

Figure 6: Port Metro Vancouver Traffic Forecast

Sector (million tonnes)	2011	2012	2013F	2014F	2015F	2016F	2017F	2018F
Auto Carrier	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Breakbulk	3.8	3.9	3.7	3.8	4.0	4.2	4.4	4.6
Container	21.7	23.0	23.8	25.1	26.4	27.8	29.1	30.5
Liquid Bulk	7.3	8.2	8.7	8.9	9.3	9.7	9.9	10.4
Dry Bulk	62.5	61.4	67.5	69.7	74.9	81.4	88.4	94.5
Domestic	26.9	27.1	27.7	27.4	27.8	28.4	28.7	29.1
Total Cargo	122.5	123.9	131.8	135.3	142.7	151.7	160.8	169.5
Cruise ('000s revenue pax)	663	666	813	816	840	875	890	905
Auto ('000 units)	298	384	349	317	324	318	311	319

Figure 7: Port Metro Vancouver Traffic Forecast



Graphic / Image 15

Graphic / Image 16

Graphic / Image 17

5.5.1 Commodity Forecasts

World GDP grew 2.9% in 2012, which was driven in part by a 2.4 % increase in world goods trade. Annual global economic growth is expected to be 3 to 4% from 2014 to 2018, accompanied by an annual increase in global goods trade in the 4 to 6% range. Commodity forecasts indicate containers, coal, grain, potash, petroleum and forest products will continue to be key growth sectors for Port Metro Vancouver.

5.5.2 Coal

China, Japan and Korea accounted for 60% of worldwide steel production and 70% of the port's steel-making coal exports up to June 2013. Steel-making coal exports will continue to be driven by developing economies in Asia, particularly China.

Thermal coal exports accounted for 32% of overall coal exports over the first half of 2013, increasing from 30% in 2012. Thermal coal exports increased by 11% to 5.7 million metric tonnes over the first half of 2013 compared to the first half of 2012. Coal demand is expected to remain strong over the next five years.

5.5.3 Grain

Global demand for Canadian grains is increasing, driven by rising populations and personal incomes in Canada and the port's major trading partners. Bulk grain volumes shipped through the port are approximately 40% wheat, 40% canola, 15% specialty crops, and 5% others. However, commodity splits change somewhat from year to year.

2014 is expected to be a record year for grain volumes through the port, as global demand for Canadian crops remains strong. The Port's proximity to key markets will allow it to continue to gain export market share over other North American gateways over the next five years.

5.5.4 Potash

Medium to long term global potash demand is expected to increase by approximately 3% per year over the forecast period, supported by strong agricultural market fundamentals, including reduced inventories and strong long term commodity prices.

Unexpected development in global market situations may create significant uncertainty in the short to medium term, but the Port is well positioned to take advantage of increasing demand over the long term.

5.5.5 Petroleum

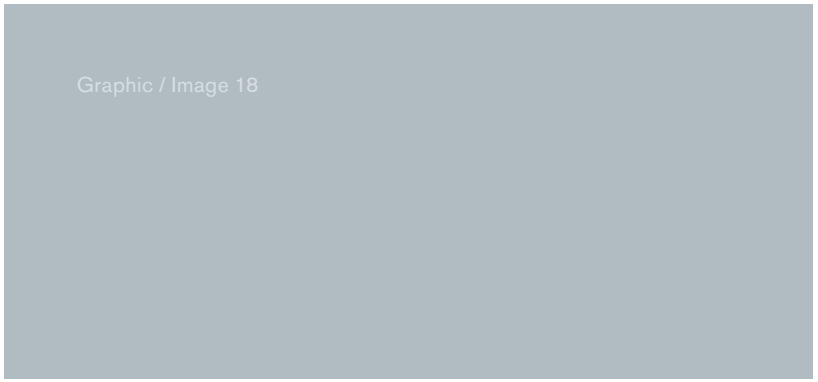
Petroleum product demand is anticipated to grow significantly over the medium to long term. The constraints of existing infrastructure are the most significant limiting factor to accommodating potential growth in this commodity.

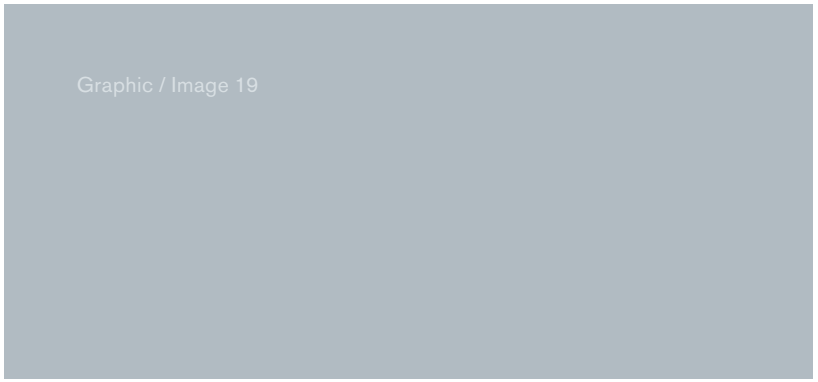
5.5.6 Forest Products

The majority of bulk forest product moving through the port is a domestic woodchip business handled on the Fraser River. Other forest products include lumber, pulp, paper and logs, which are moved through containers or as breakbulk. There is a trend towards shifting from breakbulk hauling to container hauling of these products. Lumber exports handled by breakbulk are projected to continue to decline due to customer preferences for the security, protection, and well-established channels container shipping provides.

Outbound foreign traffic through Burrard Inlet has grown rapidly due to the emergence of wood pellets as an alternative energy source in global markets. Wood pellet traffic has mostly been driven by increasing bioenergy demand in Europe.

Overall, a moderate decline is expected in lumber volumes in 2013, but is expected to recover over the longer term.





5.5.7 Major Initiatives Underway

Being one of the largest ports in North America, and with the forecasted growth in trade, Port Metro Vancouver is undertaking a number of major initiatives to optimize its ability to accommodate and capitalize on this growth.

Container Terminal Capacity

The Container Capacity Improvement Program (CCIP) is a long-term strategy to reliably support growing international trade in containerized cargoes in an efficient and sustainable manner. As part of this program, the Port has been working with the Province and Deltaport operator TSI Terminal Systems Inc. to develop a plan to increase Deltaport's container capacity by 600,000 TEUs to a total of 2.4 million TEUs. The majority of this work is expected to occur within the existing terminal and transportation corridor footprint.

Port Metro Vancouver is also proposing a new container terminal adjacent to the existing terminals at Roberts Bank in Planning Area 6 (Section 7.6). The Roberts Bank Terminal 2 Project is a proposed three-berth marine container terminal that could provide additional capacity of 2.4 million TEUs per year to meet forecast demand to 2030. Subject to project and environmental approvals, the project could be fully operational by the early 2020's.

Terminal Development

In addition to capacity expansion for the container sector, many other port terminals are planning for increased capacity or are already undertaking capacity improvements through investments in equipment, improvements to operating procedures, and/or making better use of their sites in support of increased throughput. For example, Neptune Terminals has undertaken a series of upgrades at the company's North Shore location to allow the terminal to handle additional throughput of potash and coal within their existing site footprint.

Westshore Terminals has undertaken similar work to increase capacity for handling coal. Several of the grain elevators in Burrard Inlet are also upgrading their facilities and replacing aging equipment to improve terminal efficiencies.

On the marine side, Chevron recently completed dredging its ship and barge berths to accommodate greater vessel drafts and full loading of more modern double hulled vessels. While the maximum size of vessels calling on their Burnaby terminal does not increase, there is now the ability to fully load these vessels, allowing for the same volume of product to be handled with fewer overall ship calls.

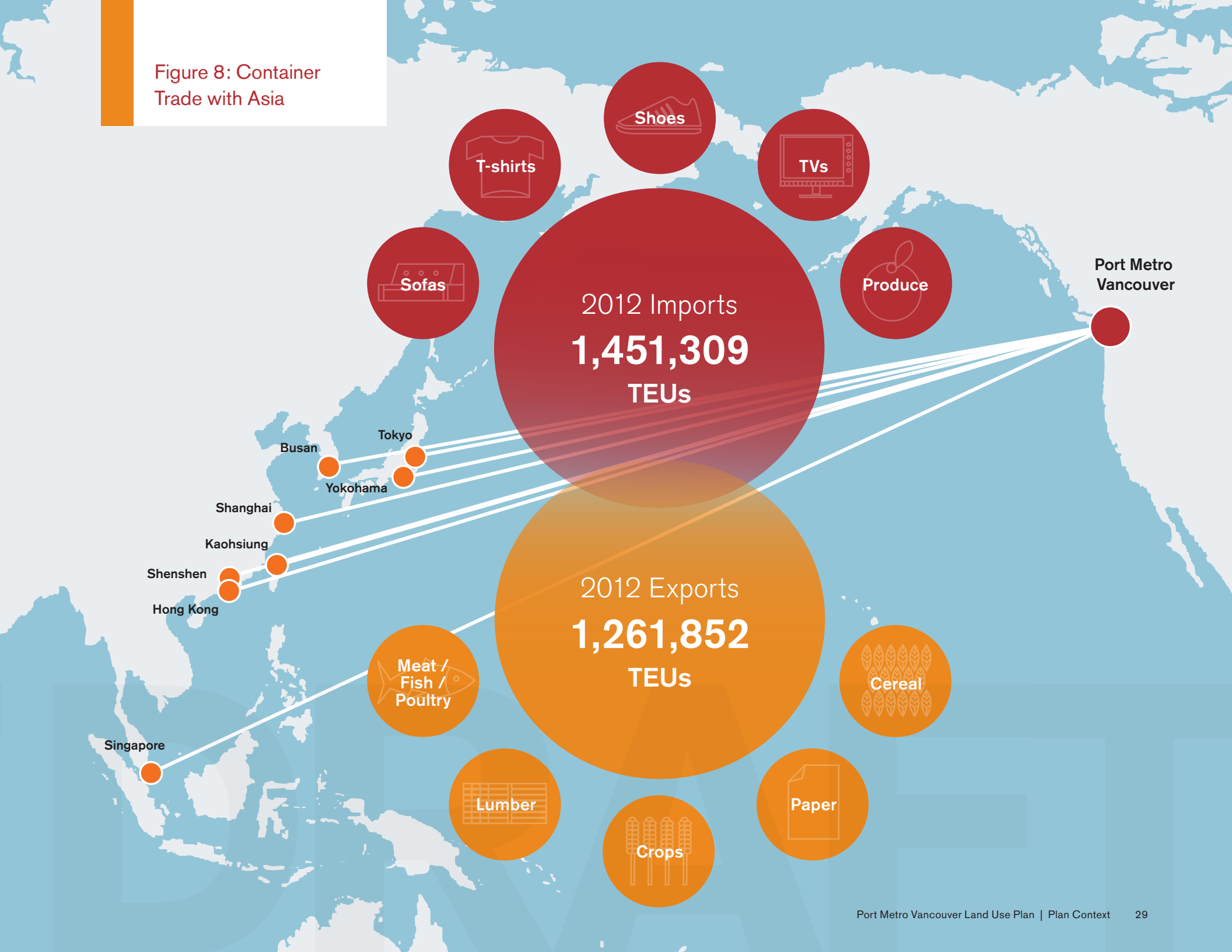
Transportation Capacity Improvements

The South Shore Trade Area, North Shore Trade Area, and Roberts Bank Rail Corridor initiatives are examples of programs which have significantly improved road and rail conditions and capacity. Working with federal and provincial governments through the Asia-Pacific Gateway and Corridor Initiative, and together with local communities, the Port is delivering major new transportation projects to keep up with growing demand. Examples include:

- The Low Level Road realignment and the Lynn Creek Rail Bridge on the North Shore;
- The South Shore Trade Area road improvements on Powell and Stewart Street in Vancouver;
- The more than $300 million invested by 12 different government, industry and agency partners into the 9 Roberts Bank Rail Corridor grade separations; and
- The $280-million Deltaport Terminal Road and Rail Improvement Project designed to increase existing container terminal capacity at Deltaport by 600,000 TEU's – all within the existing land footprint.

Through a collaborative approach to planning and development, the Port will continue to facilitate growth in partnership with interested parties to ensure that forecasted demand is anticipated and appropriately addressed.

Figure 8: Container Trade with Asia



5.6 Industrial Lands

A key priority for Port Metro Vancouver is to ensure there is adequate industrial land available in the region to meet trade requirements today and in the future. The retention of a viable industrial land base in the region is critical to a strong economy locally and across the nation.

Although the demand for industrial land in the region continues to rise, the supply of lands designated for industrial use has significantly declined over the past several decades. For example, Metro Vancouver's stock of industrial land has declined approximately 27% over the past 25 years due in large part to redevelopment or re-designation of industrial lands to other uses such as residential or commercial. In addition, on-going development of lands designated for industrial use has resulted in a dwindling supply of market-ready lands available for new investment in industrial activities that directly or indirectly support Canada's trade. Recent research suggests that the current inventory of market ready industrial lands is sufficient to meet demand for only about 10 years.

