



PORT METRO
vancouver



LAND USE PLAN

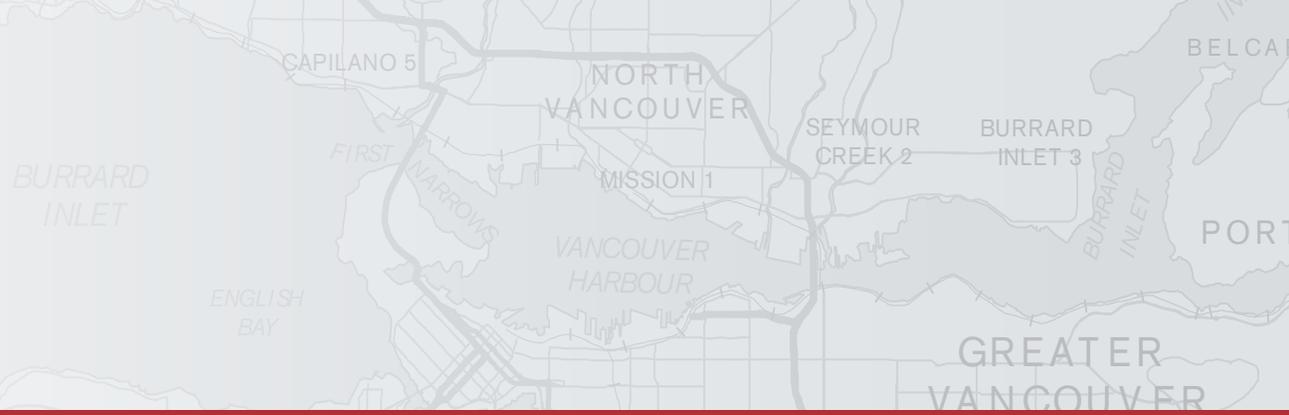
ADOPTED OCTOBER 28, 2014



PORT METRO
vancouver

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 has been developed in consultation with more than 1,000 people representing municipalities, First Nations, government agencies, environmental organizations, businesses, industries, and members of the public.



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“We’re the hub of one of North America’s most important economic corridors, generating nearly 100,000 jobs for Canadians.”

Chairman of the Board



Craig Neeser
Chairman of the Board

Port Metro Vancouver is Canada’s largest port, and the most diversified port in North America. We’re proud to serve Canadians by facilitating trade with more than 160 economies worldwide in a safe, efficient and environmentally responsible manner.

The port is vital to Canada’s economy, enabling close to 20 per cent of Canada’s entire trade in goods and adding almost \$10 billion to the gross domestic product. We’re the hub of one of North America’s most important economic corridors, generating nearly 100,000 jobs for Canadians.

As the world’s population grows, so does the need for Canadian resources – whether it’s wheat from Saskatchewan or lumber from B.C. At the same time, Canadian demand for imported products such as coffee, cell phones and clothes is also on the rise. Port Metro Vancouver’s continued success over the long term can’t be achieved without a rigorous plan to guide the development of the lands and waters within our jurisdiction. For that reason, the *Canada Marine Act* requires every Canadian port authority to have a Land Use Plan.

The Land Use Plan will guide development decisions for the next 15 to 20 years and, because Port Metro Vancouver borders 16 municipalities and several First Nations, it has been critical to get a broad cross-section of input and perspectives. Since we began developing this most recent version of our plan in 2012, we have engaged with more than 1,000 people representing municipalities, First Nations, government agencies, environmental organizations, businesses, industries, and members of the public.

I want to thank the organizations and individuals who participated in the development of the plan, as well as all those who are contributing to the success of the Vancouver Gateway and Canada’s continued growth and development.

A handwritten signature in black ink that reads "C. Neeser". The signature is fluid and cursive.

Craig Neeser
Chairman of the Board





Robin Silvester

President & Chief
Executive Officer

Over the next 25 years, more than one million additional people are expected to settle in Metro Vancouver – a region which is surrounded on all sides by mountains, ocean, and an international border. While the growing population will need space for housing and recreation, it will also need jobs and economic growth.