The successful preservation of industrial lands will depend on the decisions of all jurisdictions having authority over land use in the region. It is vital that all such authorities work together to ensure adequate protection is put in place to protect remaining industrial lands and jobs, and provide an adequate industrial land base for future generations.

There may be opportunities to use the region's industrial lands more intensively. Research is underway to look at how this might be achieved in a port and non-port setting. For port lands, more intensive use is generally achieved through better site utilization, through investments in equipment and operating procedures that increase throughput efficiency, and through increased transportation capacity. In some cases, innovative building and design solutions appropriate to an industrial setting can also result in increased efficiency.

As former industrial lands in neighbouring municipalities are redeveloped with residential or other uses, and as established residential communities become denser through infill or redevelopment, the potential for conflict at the interface between the working waterfront and adjacent uses will increase. While some of this is inevitable in a growing region with a limited land base, it nevertheless requires all jurisdictions to plan and manage growth in recognition of the critical role the Port plays in the region. This will become even more important as port activities on and near the waterfront intensify through new development and investments that increase the capacity and throughput of existing terminals.

Port Metro Vancouver supports ongoing efforts to identify strategies that provide effective protection of the industrial land base, and will continue to provide input to municipal and other planning processes that may impact the industrial land supply.

Graphic / Image 21

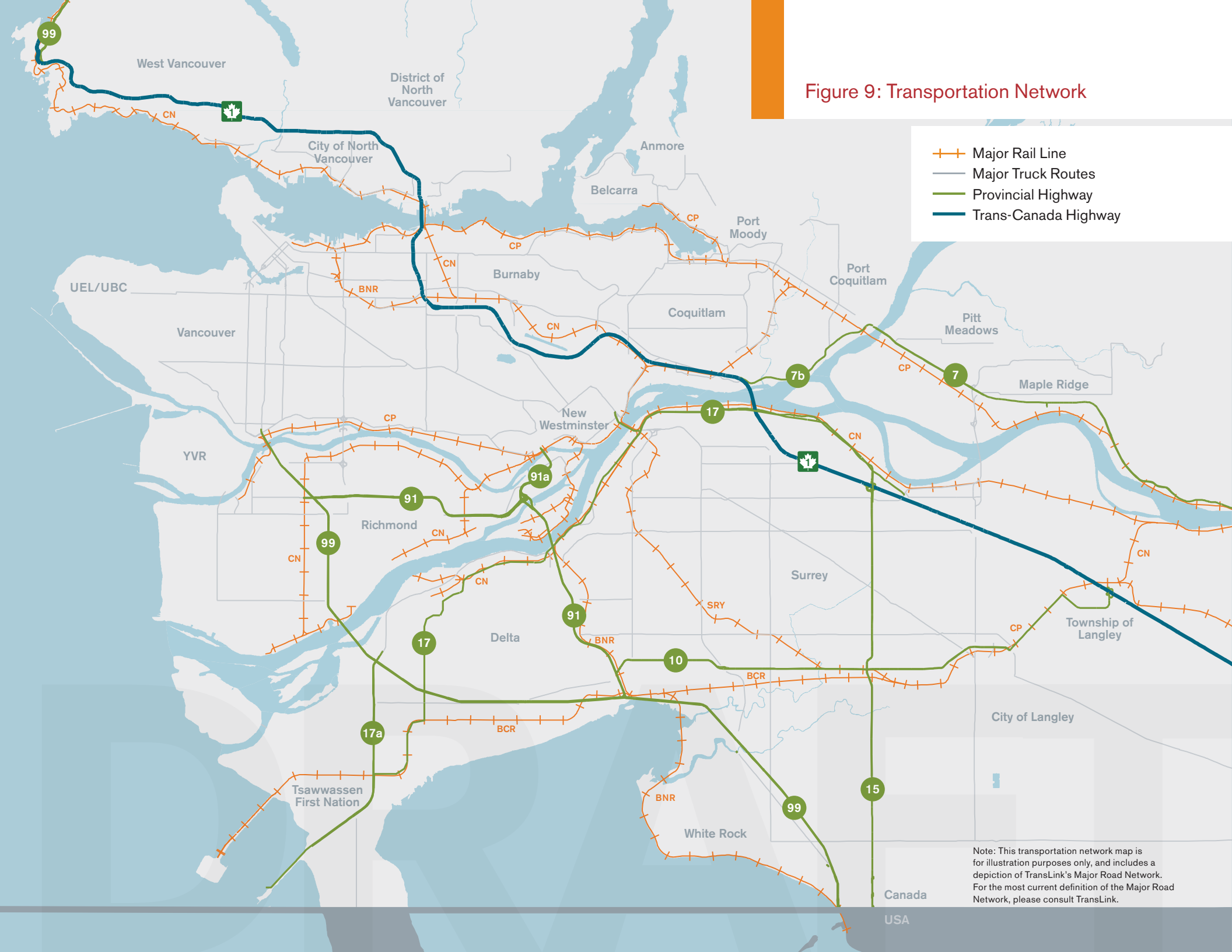
5.7 Transportation and Goods Movement

As part of Canada's Pacific Gateway, the lands and waters managed by Port Metro Vancouver are one link in the supply chain which delivers a product from its origin to a final destination. For a port tenant or terminal operator to be able to effectively use port lands and waters to manage their products, they must be served by a reliable and efficient transportation network.

In a port setting, the network critical to goods movement consists of marine, road and rail transportation modes that all connect together to move cargo through the supply chain. While marine navigation is largely within the Port's jurisdiction, transportation to and from the Port by land relies on a transportation network that is developed, owned and managed by a variety of external organizations.

Growth in trade activity and more intensive use of port lands will mean that the connecting regional transportation corridors will themselves be more intensively used in the future and will require active management and significant investments to provide the additional capacity needed to accommodate growth efficiently and effectively, and in a manner that addresses the impacts of transportation on surrounding communities.

Figure 9: Transportation Network



Regional Road Network

Land-based truck transportation is a key component of port operations. In general, port trucks use the provincial highways managed by the Ministry of Transportation and Infrastructure, regional roads and bridges managed by TransLink, and municipal truck routes owned and managed by individual municipalities. Transport Canada also has a role in facilitating transportation infrastructure solutions to support Canada's economic interests, and thus has a significant role in facilitating goods movement in the region.

Rail Network

Port Metro Vancouver is served by three Class 1 rail companies: Canadian National Rail (CN), Canadian Pacific Rail (CP), and Burlington Northern Santa Fe Rail (BNSF). The rail network also consists of local short line railways, interconnecting rail yards and interchanges.

Rail lines are generally owned and managed by each rail company. However, in Metro Vancouver, shared use of rail lines to enable efficient movement of goods is available through co-production agreements between CN and CP.

Marine Navigation

Providing marine vessels with safe and unimpeded access to terminals is critical for continued port operations. Key assets of the port are the deep waters of Burrard Inlet and Roberts Bank as well as the ability of the Fraser River to accommodate both shallow and deep-sea vessels. These assets were recognized by early settlers of the region and are the main reason the port is located where it is today. Deep water is essential for major cargo terminals that must accommodate large, deep-sea vessels in order to function efficiently and remain viable.

Port Metro Vancouver marine operation responsibilities include marine patrols, ship inspections, event planning, permitting of dangerous goods and the provision of navigational and safety advice. Dredging is often required to ensure appropriate water depth, and is undertaken by the Port, tenants and/or local users depending on the location. Dredging requirements differ throughout the Port's jurisdiction with Burrard Inlet dredging primarily consisting of capital dredging works and the Fraser River requiring annual maintenance dredging.

Growth in trade activity and more intensive use of port lands will mean that the connecting regional transportation corridors will require active management and significant investments to provide the additional capacity needed, in a manner that addresses the impacts of transportation on surrounding communities.

Graphic / Image 22

6.0 Goals, Objectives and Policy Directions

Port Metro Vancouver has developed goals, objectives and policy directions to provide the policy framework for future growth and development. Individual goals, objectives and policy directions address specific topics and issues, but they should be read and considered together to fully understand the Port's approach to managing growth and meeting its responsibilities and commitments to sustainable development.

Goal

A broad statement of what is to be accomplished – the "ends".

Objective

A more specific statement that supports and expands on the goal.

Policy Direction

The action to be taken to accomplish the goal and objective at a port-wide scale.

GOALS

1 2 3 4 5

Port Metro Vancouver manages port growth and activity in support of Canada's trade while preparing for anticipated transitions in the global economy.

Port Metro Vancouver is a leader in ensuring the safe and efficient movement of port-related cargo, traffic and passengers throughout the region.

Port Metro Vancouver is a global leader among ports in the environmental stewardship of the lands and waters it manages.

Port activity and development is a positive contributor to local communities and First Nations.

Port Metro Vancouver is a leader in communication and engagement in support of the use and development of port lands and waters.

GOAL 1 Port Metro Vancouver manages port growth and activity in support of Canada's trade while preparing for anticipated transitions in the global economy.

Looking forward the next 15 to 20 years, growth is forecasted across almost all commodity sectors currently handled at the port, as well as in the cruise sector. The Port's mission is to *lead the growth of Canada's Pacific Gateway in a manner that enhances the well being of Canadians and inspires national pride*.

A key challenge will be ensuring there is sufficient land to support this expected growth and to make the best use possible of the lands available. While various land uses within the region – such as commercial, industrial and residential – are interdependent on one another, they also compete with one another for the very land needed to sustain them.

Port Metro Vancouver is uniquely positioned to take a leading role in managing port growth responsibly, and preparing the port community for the future so that together we may adapt to new challenges and seize the potential of new opportunities that will inevitably arise.

OBJECTIVE 1.1 Protect the industrial land base to support port and related activities into the future.

Policy Directions:

1.1.1 Preserve the lands and waters under the Port's jurisdiction to support current and future port activities.

1.1.2 Collaborate with local governments, First Nations, Metro Vancouver and other land use authorities to protect the region's industrial land base.

1.1.3 Collaborate with local, regional and provincial governments and First Nations to identify opportunities to improve the compatibility of port and adjacent land uses across jurisdictional boundaries.

OBJECTIVE 1.2 Optimize the use of existing port lands and waters.

Policy Directions:

1.2.1 Intensify the use and development of port lands to achieve the highest feasible operational capacities within the existing land base, considering the impacts intensified use may have on adjacent communities, transportation networks and the environment.

1.2.2 Manage the use and development of port lands and waters in a manner that takes advantage of a site's unique physical and geographical attributes in its broader context.

1.2.3 Manage new port development to create synergies and efficiencies between adjacent activities and uses.

1.2.4 Ensure, as appropriate, effective integration of utilities associated with new or expanded port development into local and/or regional systems through the Project Review Process.

OBJECTIVE 1.3 Ensure the availability of a land base within the region that is sufficient to support future port and port-related activities.

Policy Directions:

1.3.1 Consider acquisition of sites to protect their availability for future port use, giving priority to lands that demonstrate ready access to shipping and/or transportation networks and close proximity to existing Port Metro Vancouver holdings.

1.3.2 Consider the creation of new land for future port uses, such as new terminal development and environmental mitigation, when suitable existing lands are not expected to be available.

1.3.3 Develop a coordinated approach to anticipating and responding to property and infrastructure impacts, such as those associated with climate change, including sea level rise and more frequent/extreme flood events.

OBJECTIVE 1.4 Lead the port community in anticipating and responding to economic trends and opportunities that will affect the growth, development and competitiveness of the Port.

Policy Directions:

1.4.1 Monitor and research economic trends and forecasts against measurable indicators to anticipate changes in the way port lands and waters will be used in the coming decades.

1.4.2 Develop innovative land management strategies and practices, in collaboration with customers, stakeholders, local governments, First Nations and other land use agencies to influence and adapt to expected changes in trade patterns, supply chains, technology and other key drivers of port activity.

1.4.3 Pursue investments in port lands and infrastructure in context of anticipated long-term economic trends and applicable environmental considerations.

1.4.4 Pursue best practices in sustainable land use management, and support port operators in developing operating and management practices that align with the Port's vision for a sustainable future.

GOAL 2 Port Metro Vancouver is a leader in ensuring the safe and efficient movement of port-related cargo, traffic and passengers throughout the region.

The lands and waters managed by Port Metro Vancouver are one link in the supply chain which delivers a product from its origin to a final destination. For a port tenant or terminal operator to be able to effectively use port land / water for the handling of their products, that land / water must be served by a reliable and efficient transportation network. In a port setting, that network consists of marine, road and rail transportation modes that all connect together to move cargo through the supply chain.

OBJECTIVE 2.1 Improve operational efficiencies of transportation modes serving the Port.

Policy Directions:

2.1.1 Monitor road, rail and marine traffic activities on an ongoing basis in order to identify and pursue opportunities for improvements to operating efficiency.

2.1.2 Collaborate with customers, stakeholders, local governments and transportation agencies to identify and implement operational changes that improve road, rail and marine traffic flows accessing the Port.

2.1.3 Support the increased use of regional waterways for the transport of cargo.

2.1.4 Work with customers, stakeholders, local governments and agencies to develop strategies and identify opportunities to optimize supply chain movements within and beyond the Metro Vancouver region.

2.1.5 Work with customers, stakeholders, local governments, First Nations and appropriate agencies to identify and monitor operational improvements to minimize and mitigate potential noise, congestion, air emissions and other impacts arising from port-related activities.

OBJECTIVE 2.2 Preserve, maintain and improve transportation corridors and infrastructure critical to moving goods and passengers to and through the Port.

Policy Directions:

2.2.1 Maintain and improve critical navigation infrastructure, port roadways and port-owned rail infrastructure and corridors in order to support the safe, efficient and effective movement of goods.

2.2.2 Support maintenance and improvement of land and marine transportation corridors and infrastructure outside of Port Metro Vancouver's jurisdiction required for current and future port activity.

2.2.3 Collaborate with industry, transportation agencies and local governments to ensure the capacity of the regional transportation network is sufficient to accommodate current and anticipated port-related traffic, in context of the needs of other transportation network users.

2.2.4 Pursue the Port's interests in efficient, effective regional transportation network management through advocacy and direct participation in the transportation planning initiatives of local, regional and senior government agencies.

2.2.5 Support transit and transportation demand management initiatives that would increase the efficiency and capacity of the regional transportation network for the movement of goods.

2.2.6 Support investigation of options to provide alternative modes of travel to port lands to increase transportation choice for port workers and facilitate improvements to regional goods movement.

OBJECTIVE 2.3 Ensure the safe and secure movement of goods and passengers through the Port.

Policy Directions:

2.3.1 Support, in collaboration with port industries, customers, and transportation service providers, the implementation and enforcement of applicable best practices, regulations and standards for the safe use and operation of roads, railways and navigation channels servicing the port.

2.3.2 Assist port users to incorporate best practices for safety and security into all aspects of their operations.

2.3.3 Collaborate with relevant authorities and agencies to ensure appropriate, coordinated emergency and post-emergency response plans are in place and regularly reviewed for incidents originating in the port or directly impacting port operations.

2.3.4 Support emergency response planning of external agencies where Port resources may be of service in responding to emergencies affecting the broader region.

GOAL 3 Port Metro Vancouver is a global leader among ports in the environmental stewardship of the lands and waters it manages.

Port Metro Vancouver strives to be a global leader in port sustainability. From an environmental perspective, the manner in which port property is physically used will influence how successful the Port is in achieving this goal. The hundreds of kilometres of shoreline managed by the Port is used for a variety of purposes, ranging from industrial operations and commerce to recreation and other uses. Working with customers, port users, local governments, communities and First Nations, the Port is able to identify environmental issues and risks posed by these activities and take action to avoid or reduce the potential impacts and improve environmental quality.

OBJECTIVE 3.1 Contribute to the overall ecological health of the region by reducing impacts from port activity and protecting, sustaining and enhancing ecosystems.

Policy Directions:

3.1.1 Develop, promote and implement, with appropriate agencies, best practices and programs to protect ecosystems and enhance fish and wildlife and their habitats.

3.1.2 Minimize potential adverse impacts on habitat quality or, where necessary, mitigate such impacts and compensate for loss of habitat resulting from new port development.

3.1.3 Support the creation, enhancement and/or restoration of fish and wildlife habitat at appropriate locations within the Port's jurisdiction, or when such locations are not available, at locations outside of the Port's jurisdiction.

3.1.4 Collaborate with environmental agencies, local governments, First Nations and stakeholders to monitor and protect critical terrestrial, marine and estuarine environments.

3.1.5 Assess, mitigate and monitor land, air and marine environmental impacts from port operations and developments.

OBJECTIVE 3.2 Reduce air emissions, including greenhouse gas intensity, and promote energy conservation in port operations and developments.

Policy Directions:

3.2.1 Reduce air emissions from port activities by applying best practices and best available technologies for reducing emissions and improving regional air quality.

3.2.2 Encourage energy conservation and utilization of alternative or renewable energy to support port operations and developments and achieve reductions in air emissions.

3.2.3 Monitor and report on port-related air emissions and air quality.

3.2.4 Maintain dialogue with relevant agencies on monitoring and reducing air emissions.

3.2.5 Explore opportunities with stakeholders and partner agencies to collaborate on initiatives that could reduce GHGs and other emissions.

OBJECTIVE 3.3 Improve land and water quality within the Port.

Policy Directions:

3.3.1 Manage contamination risks within the port with remediation and risk management approaches to address lands and sediments that have been contaminated historically.

3.3.2 Work with agencies, Port customers and stakeholders to monitor and assess port uses to prevent contamination from port-related activities, and periodically review monitoring and assessment practices to ensure they reflect best practice.

3.3.3 Ensure sediment and soil quality of tenanted sites is maintained or improved from the time a site becomes occupied to the time it becomes vacant.

3.3.4 Pursue removal of derelict structures and vessels that pose a hazard to safety and/or the environment.

3.3.5 Ensure that proposed developments and works on port lands include appropriate measures to protect receiving water quality and meet best practices for storm water management.

3.3.6 Ensure environmental assessments are undertaken for all projects proposed on lands and waters managed by Port Metro Vancouver to determine that there are no significant adverse environmental effects.

OBJECTIVE 3.4 Promote sustainable practices in design and construction, operations and administration in the Port.

Policy Directions:

3.4.1 Promote green infrastructure within the port based on best practices and related standards.

3.4.2 Encourage Port customers to adopt corporate social responsibility and sustainability principles into their organizations in a way that integrates social and environmental matters into decision making, strategy and operations, in a transparent, accountable and economically viable manner.

3.4.3 Develop and integrate sustainability and other guidelines to assist in the review of projects proposed on lands and waters managed by Port Metro Vancouver.

GOAL 4 Port activity and development is a positive contributor to local communities and First Nations.

Port lands and waters border 16 municipalities and one treaty First Nation in Metro Vancouver, and are located within the asserted traditional territories of several First Nations. While the Port's mandate is to facilitate trade in the best interest of all Canadians, the Port is committed to ensuring that local interests are also considered.

Trade activities result in substantial local benefits, including direct and indirect employment, business activity, government revenues and a strong economy. In addition to the positive economic impacts of a thriving port, port activity can also provide opportunities for public waterfront access and other goals of local communities and First Nations. However, port activity can also present challenges for local residents, such as noise, traffic congestion and environmental impacts. The Port endeavours to address these challenges in consultation with neighbouring communities while ensuring the viability of port businesses. Ultimately, the Port's intent is that the benefits for those living and working in this region alongside a successful and growing port far outweigh the impacts.

OBJECTIVE 4.1 Generate sustainable local and national economic benefits through the use and development of port lands and waters.

Policy Directions:

4.1.1 Support the creation and expansion of business activities that provide local, port related economic opportunities for Metro Vancouver residents.

4.1.2 Explore opportunities for employment and contracting within the Port for First Nations whose asserted traditional territories intersect with the Port.

4.1.3 Encourage industry training initiatives designed to provide necessary skills for workers of businesses operating within the Port.

4.1.4 Maintain a program where a portion of the Port's net income is invested in the communities in which the Port operates.

OBJECTIVE 4.2 Ensure public recreational opportunities and waterfront access are provided within the Port in a manner compatible with port activities and the protection of fish and wildlife.

Policy Directions:

4.2.1 Support the continuation of park use within the Port and explore new opportunities for public waterfront access and views, where such opportunities would not adversely impact port development and operations, introduce safety hazards, or negatively impact fish and wildlife.

4.2.2 Collaborate with communities and First Nations to explore opportunities within publicly accessible port areas to acknowledge and celebrate the traditional and contemporary uses of port lands and waters by Aboriginal Peoples and early settlers.

4.2.3 Manage recreational dock development in a manner that protects the environment and supports the public use and enjoyment of foreshore and intertidal areas accessible within their communities.

OBJECTIVE 4.3 Seek to minimize the impacts from port operations and development on local communities and First Nations.

Policy Directions:

4.3.1 Ensure potential impacts from new or expanded development and transportation infrastructure, such as noise, lighting glare, dust, views, emissions and traffic congestion, as well as disturbances to archaeological deposits, are identified and appropriately minimized and/or mitigated by administering a comprehensive and thorough Project Review Process that solicits and incorporates input from potentially affected communities, First Nations and stakeholders, and requires appropriate actions and monitoring by project proponents.

4.3.2 Work with port businesses to develop and implement effective and appropriate solutions for minimizing impacts from their on-going operations on adjacent communities and First Nations.

4.3.3 Develop guidelines based on best practices to assist in identifying and responding to the presence of archaeological sites and deposits.

4.3.4 Engage with local governments, First Nations and other land use authorities, as appropriate, when developing and updating Port Land Use Plans.

GOAL 5 Port Metro Vancouver is a leader in communication and engagement in support of the use and development of port lands and waters.

Port Metro Vancouver places high value in how the Port works with neighbouring communities to identify shared interests and respond to concerns about port operations and development. The Port engages with communities in a variety of ways – through liaison groups and at community events, by supporting the outreach efforts of port industry partners, by building solid relationships with local governments and First Nations, and by investing in community amenities.

The Port's Project Review Process provides a variety of opportunities for public notification and consultation tailored to the scope and level of interest in proposed developments. The Port seeks to address issues that arise from port operations and proposed developments in a manner that is proactive, reasonable and consistent. In a rapidly growing region where urban and port development are in close proximity, the need for strong and effective engagement processes will only continue to grow. Port Metro Vancouver is committed to a process of continual improvement in how and when it engages communities and stakeholders in the growth and development of the Port.

OBJECTIVE 5.1 Provide a relevant range of opportunities for communication, consultation and engagement that reflects the scale, scope, impacts and community interest in the use and development of port lands and waters.

Policy Directions:

5.1.1 Provide current and accessible information on significant development proposals, and work towards a system that makes publically available all development proposals under review.

5.1.2 Periodically review the Project Review Process to ensure it provides appropriate opportunities for consultation and engagement with interested parties.

5.1.3 Consult with First Nations through the Port's Project Review Process on development activities that have the potential to adversely impact Aboriginal or Treaty rights.

5.1.4 Upon acquiring new lands, undertake a consultation process to solicit input from interested and affected parties on any potential change of the land use designation applicable to those lands as part of a process to amend the Land Use Plan.

5.1.5 Explore opportunities for establishing agreements with local governments, First Nations and other land use authorities to guide collaboration and engagement on matters of shared interest related to the use and development of lands and waters within and adjacent to the Port.

Graphic / Image 23

7.0 Planning Areas

Port Metro Vancouver's lands and waters are organized into seven distinct planning areas based on geography and port-related activities. The land use designations depicted in the following Planning Area figures are intended to convey the general distribution of land uses in each area, and are not intended to identify the land use designations for specific sites. Detailed land use designation information may be obtained at portmetrovancouver.com/landuseplan, and the designations are described in Section 8.0 of this Plan.