Port Metro Vancouver is at the heart of one of the most important economic corridors in North America. We manage hundreds of kilometers of shoreline, bordering 16 municipalities, one electoral area and one treaty First Nation in Metro Vancouver, and are located within the asserted traditional territories of several First Nations.

Over the past 30 years, Metro Vancouver has lost much of its industrial land to commercial and residential development. Recent studies indicate that the Vancouver Gateway will need 2,300 additional acres of industrial land by 2025 to meet increasing cargo demand. While people need homes and shops, they also need good jobs. Currently, Port Metro Vancouver industrial lands generate 77,000 jobs in BC – jobs which pay substantially more than the Canadian average

wage. Without suitable land, we will not be able to deliver economic growth to support the growing population. And without careful planning, we will not be able to make best use of the land we manage.

In anticipation of the influx of population and looming land shortages, our port tenants are optimizing their operations to meet Canada's trade objectives efficiently. Terminals are upgrading their infrastructure, investing in new technology and making better use of space. At the same time, Port Metro Vancouver is working more broadly to protect the remaining supply of industrial land.

In January 2012, we began the process of creating a single, comprehensive Land Use Plan that will guide how Port Metro Vancouver develops its lands and waters over the next 15 to 20 years. Throughout the nearly three years it has taken to develop the new plan, we have listened to the diverse perspectives of all who provided input and aimed to balance those perspectives with our mandate to facilitate trade. Our goal has been to plan for future trade needs and respond to anticipated economic growth while continuing to protect the unique environmental areas and communities that make our region truly spectacular.

“While the growing population will need space for housing and recreation, it will also need jobs and economic growth.”

President & Chief Executive Officer

We are grateful to everyone who contributed to the Land Use Plan; we all have a stake in the future of the Vancouver Gateway. Our Land Use Plan provides the blueprint to grow Canada's trade in a competitive, efficient and reliable manner, and to ensure we are operating in a sustainable way that enhances the well being of all Canadians.

Robin Silvester
President & Chief Executive Officer

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 and passenger terminals and connects with three Class 1 railroads and one short line railroad, 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 responsible stewardship of port lands and waters, and demonstrates the Port's responsiveness to social, environmental and economic trends that will impact Canada's Pacific Gateway and the broader community.



1.2 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 the 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 workforce, and its ability to strengthen the regional and national economies through trade and business development.

In 1913 the Government of Canada established the three Harbour Commissions that would later evolve into the North Fraser, Fraser River and Vancouver Port Authorities. In 2008, these three Port Authorities were amalgamated in accordance with the *Canada Marine Act* into the Vancouver Fraser Port Authority, which does business as Port Metro Vancouver. 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, local communities and First Nations are working together to take advantage of the opportunities a thriving port can offer. Building upon these relationships and the energy and innovation they bring, the Port will continue to pursue investments, strategies and initiatives that will set the stage for strong and sustainable growth in trade for the benefit of all Canadians.

OUR MISSION

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

OUR 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.

1.3 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 per cent 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 the 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 bringing goods to market faster and with less of an impact on local communities.

Working with federal and provincial governments, and together with local communities, Port Metro Vancouver will deliver major new projects that will continue to benefit regional, provincial and national communities.