Figure 10: Planning Areas

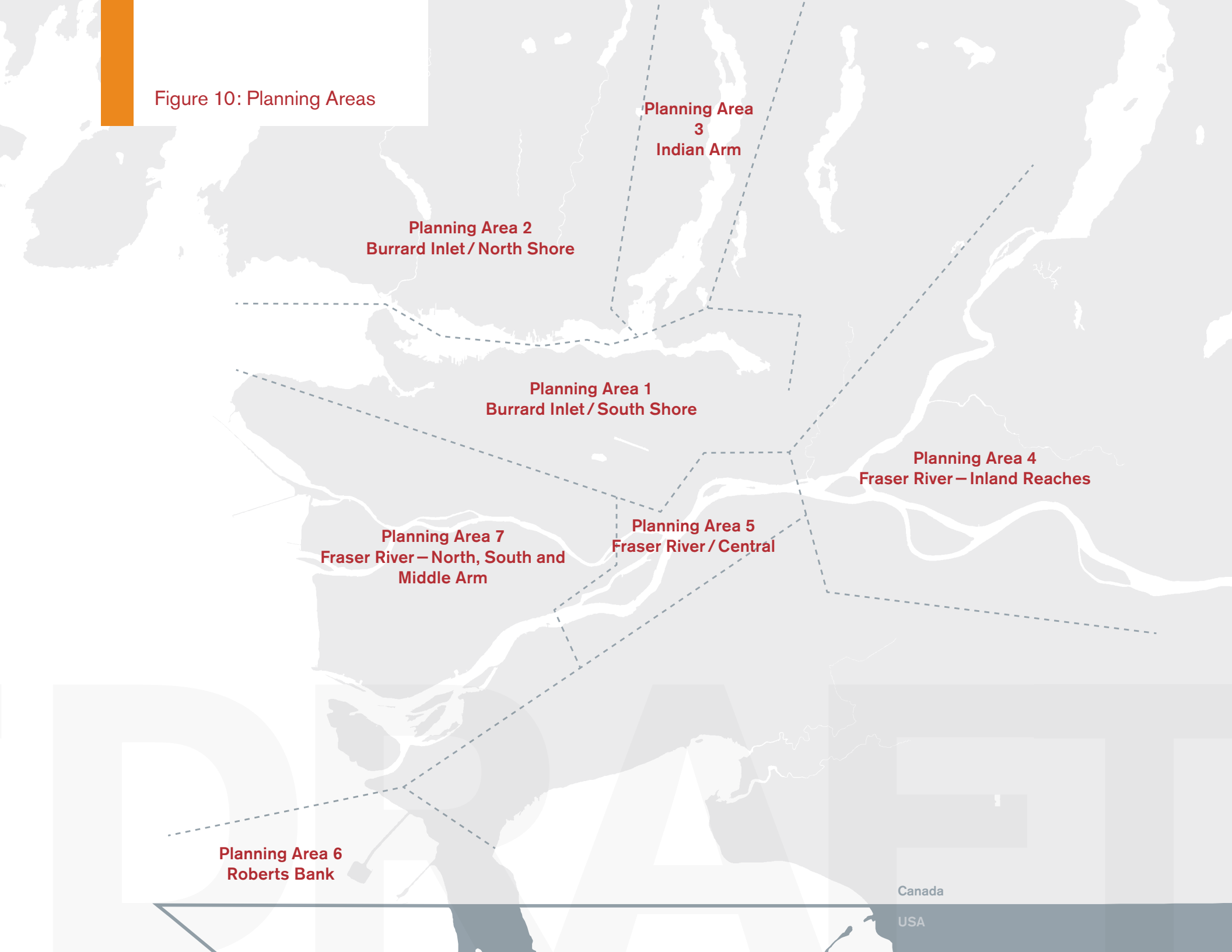


Figure 11: Planning Area 1

First Nation Reserves

Land Use Designations

- Port Terminal
- Industrial
- Commercial
- Log Storage and Barge Moorage
- Recreation
- Conservation
- Port Water
- Special Study Area

7.1 Planning Area 1:

Burrard Inlet / South Shore

The East Vancouver Port Lands Liaison Group, North Shore Waterfront Liaison Committee and the Port Community Liaison Committee in Delta are mechanisms for dialogue and communications about port-related issues in the community. These committees have been instrumental in bringing about changes to operational matters such as truck traffic management and rail whistling.

Planning Area 1 borders the municipalities of Vancouver, Burnaby, Port Moody, and the reserve lands of the Squamish Nation. The area spans from Stanley Park in Vancouver to Port Moody Arm in Port Moody. It also includes the East Vancouver Port Lands (EVPL) sub-area, which borders Victoria Drive to Council Road north of McGill Street in Vancouver. This sub-area has its own area plan containing specific policies related to port development.

The South Shore benefits from a deep-sea shipping channel and is one of the major trading areas in Port Metro Vancouver. In 2012, the area handled approximately 30 million metric tonnes of cargo and over 666,000 cruise passengers. Major terminals along the South Shore include Canada Place, Centerm, Vanterm, Cascadia, Stanovan, Shellburn, Westridge, Burrard Products Terminal, Pacific Coast Terminals and Kinder Morgan. Collectively, these terminals move cruise passengers, containers and dry bulk, liquid bulk, and breakbulk cargo. The area is also connected to the main Canadian Pacific Railway (CPR) corridor, with access for Canadian National Railway (CN) and Burlington Northern Santa Fe (BNSF), and regional truck routes to the rest of Canada.

The South Shore also includes industrial and commercial activities, float plane operations, anchorages, and a number of conservation and recreational uses and waterfront parks.

There will be continued growth of port-related uses in all commodity sectors on the South Shore, particularly in container, dry bulk and liquid bulk activities and industrial uses. Further intensification of port-related industrial uses on existing sites is likely, particularly as the availability of industrial lands in other areas of the port becomes more limited.

Current and future investments in rail and road infrastructure through initiatives such as the South Shore Corridor Project are expected to improve operational efficiencies and lessen impacts from rail noise and traffic generated by port-related activities in the community.

The close proximity of residential areas to port-related activities and conversion of former industrial lands to non-industrial uses create the potential for conflicts between port-related and non-industrial uses. Solutions will require careful planning and collaboration between the Port and adjacent municipalities and First Nations.

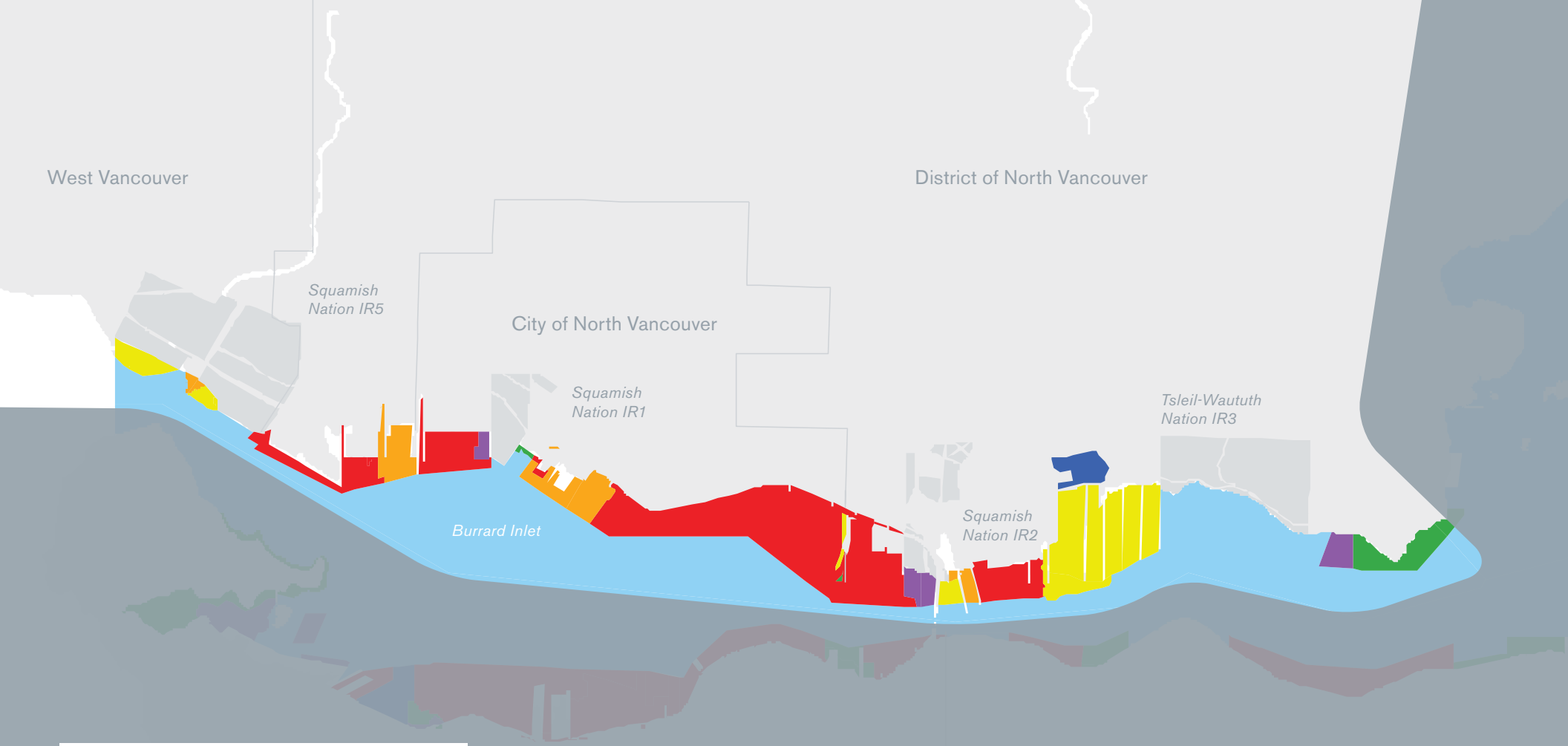


Figure 12: Planning Area 2

First Nation Reserves

Land Use Designations

- Port Terminal
- Industrial
- Commercial
- Log Storage and Barge Moorage
- Recreation
- Conservation
- Port Water
- Special Study Area

7.2 Planning Area 2:

Burrard Inlet / North Shore

Planning Area 2 in Burrard Inlet borders the District of West Vancouver, the City of North Vancouver, the District of North Vancouver and reserve lands of the Squamish and Tsleil-Waututh Nation. The North Shore extends from Ambleside Park in West Vancouver to Cates Park in the District of North Vancouver.

This Planning Area borders a deep-sea shipping channel and is one of the major trading areas in the port. In 2012, the North Shore handled over 22% of all cargo volume through Port Metro Vancouver, and remains an integral connection for Canadian exports to overseas markets. It is a critical export gateway to the Asia-Pacific region and supports export-based industries, including agriculture, forestry, mining and manufacturing in British Columbia and across Canada as a whole.

Major terminals and industrial activities in this area include Richardson International, Cargill, Neptune, Lynnterm, Univar Canada, Canexus, Vancouver Wharves and Seaspan. Collectively, these terminals move containers, dry bulk, liquid bulk and breakbulk products. There are some industrial and commercial uses, anchorages, as well as conservation and recreation activities in the area. This area is also a main rail line for Canadian National (CN) Railway.

It is anticipated that there will be continued growth of port-related uses in all commodity sectors on the North Shore, particularly in dry bulk, liquid bulk and breakbulk activities. Further intensification of port-related industrial uses on existing sites is likely, particularly as industrial lands in other areas of the Port become more limited.

Current and future investments in rail and road infrastructure, such as through the Low Level Road and other improvement projects, are expected to improve operational efficiencies and lessen impacts from rail noise and traffic generated by port-related activities in the community.

The close proximity of residential areas to port-related activities and conversion of former industrial lands to non-industrial uses create the potential for conflicts between port-related and non-industrial uses. Solutions will require carefully planning and collaboration between the Port and adjacent municipalities and First Nations.

In 2012, the North Shore handled over 22% of all cargo volume through Port Metro Vancouver, and remains an integral connection for Canadian exports to overseas markets.

Figure 13: Planning Area 3

First Nation Reserves

Land Use Designations

- Port Terminal
- Industrial
- Commercial
- Log Storage and Barge Moorage
- Recreation
- Conservation
- Port Water
- Special Study Area

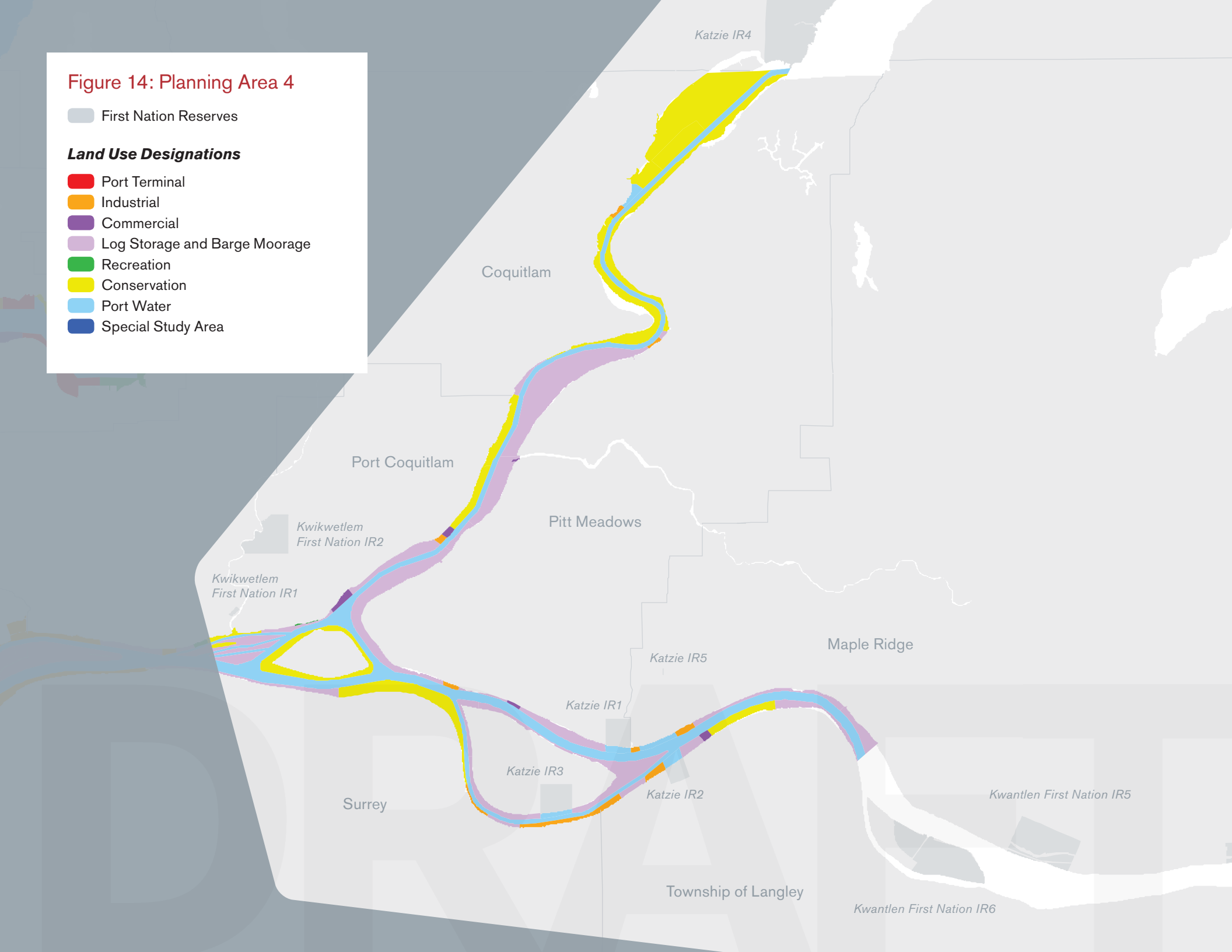
7.3 Planning Area 3:

Indian Arm

The Indian Arm Planning Area (Planning Area 3) borders the District of North Vancouver, Electoral Area A and the reserve lands of the Tsleil-Waututh Nation. Indian Arm is a natural fjord characterized by deep water, steep slopes and undeveloped upland forests.

A majority of the upland area in Indian Arm consists of Cates Park/Whey-Ah-Wichen, Indian Arm Provincial Park/Say Nuth Khaw Yum, and Belcarra Regional Park. Existing uses include residential moorage facilities, marinas, and public wharves. Future port-related uses in this area will likely continue to be limited, mainly consisting of a mix of commercial, recreational and conservation uses.

Figure 14: Planning Area 4



7.4 Planning Area 4:

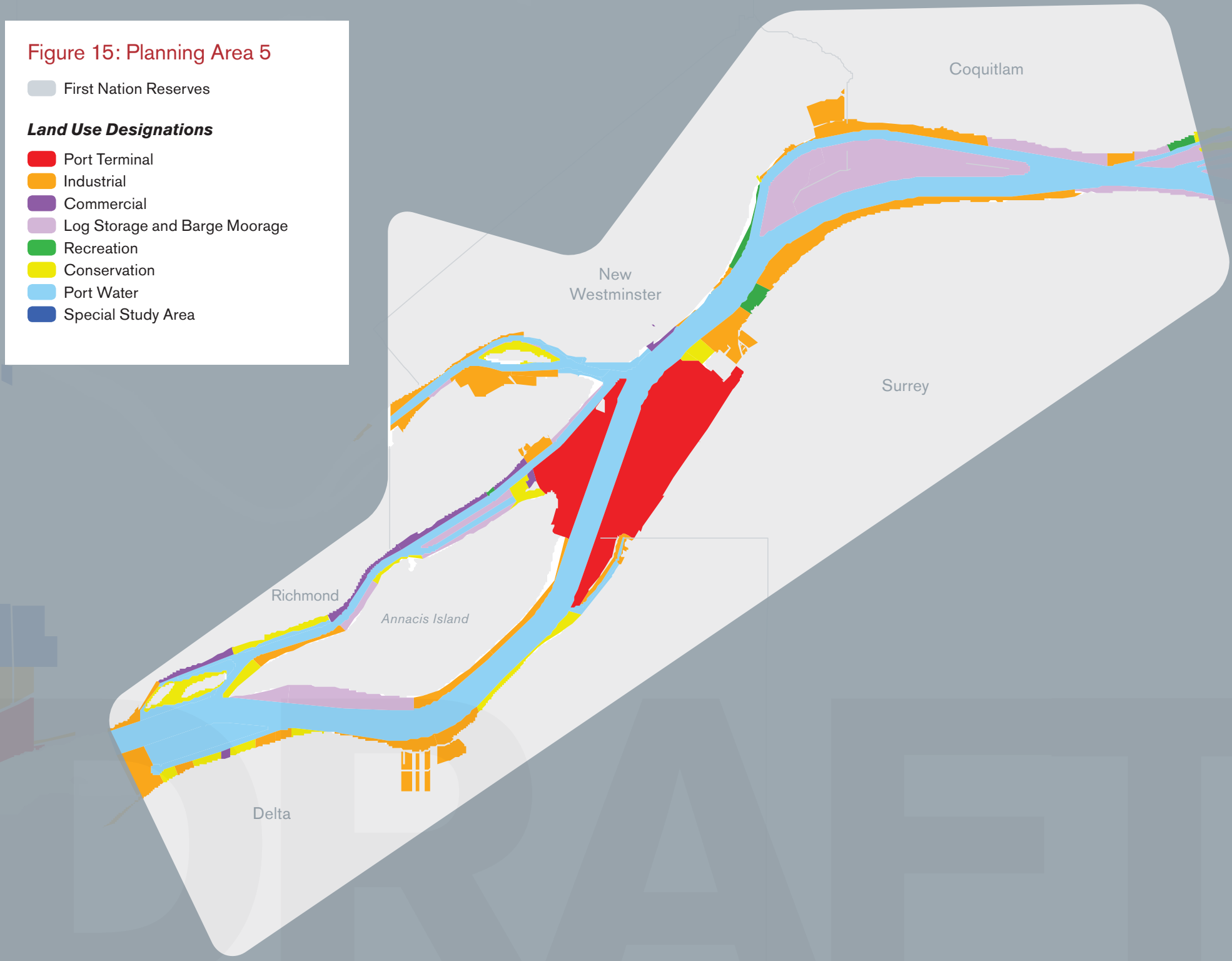
Fraser River – Inland Reaches

Planning Area 4 (Fraser River – Inland Reaches) extends east from the Port Mann Bridge to Pitt River and Kanaka Creek in Maple Ridge. The area borders the municipalities of Port Coquitlam, Pitt Meadows, Surrey, Township of Langley and Maple Ridge, and the reserve lands of the Katzie First Nation.

The Fraser River – Inland Reaches Planning Area consists of domestic and local navigation channels, which are relatively shallow in depth. The area is primarily used for log storage, industrial, commercial, conservation and recreational uses. Future port-related uses in this area will likely continue to include a mix of existing uses.

The majority of bulk forest product moving through the Port is a domestic woodchip business handled on the Fraser River. Other forest products include lumber, pulp, paper and logs, which are moved through containers or as breakbulk.

Figure 15: Planning Area 5



7.5 Planning Area 5:

Fraser River – Central

The Fraser River – Central area extends from approximately 3km southwest of the Alex Fraser Bridge on the south reach to west of the Port Mann Bridge, and is the main area of port activity on the Fraser River. The Planning Area borders the municipalities of Richmond, Delta, Surrey, New Westminster and Coquitlam. The west boundary of the Planning Area coincides with the provincial bed of the Fraser River.

The Fraser River – Central area has a deep-sea shipping channel up to Fraser Surrey Docks. The Planning Area includes two deep-sea terminals: Fraser Surrey Docks in Surrey which handles a variety of bulk and breakbulk products as well as containers, and Wallenius Wilhelmsen Logistics (WWL) on Annacis Island in Delta which specializes in automobiles. There is a wide variety of port-related industrial and commercial uses such as barge terminaling, ship repair, ship building, marinas, fuelling facilities, log storage and river-related commercial activities. Conservation and recreation uses also exist throughout this area.

This area will continue to be the main hub of shipping and goods movement in the Fraser River, with anticipated intensification of use and growth in all sectors including bulk, breakbulk, liquid bulk and other commodities. As potential growth becomes limited on the Burrard Inlet North and South Shore Planning Areas it is possible that more upland and foreshore areas of the Fraser River - Central Planning Area will be developed to accommodate port-related activities, particularly if navigational draft increases.

It is anticipated that there will be further intensification of port-related industrial uses on existing sites, particularly as industrial lands in other areas of the port become more limited.

Similar to other areas of the port, the Fraser River – Central Planning Area is facing the continued conversion of former industrial uplands to residential and other non-industrial uses. This may create the potential to increase conflicts between port-related and non-industrial uses in the community.

Figure 16: Planning Area 6

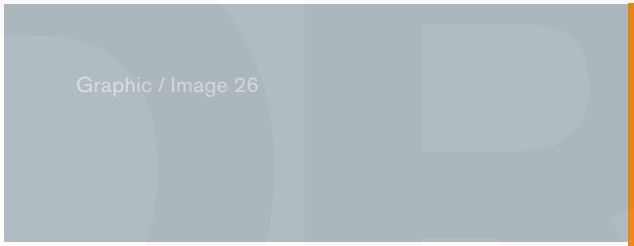
7.6 Planning Area 6:

Roberts Bank

The Roberts Bank Planning Area extends into the Strait of Georgia from the foreshore of Delta and the Tsawwassen First Nations lands. Port Metro Vancouver facilities in this area consist of a 105 hectare artificial land mass and causeway originally built by the federal government in the 1970s, expanded in the 1980s, and expanded further by the Port in 2009 with the Deltaport 3rd Berth project.

Roberts Bank is one of the main trading areas of Port Metro Vancouver, consisting of its largest bulk facility, Westshore Terminals, and its largest container terminal, Deltaport. In 2012, over 38 million metric tonnes of container and bulk cargo flowed through Roberts Bank. It is served by a rail and road system that connects to major regional, national and United States highway systems.

The Roberts Bank Planning Area is anticipated to undergo significant growth over the next 10 years as part of the Container Capacity Improvement Program, a long-term strategy to deliver projects to meet anticipated growth in container capacity demand through a series of road and rail improvements described earlier. This Planning Area also includes the proposed new container terminal known as the Roberts Bank Terminal 2 project that would significantly expand container capacity at Roberts Bank in response to projected demand. Further intensification of port-related activities and uses is likely to continue at the existing site.



Container traffic through Canada's Pacific Gateway is expected to double over the next 10 to 15 years, and nearly triple by 2030. Current projections indicate approximately four million TEUs (twenty-foot equivalent units) of additional capacity will be needed to meet West Coast container demand by 2030.

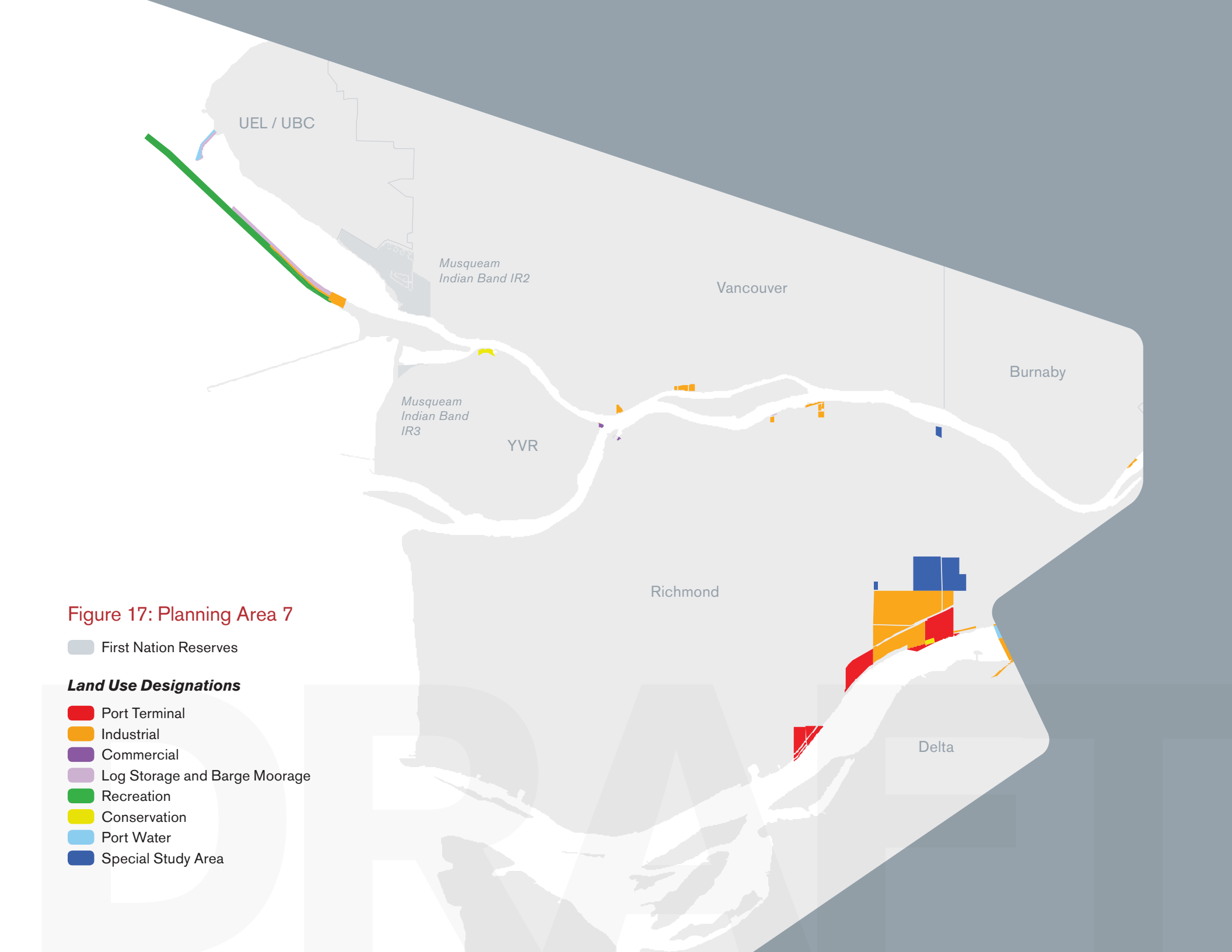


Figure 17: Planning Area 7

First Nation Reserves

Land Use Designations

- Port Terminal
- Industrial
- Commercial
- Log Storage and Barge Moorage
- Recreation
- Conservation
- Port Water
- Special Study Area

7.7 Planning Area 7:

Fraser River—North, South and Middle Arm

The North, South (also referred to as the Main Arm) and Middle Arm of the Fraser River extends from the North Arm Jetty and Sturgeon Bank to Boundary Road, and from the Sand Heads to just south of Lion Island. The area borders The University of British Columbia, Vancouver International Airport (YVR), the municipalities of Vancouver, Richmond, Burnaby, Delta, New Westminster, and the reserve lands of the Musqueam Indian Band.