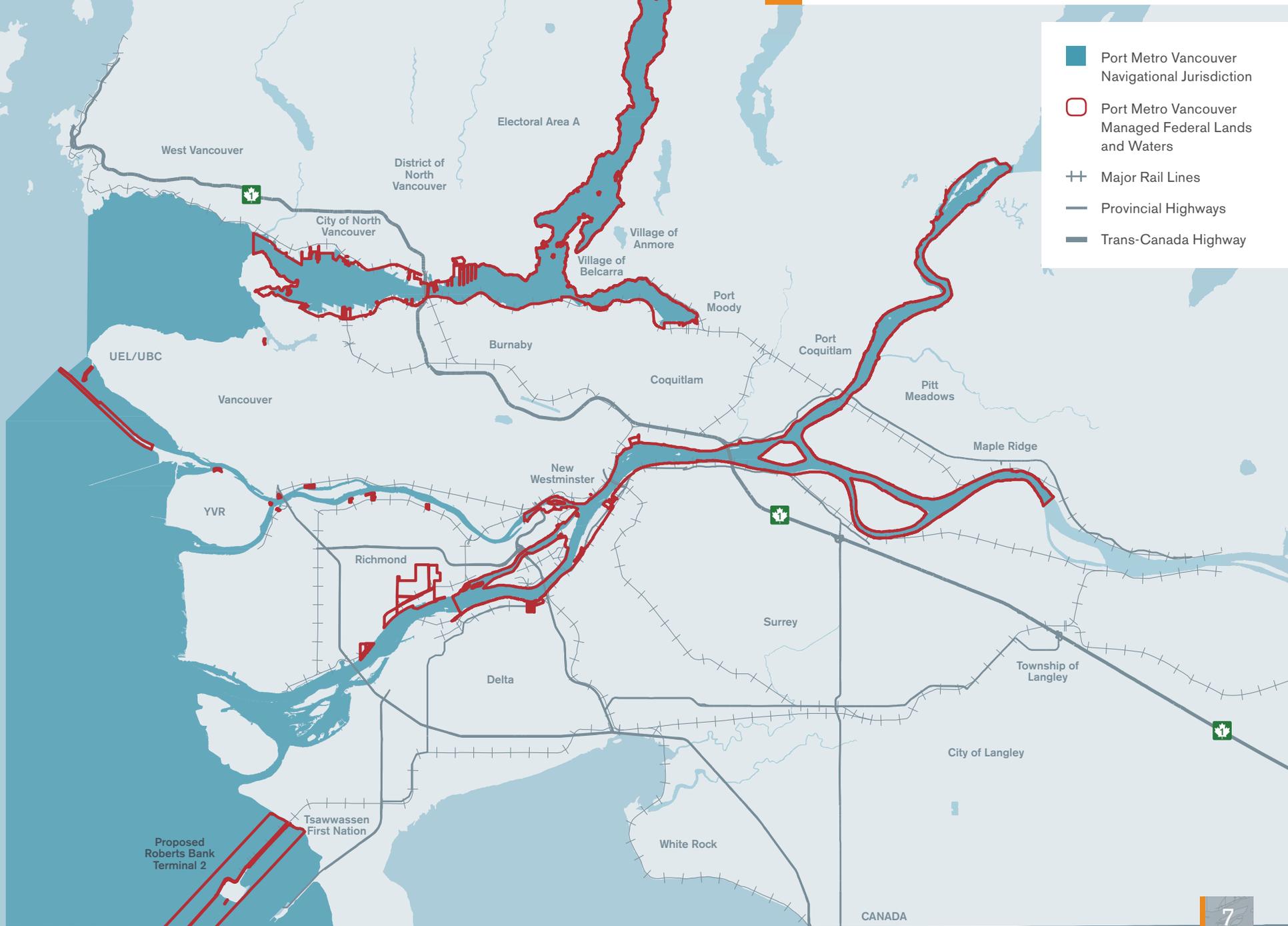
1.4 Regional Context

The Port's mandate, among other things, is to manage 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 manage 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 supporting 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 this Land Use Plan applies exclusively to lands and waters managed by Port Metro Vancouver, 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 a world class gateway be achieved.