The North, part of the South, and the Middle Arms of the Fraser River were included within a Head Lease with the Province of BC until the end of 2014. The Port maintains navigational jurisdiction in these waters, holds a number of properties in the upland, and leases water lots to support trade activities. Future use of these lands is likely to be similar to those now present, although more intensive use of the sites on the south arm can be anticipated to support the growth in Canada's trade.

8.0 Land Use Plan Designations

Port Metro Vancouver's Land Use Plan includes eight land and marine designations that are consistent across the Port's jurisdiction, each having a specific intent and list of associated uses. Section 8.2 provides a list of these designations and their purpose. The detailed designation maps are located at: portmetrovancouver.com/landuseplan.

The purpose of land use designations is to provide for the orderly development and management of lands and waters within Port Metro Vancouver's jurisdiction, and to provide clarity on long term development. All developments and activities proposed within Port Metro Vancouver's jurisdiction are subject to the Port's review and approvals, and must be consistent with the uses permitted under the *Canada Marine Act* and Letters Patent.

The land and water designations have the following characteristics:

Applicable to all areas: the designations apply to all land and water within the Port's jurisdiction.

Provide flexibility: the designations indicate the general intended use of the site while also identifying the more specific types of development that can be considered on a primary, ancillary or conditional basis.

Clear and accurate mapping: the system of designation supports the orderly development and management of lands and waters within the Port's jurisdiction.

Align with Port mandate: the designations are consistent with the mandate of Port Metro Vancouver under the *Canada Marine Act* and Letters Patent.

8.1 Designation Descriptions

Each land use designation is described below. In addition to these primary uses, ancillary uses may be considered as appropriate on individual sites to support the primary use. Ancillary uses may include uses such as parking, ancillary offices, storage areas, caretaker facilities, utilities, ancillary commercial and other uses.

Graphic / Image 28

Port Terminal

Port Terminal areas are primarily designated for deep-sea and marine terminals which handle a variety of commodities, including autos, breakbulk, dry bulk, liquid bulk and containers, as well as cruise passengers. This includes uses that support shipping, transportation and the handling of goods.

Industrial

Industrial areas are primarily designated for industrial activities in support of port operations and marine support services. This includes uses that support shipping, transportation and the handling of goods, in some cases including the manufacturing of goods.

Commercial

Commercial areas are primarily designated for commercial activities related to port or marine support services, tourism related businesses, transportation of passengers, and the handling and storage of goods.

Log Storage and Barge Moorage

Log Storage and Barge Moorage areas are primarily designated for log storage, barge moorage and associated activities.

Recreation

Recreation areas are primarily designated for public recreational use such as parks and viewing areas. Examples include Crab Park at Portside, New Brighton Park, and the public viewing platforms on the south side of Queensborough.

Conservation

Conservation areas are primarily designated for habitat conservation, enhancement, restoration and similar uses, and may be publically accessible. These areas are generally not intended for development.

Port Water

The Port Water designation primarily applies to open water and foreshore areas adjacent to Port and non-Port lands, and are generally intended for shipping, navigation and anchorages. Port Water includes the following parameters:

Navigation Channel – within Port Metro Vancouver's jurisdiction, navigation channels have been designed using national and international guidelines and fall into one of the following four categories: (1) Deep-Sea Shipping Channel; (2) Domestic Shipping Channel; (3) Local Navigation Channel; and (4) Channel Reserve. The design of the navigational channels is determined by the following:

- depth of water
- current and tidal considerations
- ship maneuvering
- hydrodynamic interactions between meeting a passing vessel in two-way traffic
- counteracting bank suction
- aids to navigation

Marine Safety Channel – an allowance of additional width adjacent to the navigational channel to ensure safety of vessels in the navigational channel and between concurrent intertidal and shoreline users. Utilized in narrow portions of the Port's jurisdiction, the safety channel also compensates for safety impacts from bank slumping, erosion, sediment transport and deposition.

Special Study Area

Special Study Areas are areas that require additional study, consultation and planning to determine their future use through a Land Use Plan amendment. Until further analysis can be completed, the current use remains unchanged.

Table 1: Land Use Designations

The following table outlines the primary uses associated with each type of land use designation. However, the table is not an exhaustive list of all potential activities that could be considered under this Land Use Plan within a given designation.

8.2 Use Definitions

There are several categories of uses within each designation:

PRIMARY USE is a use that is considered to be the main and intended use within a specific designation.

ANCILLARY USE is a use that is considered to be supplementary to a primary use and may be permitted if in conjunction with a primary use.

CONDITIONAL USE is a use that is permitted subject to specific regulations or policies and/or may be permitted on an interim or temporary basis. All conditional uses are subject to Port Metro Vancouver determination of their appropriateness in a given context.

Designation	Primary Uses in this Designation
Port Terminal	• Terminals for Autos, Bulk, Breakbulk, Liquid Bulk, Containers, Cruise and Passengers • Uses related to the shipping, transportation and the handling of goods and passengers • Intermodal Yard • Marine Support Services
Industrial	• Intermodal Yard • Marine Support Services • Warehousing and Distribution Centre • Materials Processing and Manufacturing • Tug and Barge Operations • Uses related to the shipping, transportation and handling of goods • Barge Moorage
Commercial	• Warehousing and Distribution Centre • Marine Support Services • Marinas • Float Plane Terminals • Boat Moorage
Log Storage and Barge Moorage	• Log Storage • Booming Grounds • Log Processing • Barge Moorage
Recreation	• Public Parks • Public Recreation Areas • Public Wharfs • Boat Moorage
Conservation	• Conservation Areas • Habitat Compensation, Restoration and Banking areas
Port Water	• Shipping • Navigation • Commercial Anchorages
Special Study Area	• Existing Use

Table 2: Conditional Uses

The following table identifies the conditional uses associated with each primary designation; these are uses that may be considered on a conditional basis.

Primary Designation	Conditional Use							
	Port Terminal	Industrial	Commercial	Log Storage and Barge Moorage	Recreation	Conservation	Port Water	Special Study Area
Port Terminal	■	■	■	■		■		
Industrial		■	■	■	■	■		
Commercial			■	■	■	■		
Log Storage and Barge Moorage				■	■	■		
Recreation				■	■	■		
Conservation				■	■	■	■	
Port Water				*	■	■	■	
Special Study Area								■

* Only for barge moorage

8.3 Additional Land Use Policies

The following are additional policies that apply to specific uses.

Parking

Vehicle or truck parking is permitted in all land-based designations on a permanent or temporary basis where compatible with primary uses on the site, and subject to applicable regulations and guidelines.

Utilities and Telecommunications

Utilities and telecommunication uses are permitted in all designations where compatible with the primary uses on the site.

- Utility uses include electricity, natural gas, water, and sewerage infrastructure.
- Telecommunication uses include cell towers and other related telecommunication infrastructure.

Existing Residential Uses on Foreshore and Uplands

There are a number of existing residential encroachments on the Port's foreshore and upland properties. The Port is pursuing an appropriate mechanism to manage and address these encroachments, consistent with the Letters Patent.

Public Recreation Areas and Uses

Public recreation areas and uses such as public wharves, viewing platforms, trails, and pathways may be permitted in areas where they are considered to be safe and compatible with the primary use of the site.

Recreational Docks

Recreational docks (single or shared) may be permitted in the Port Water designation and in certain other locations within the Port's jurisdiction and must be associated with a residential upland use or with the consent of the upland owner/ municipality. All recreational docks will be reviewed on a case-by-case basis and be subject to the Port's recreational dock policies and guidelines. Port Metro Vancouver will also consider the applicable policies of the local municipality.

Float Homes

New or relocated float homes are only permitted within or immediately adjacent to existing float home locations on the Fraser River. No new float homes will be considered within the Port's jurisdiction on the Fraser River unless it meets the following criteria: 1) it is in or immediately adjacent to a permitted float home location; 2a) is a replacement of an existing float home; or 2b) is a new float home that does not cause the total number of float homes to exceed the aggregate number allowable under the Letters Patent and applicable Port policies or guidelines.

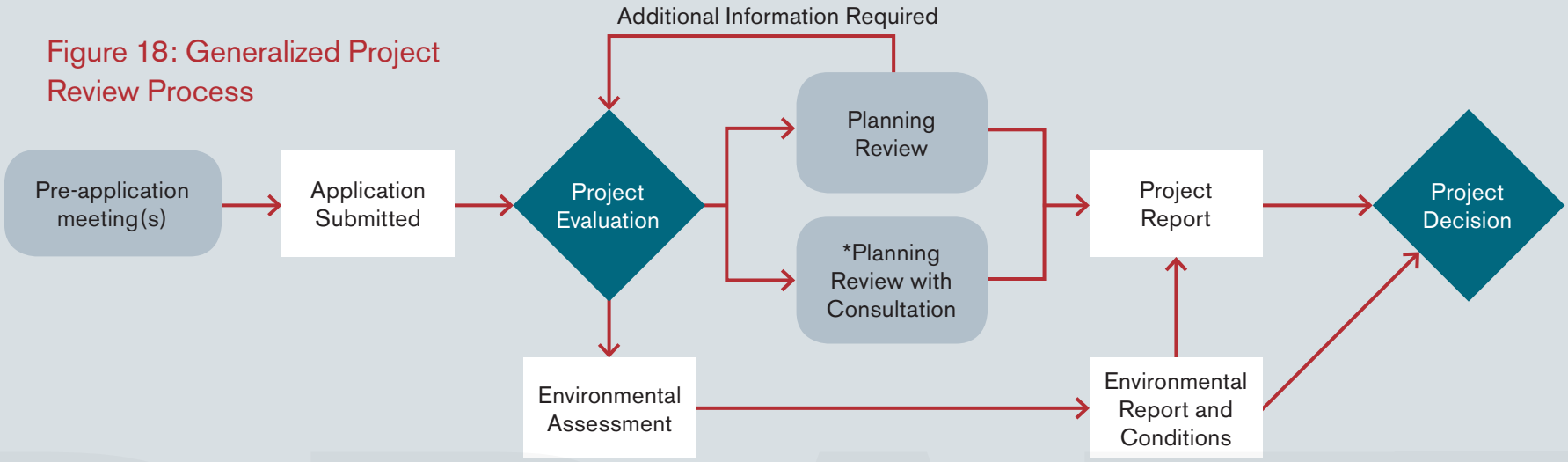
9.0 Project Review and Environmental Assessment

The project review and environmental assessment processes contribute to the goal of integrating social, environmental and economic sustainability into land use and development decision-making.

9.1 Project Review Process

Most physical works on Port Metro Vancouver property require a Project Permit, sometimes including a Port Building Permit. All works on Port lands and waters must be reviewed under the Port's Environmental Assessment Procedure.

Figure 18: Generalized Project Review Process



The Project Review Process commences upon receipt of a complete project permit application. Where the proposal involves potential off-site impacts (e.g. traffic, noise, views, glare, dust) Port Metro Vancouver may request the applicant to provide assessments of the impacts and options for mitigative measures. Additional documentation such as studies or professional reviews may be necessary. Any such requirements will be identified by the Port during either pre-application discussions or the Project Review Process.

* Note: The Project Review Process determines the necessary consultation requirements, which may include referring the project to relevant local governments, First Nations, and/or stakeholders for review and comment, as well as other consultation activities depending on the project's scope, scale and level of community interest.

9.2 Environmental Assessment Procedure

On July 6, 2012, the new *Canadian Environmental Assessment Act* or *CEAA 2012* came into force. Under CEAA 2012, Port Metro Vancouver is a "federal authority" whereby projects that were formerly considered "comprehensive study projects" are now considered "designated projects" and are captured under a new regulation - the "Regulations Designating Physical Activities".

An environmental assessment is required for all designated projects. For all other projects, as a federal authority, the Port must not make any decisions or carry out any projects unless the Port determines the project is not likely to cause significant adverse environmental effects.

To fulfill its legal responsibility under CEAA 2012, the Port maintains an environment policy which includes a Project Environmental Assessment Procedure that outlines how to perform environmental assessments.

The Environmental Assessment Procedure requires that all projects and activities that could have an effect on the lands and waters within Port Metro Vancouver's jurisdiction undergo an environmental review, and that potential environmental effects are identified, evaluated and mitigated.

The Environmental Assessment Procedure ensures that:

1) All projects and proposals in the Port's jurisdiction or authority are reviewed. That includes projects whether they are led by the Port, tenants or others. The intent is to assess all projects and activities that might have environmental consequences.

2) The procedure includes Environmental Assessments mandated under legislation. Where the Port's Environmental Assessment review requirements are more stringent than those required under the regulations, the Port's requirements are applied.

Graphic / Image 30

10.0 Implementation

Port Metro Vancouver's Land Use Plan will help guide and manage the planning and development of the Port's land and water resources to facilitate trade on behalf of all Canadians, while demonstrating leadership in community engagement and environmental stewardship.

10.1 Role of Port Metro Vancouver

Port Metro Vancouver is primarily responsible for implementing the Plan's policy directions and initiatives, although in many cases implementation will happen in conjunction with other agencies. The implementation measures outlined in Appendix B, and to be developed in the years to come, serve as an action plan for the Port itself and the broader port community. The Port's Project Review and Environmental Assessment Processes will continue to be key mechanisms for evaluating and consulting on proposed developments within the Port's jurisdiction, guided by the directions established by the Plan.

10.2 Role of Port Metro Vancouver Partners

The role of Port Metro Vancouver's partners in implementing the Land Use Plan cannot be overstated. In many cases partners will take the lead in providing the context for achieving the goals and objectives of the Plan, since the long term prosperity of the port and its surrounding communities are so closely interrelated. Key partners in implementing the Plan include:

a) **Terminal operators, customers, and tenants** through their operations, projects and investments, play a key role in the successful implementation of this Plan;

b) **Municipalities and First Nations**, through their role in managing the growth of their own communities in a way that supports efficient and effective access to port lands, addressing potential conflicts along the interface between the port and nearby residents and businesses, and through capitalizing on the economic and other opportunities a thriving port can offer;

c) **Regional and senior government agencies**, through collaborative planning and delivery of infrastructure that supports efficient and effective port operation and sustainable growth;

d) **Transportation service providers**, through the delivery of road, rail and water-based transportation infrastructure and services in a manner that is sensitive to the impacts on host communities; and

e) **Neighbourhoods and individuals**, through engaging with the Port in on-going and new initiatives, and being aware of the role the Port plays in the livability and prosperity of the region.

The establishment of the Fraser River Improvement Initiative is an example of a regional collaboration resulting in a five-year initiative to remove derelict structures and vessels from Fraser River municipalities. With municipalities and Metro Vancouver, Port Metro Vancouver will lead this initiative, targeting derelict vessels and structures that pose a risk to the environment, life safety, or impede navigational safety on the Fraser River.

Another example of a collaboration-based initiative is a study with the City of Vancouver and related parties on a coastal flood risk assessment that includes Port lands in Burrard Inlet. One of the outcomes will be the identification of vulnerable infrastructure assets and facilities that will assist with emergency management and mitigating measures.

10.3 Monitoring and Reporting

Port Metro Vancouver's Land Use Plan is intended to be adaptable to changing conditions. Through monitoring and reporting, the Port is able to ensure that the Land Use Plan will guide the current and future management of the Port's lands and waters while also being responsive to new opportunities, changing market circumstances, and new ideas. Reporting on implementation of the Land Use Plan will be undertaken through Port Metro Vancouver's annual Sustainability Report to ensure that stakeholders and the public are aware of progress towards achieving the goals and objectives of this Land Use Plan.

10.4 Implementation Measures

The measures identified in Appendix B were developed to reflect the Port's commitment to the sound management of its lands and waters, and to the realization of the Land Use Plan's goals, objectives and policy directions. The measures describe the 'how' in terms of realizing the Port's vision for managing growth.

The table provides an initial list of implementation measures, together with their anticipated timeline. Additional implementation measures will be developed over time and integrated into Port Metro Vancouver programs, with their results described in the annual Sustainability Report.

10.5 Amendments to the Plan

The Land Use Plan is approved by the Port Metro Vancouver Board of Directors and may be amended from time to time by the Board consistent with the applicable legislation.

Next Update

Port Metro Vancouver will consider the need for a review of the plan five years after its adoption or last major update, and may consider a review prior to that if circumstances warrant it.

Why Amendments Can Be Necessary

In order to keep the Plan relevant, to adjust to changing circumstances, and to support the mission and vision of Port Metro Vancouver, amendments to the Plan may be required from time to time outside of the five year reviews of the Plan.

Amendments could include changes to land use designations, acquisitions or dispositions of land, or substantive revisions to goals, objectives, or policy directions. In addition, an amendment to the Plan may be warranted if the Port undertakes a sub-area plan which results in the need to amend the Land Use Plan.

The role of Port Metro Vancouver partners in implementing the Land Use Plan cannot be overstated. In many cases partners will take the lead in providing the context for achieving the goals and objectives of the Plan, since the long term prosperity of the Port and its surrounding communities are so closely interrelated.

Amendment Process

Amendments to the Land Use Plan are initiated by Port Metro Vancouver, consistent with the applicable provisions of the *Canada Marine Act*.

An amendment to one element of the Plan may affect several other elements of the Plan, as they are all interdependent upon each other to some extent. Thus, any proposed amendment will require a thorough assessment of the potential impacts on the balance of the Plan.

Administrative/Minor Amendments

Administrative/minor amendments do not have a substantive impact on the policies or directions of the Land Use Plan. Examples include minor wording adjustments or technical updates, and minor designation boundary amendments to reflect lease area adjustments. Consultation is generally not required for such amendments, although Port Metro Vancouver will provide information on such amendments and maintain an up-to-date version of the Land Use Plan on portmetrovancouver.com/landuseplan.

Substantive Amendments

For substantive amendments, the *Canada Marine Act* sets out procedural requirements for public notice and adoption by the Board of Directors. Port Metro Vancouver is committed to undertaking a consultation process to solicit input from interested parties for all proposed substantive amendments to the Land Use Plan.

11.0 Glossary

Berth: An area of water allocated for the wet storage of vessels attached to a fixed or floating structure allowing walk-on access to vessels.

Booming Grounds: An area where boats are used to push or pull logs, booms, bundles, or bags for temporary storage prior to shipping.

Breakbulk Cargo: Generalized cargo that is not containerized but may be bundled into specific units. Typical breakbulk cargo includes goods such as lumber, steel, pulp and machinery.

Certificate of Amalgamation: means the Certificate of Amalgamation (effective January 1, 2008) issued by the Minister of Transport in accordance with the *Port Authorities Management Regulations* under which the Vancouver Port Authority, the Fraser River Port Authority and the North Fraser River Port Authority are amalgamated and continued as the Vancouver Fraser River Port Authority.

Channel: An unobstructed waterway that allows the movement of vessel traffic.

Deep water: A minimum water depth of two metres, relative to the Canadian Hydrographic Chart Datum.

Dock (fixed pier): A non-floating structure extending seaward beyond the shore and to which a ramp (gangway) is usually attached.

Dry Bulk Cargo: Dry cargo that is poured or placed into ships in bulk, such as grain, sulphur, coal and minerals.

Environmental Assessment: a review and evaluation of the possible impacts that a proposed project may have on the environment, consisting of the social, environmental, and economic aspects.

Foreshore: The lands located between the Legal High Water Mark and the Average Low Water Mark.

Asia-Pacific Gateway and Corridor Initiative: The Asia-Pacific Gateway and Corridor Initiative is an integrated set of investment and policy measures focused on trade with the Asia-Pacific Region. Its mission is to establish Canada's Asia-Pacific Gateway and Corridor as the best transportation network facilitating global supply chains between North America and Asia. The Initiative is led by the Minister of Transport.

Greenhouse Gas Intensity*: A ratio to express GHG impact per unit of physical activity or unit of economic value (e.g. tonnes of CO_2-equivalent emissions per unit of electricity generated, grams of CO_2-equivalent emissions per TEU, grams of CO_2-equivalent emissions per tonne-kilometre, tonnes of CO_2-equivalent emissions per tonne of product, tonnes of CO_2-equivalent emissions per dollar revenue).

Intermodal: The transshipment of cargo by means of multiple interconnected methods including rail, water, air and road.

Letters Patent: means the letters patent for the Vancouver Fraser Port Authority issued by the Minister of Transport under the authority of the *Canada Marine Act* that are contained in the Certificate of Amalgamation and that set out the powers of the Vancouver Fraser Port Authority to operate the Port, as amended by supplementary letters patent issued by the Minister of Transport from time to time.

License Area: The total area for which a Residential Waterfront Licence is granted.

* Source: The Greenhouse Gas Protocol, A Corporate Accounting and Reporting Standard Revised Edition, World Resource Institute.

Liquid Bulk Cargo: Liquid cargo that is poured or pumped into ships, such as crude petroleum, refined petroleum, edible oils and petrochemicals.

Moorage: A specific location identified where water vessels such as boats and barges are able to tie up.

MMT: million metric tonnes

Shoreline: The general line defined where the water meets the land.

Smart Fleet Trucking Strategy: Port Metro Vancouver's Smart Fleet Trucking Strategy (Smart Fleet) is a three-year plan to improve the long-term sustainability of the container drayage sector by working collaboratively with supply chain partners.

TEU: Twenty-foot equivalent units are the standard measurement for containers. Containers or 'boxes' can come in different sizes – 20, 40 and 45 foot units. A forty-foot container would equate to two TEUs.

Vancouver Fraser Port Authority (VFPA): Doing business as Port Metro Vancouver, the Vancouver Fraser Port Authority is a corporation under the *Canada Marine Act* that is accountable to the federal Minister of Transport.

Vessel: Any ship, boat, barge, raft, dredge, floating elevator, seaplane on the water or other floating craft.

Water Lot: A property that is wholly or partially covered by water.