Figure 1: Port Metro Vancouver Jurisdiction



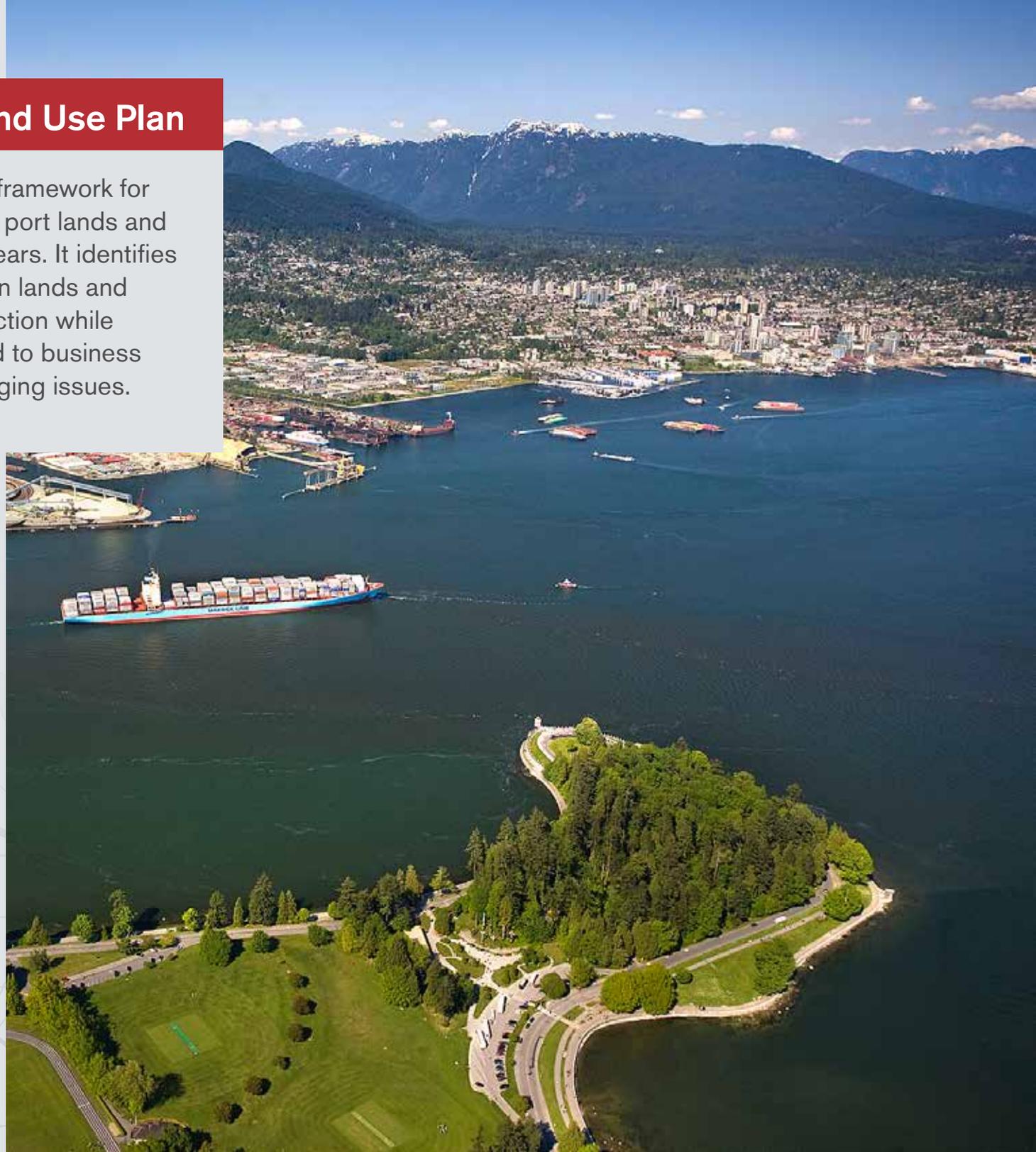
2.0 Purpose of the Land Use Plan

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 lands and waters across the Port's jurisdiction while maintaining flexibility to respond to business needs, market trends and emerging issues.

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

Section 7.0 describes the land and water 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 and stakeholders, First Nations, communities and future investors in the Asia-Pacific Gateway.

Implementation measures and monitoring addressed in Section 10.0 demonstrate Port Metro Vancouver's commitment to acting on the directions established by the Plan.