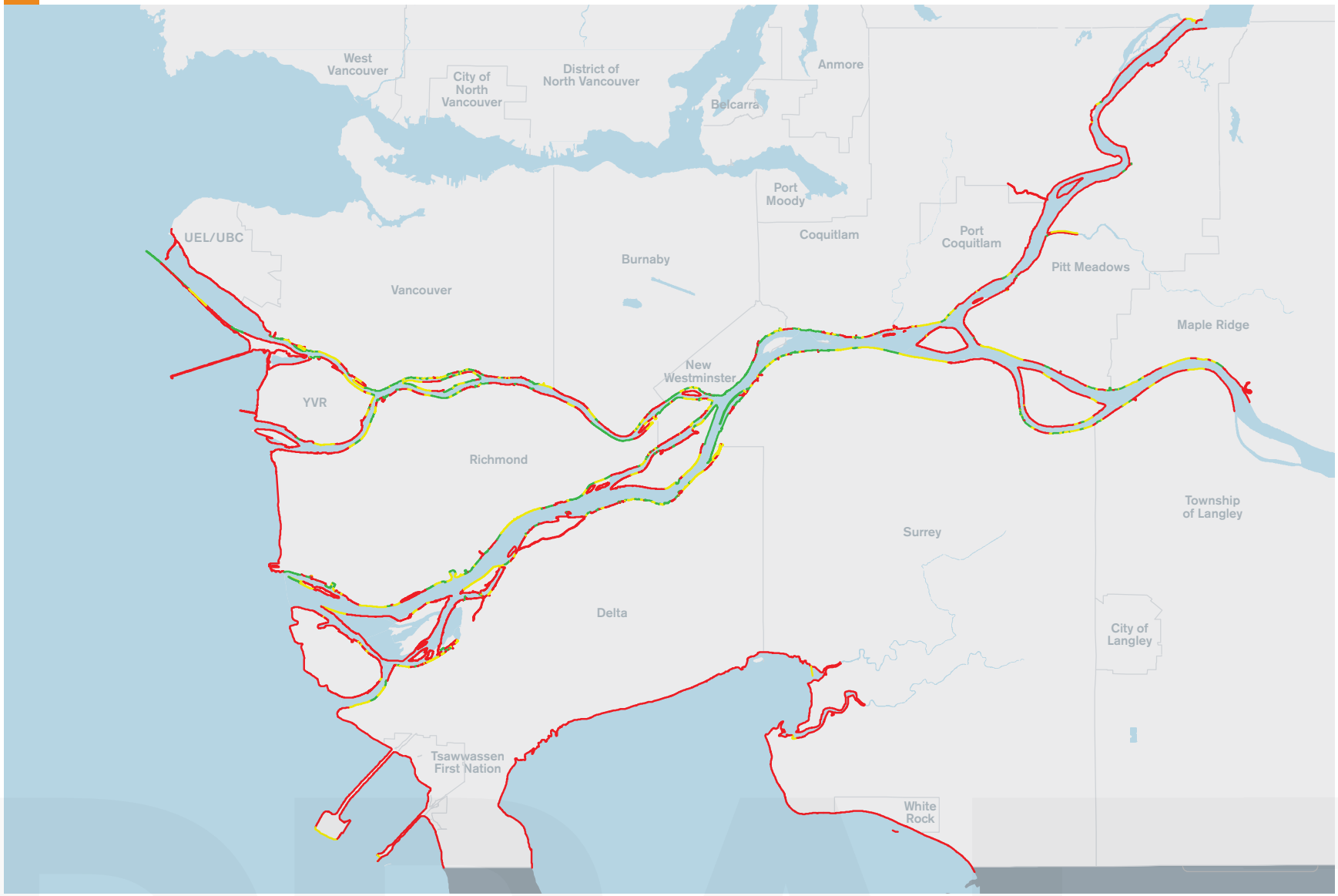
12.0 Appendices

Appendix A: Environmental Maps

Appendix B: Implementation Measures

Appendix A: Environmental Maps

Figure 19: Habitat Coding



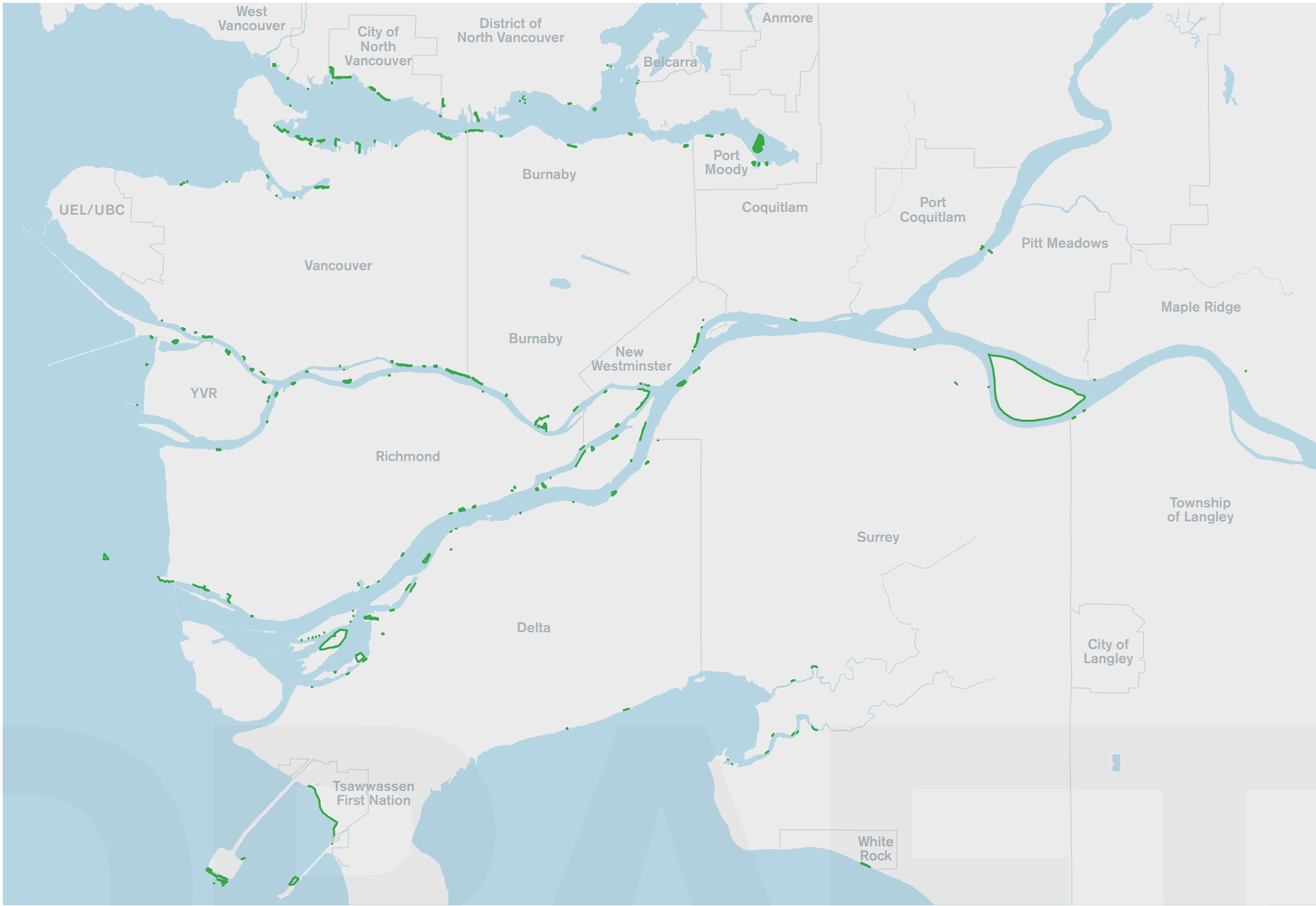
FREMP Coding

- Red
- Green
- Yellow

Effective December 2013*

*FREMP refers to the Fraser River Estuary Management Program. FREMP habitat colour coding was updated in 2005. Shorelines that include intertidal and near-shore riparian areas within FREMP were classified and colour-coded on the basis of the relative values of their features. The classification system was based on an inventory of all habitat types in the estuary. The codes guide prospective developers in selecting appropriate sites and identifying suitable design concepts prior to project applications. Code descriptions are as follows: Red coded habitats include productive and diverse habitat features that support critical fish and wildlife functions on-site or as part of a more regional context and/or areas where habitat compensation has previously been constructed to offset habitat losses. Yellow coded habitats include habitat features that are of moderate value in structure or diversity due to existing conditions, and which support moderate fish and wildlife functions. Green coded habitats include areas where habitat features and functions are limited due to existing conditions. For more information, www.bieapfremp.org/main_fremp

Figure 20: Habitat Compensation Sites



Habitat Compensation Sites

This map illustrates the generalized location of habitat compensation sites in the lands and waters managed by Port Metro Vancouver as of December 2013.

Appendix B: Implementation Measures

The following is an initial list of measures to implement the Land Use Plan, and the associated timing. Additional implementation measures will be developed in the years to come and reported on, as appropriate, in Port Metro Vancouver's annual Sustainability Report.

Goal 1 – Port Metro Vancouver manages port growth and activity in support of Canada's trade while preparing for anticipated transitions in the global economy.

Objective 1.1 – Protect the industrial land base to support port and related activities into the future.

Objective 1.2 – Optimize the use of existing port lands and waters.

Objective 1.3 – Ensure the availability of a land base within the region that is sufficient to support future port and port-related activities.

Objective 1.4 – Lead the port community in anticipating and responding to economic trends and opportunities that will affect the growth, development and competitiveness of the Port.

Port Metro Vancouver Land Use Plan Implementation Measures		TIMELINE			
No.	**Implementation Measure**	**Short 2014-16**	**Medium 2016-18**	**Long 2018+**	**Ongoing**
1	Explore and pursue initiatives with local governments, the Province of BC and other agencies to protect the region's industrial land base – including consideration of an Industrial Land Reserve or similar approach – and identify opportunities to expand the industrial land base to meet the region's long term needs.				
2	Undertake a study of best practices and opportunities to intensify the use of port terminals.				
3	Develop updated Log Storage Guidelines.				
4	Work with governments and other agencies on development of a Regional Flood Management Plan.				
5	Collaborate with relevant agencies such as the Pacific Climate Impacts Consortium on sea level rise research and the potential implications for port-related business and infrastructure.				
6	Undertake a comprehensive review of each site designated as Special Study Areas in the Land Use Plan to determine their need and suitability for long term port use. This review will include consultation with affected communities, governments, agencies and stakeholders prior to an associated amendment to this Land Use Plan.				
7	Continue to monitor events and trends to determine and report on progress towards the Port's anticipated future established through the Port 2050 process.				

Goal 2 – Port Metro Vancouver is a leader in ensuring the safe and efficient movement of port-related cargo, traffic and passengers throughout the region.

Objective 2.1 – Improve operational efficiencies of transportation modes serving the Port.

Objective 2.2 – Preserve, maintain and improve transportation corridors and infrastructure critical to moving goods and passengers to and through the Port.

Objective 2.3 – Ensure the safe and secure movement of goods and passengers through the Port.

Port Metro Vancouver Land Use Plan Implementation Measures		TIMELINE			
No.	**Implementation Measure**	**Short 2014-16**	**Medium 2016-18**	**Long 2018+**	**Ongoing**
8	Pursue a Designated Anchorage Area Pilot Project specific to pleasure crafts, in partnership with the City of Port Moody.				
9	Participate in TransLink's initiative to prepare a Regional Goods Movement Strategy as part of its overall transportation plan.				

Goal 3 – Port Metro Vancouver is a global leader among ports in the environmental stewardship of the lands and waters it manages.

Objective 3.1 – Contribute to the overall ecological health of the region by reducing impacts from port activity and protecting, sustaining and enhancing ecosystems.

Objective 3.2 – Reduce air emissions, including greenhouse gas intensity, and promote energy conservation in port operations and developments.

Objective 3.3 – Improve land and water quality within the Port.

Objective 3.4 – Promote sustainable practices in design and construction, operations and administration in the Port.

Port Metro Vancouver Land Use Plan Implementation Measures		TIMELINE			
No.	**Implementation Measure**	**Short 2014-16**	**Medium 2016-18**	**Long 2018+**	**Ongoing**
10	Pursue the establishment of a new interagency partnership to coordinate the external environmental reviews of projects in the Fraser River Estuary and Burrard Inlet.				
11	Pursue the development and implementation of strategies and initiatives that aim to reduce greenhouse gas intensity as a result of Port operations, including the Port's Smart Fleet Trucking Strategy.				
12	Pursue the development and implementation of strategies and initiatives that aim to reduce diesel particulate matter emissions as a result of Port operations, including the Port's Non-Road Diesel Emissions Initiative led by the Port and Metro Vancouver.				
13	Update the port air emissions inventory every five years and report annually on progress towards achieving the goals and targets in the Port's Air Action Program.				
14	Apply Port Metro Vancouver's Air and Energy Action Initiative to promote leadership in energy conservation, use of alternative energy and clean technology.				
15	Continue to implement the five-year Fraser River Improvement Initiative to address the removal of derelict vessels and structures that pose risk to wildlife or natural habitats, or impede navigational safety.				
16	Develop and implement sustainable development guidelines for developing on Port lands and waters.				
17	Strengthen and implement practices, through ongoing development of Port Metro Vancouver's environmental management system, to promote continuous improvement of the surrounding environment.				
18	Implement and maintain Port Metro Vancouver's Aboriginal Business Directory.				

Goal 4 — Port activity and development is a positive contributor to local communities and First Nations.

Objective 4.1 – Generate sustainable local and national economic benefits through the use and development of port lands and waters.

Objective 4.2 – Ensure public recreational opportunities and waterfront access are provided within the Port in a manner compatible with port activities and the protection of fish and wildlife.

Objective 4.3 – Seek to minimize the impacts from port operations and development on local communities and First Nations.

Port Metro Vancouver Land Use Plan Implementation Measures		TIMELINE			
No.	**Implementation Measure**	**Short 2014-16**	**Medium 2016-18**	**Long 2018+**	**Ongoing**
19	Maintain and monitor Port Metro Vancouver's Community Investment Program.				
20	Update and implement the Port's guidelines for recreational docks.				
21	Develop and implement the Smart Fleet Trucking Strategy to improve the efficiency of port-related truck traffic.				
22	Develop archeological review guidelines to assist in the review of development proposals.				
23	Evaluate and determine whether or not the East Vancouver Port Lands Area Plan needs to be updated, in consultation with the City of Vancouver and area residents.				

Goal 5 – Port Metro Vancouver is a leader in communication and engagement in support of the use and development of port lands and waters.

Objective 5.1 – Provide a relevant range of opportunities for communication, consultation and engagement that reflects the scale, scope, impacts and community interest in the use and development of port lands and waters.

Port Metro Vancouver Land Use Plan Implementation Measures		TIMELINE			
No.	**Implementation Measure**	**Short 2014-16**	**Medium 2016-18**	**Long 2018+**	**Ongoing**
24	Implement a Municipal Outreach Program in order to proactively guide efforts in maintaining and further developing Port Metro Vancouver's working relationships with local governments and Metro Vancouver.				
25	Support ongoing communication with customers, stakeholders, local governments, First Nations, and relevant agencies through measures such as the Municipal Engagement Program, Aboriginal Engagement Strategy, Community Liaison Committees, and regular dialogue and engagement activities.				
26	Complete an evaluation of the Port's Project Review Process.				

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REQUIRED IMAGES