THE GOALS

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

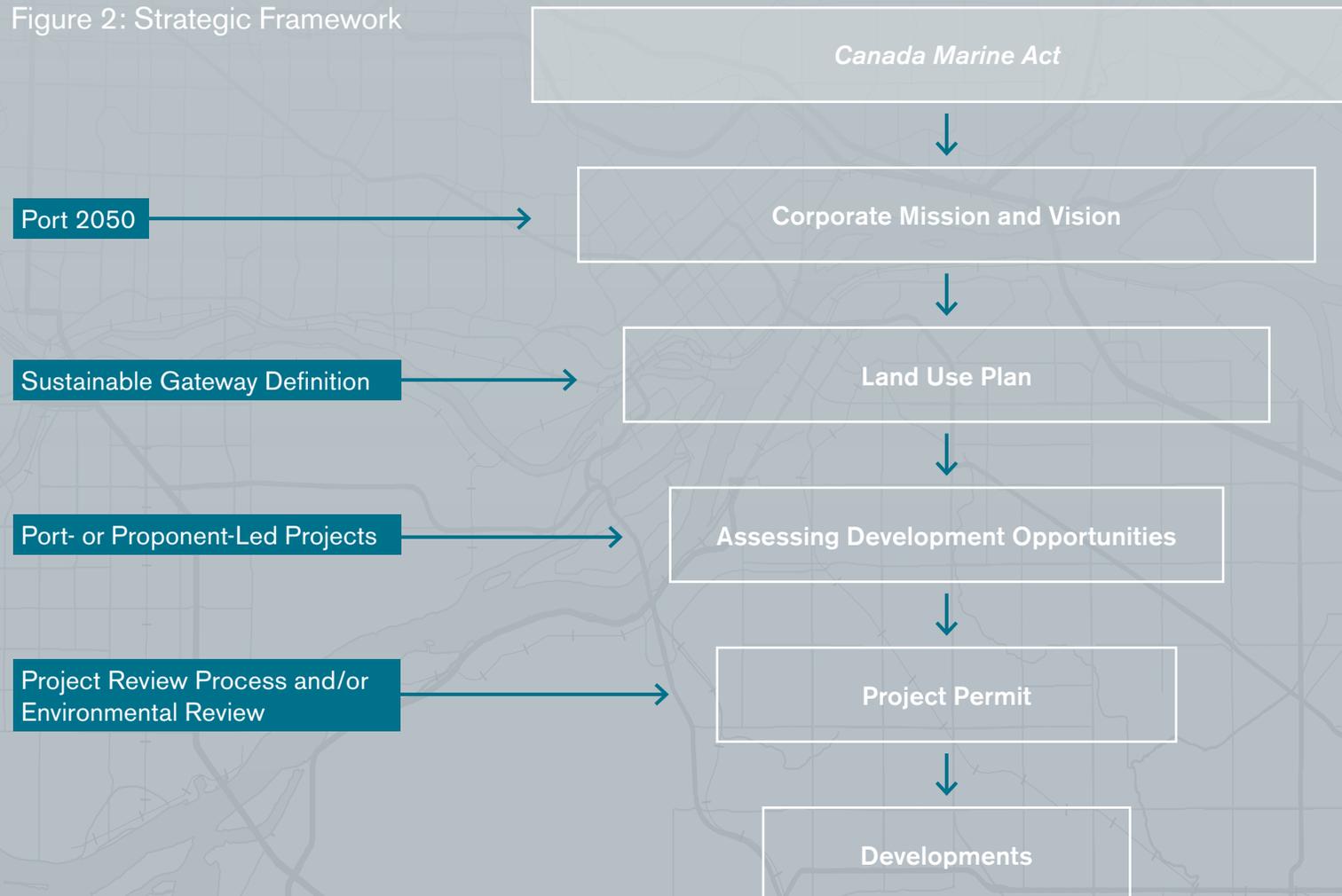
THE PLAN

- 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 the intended use of Port Metro Vancouver's lands and waters adjacent to their reserves and within their asserted traditional territories, without substituting the Port's consultation with First Nations where activities have the potential to adversely impact Aboriginal and Treaty rights.
- Illustrates the Port's ability to accommodate future growth in a socially, environmentally and economically sustainable manner.

3.0 Land Use Plan Strategic Framework

The Port's Land Use Plan is one of many strategic considerations at Port Metro Vancouver. Guided by the *Canada Marine Act* and the Port's Corporate Mission and Vision, the Plan directly informs existing and future developments within the Port's jurisdiction.

Figure 2: Strategic Framework



3.1 Port 2050: Our 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 who had an interest in Port Metro Vancouver’s future.

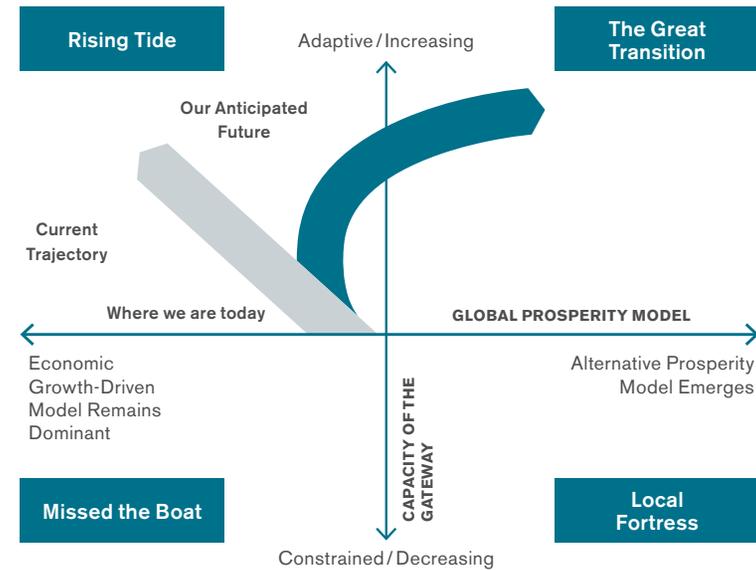
The scenario that emerged from this initiative was Our Anticipated Future. This is an outlook that involves considerable growth across cargo sectors in the coming years, with an eventual transition to a scenario where social, environmental and economic imperatives are equally considered in all measures 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 Plan.

3.2 Sustainable Gateway Definition

Port Metro Vancouver launched the Sustainable Gateway Definition 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: Our Anticipated Future



Port 2050 Future Scenarios

Rising Tide: This is a scenario of continued growth, but in a context of increased volatility due to resource conflicts and climate instabilities.

Missed the Boat: This is a scenario where emerging market growth is strong, but the Gateway misses key opportunities and doesn’t live up to expectations due to problems with supply chain issues, poor coordination, lack of community buy-in and diminishing industry support.

The Great Transition: This is a scenario where we see a paradigm shift – a rapid transition to a post-industrial/post-carbon model.

Local Fortress: This is a scenario where Gateway growth is constrained because the Lower Mainland focuses on the regional economy and local resilience.

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 Fraser Port Authority, the North Fraser Port Authority and the Vancouver 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 to be developed through a consultative process that involved municipal, regional and senior governments, agencies, tenants, customers, stakeholders, communities and First Nations.

Figure 4: Plan Development

Phase 1

January 2012 – July 2012

Gathering inputs and setting the context

Phase 1 focused on data collection, background research, and issue identification around five key topics:

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

Phase 1 established the baseline data for the Land Use Plan, and helped to inform subsequent phases of the process.

Port Mission and Vision

Consultation Input

Studies and Best Practices

Phase 2

August 2012 – November 2012

Developing Goals and Policies

Phase 2 focused on developing draft:

- Goals
- Objectives
- Policy Directions

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

2012

The Plan development and consultation process undertaken by Port Metro Vancouver far exceeds *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.

Summaries of the consultation processes and outcomes for each phase of the Land Use Plan update process are available on Port Metro Vancouver's website.

Phase 3

December 2012 – December 2013

Drafting the Plan

Phase 3 focused on developing the draft Plan document, including:

- Revisions to the draft goals, objectives and policy directions
- Updating the land and water designations and associated mapping
- Developing draft implementation measures

2013

DID YOU KNOW?

The *Canada Marine Act* requires port authorities to hold one public meeting and post a newspaper advertisement before and after adopting a land use plan. Port Metro Vancouver's process reflected its commitment to engage widely with those who have a stake in the future of the Gateway. The process consisted of four consultation periods and included 15 stakeholder workshops, six open houses, three discussion sessions, three First Nations workshops, three street teams, three webinars and many individual meetings. In addition, 5,000 people visited the Plan's online engagement tool. The feedback received through the consultation process helped to shape a Plan that reflects the aspirations of the region as well as the trade objectives of Canada.

Phase 4

January 2014 – October 2014

Finalizing the Plan

Phase 4 involved extensive consultation in order to:

- Refine and finalize the proposed Land Use Plan
- Meet the consultation requirements of the *Canada Marine Act*
- Prepare the proposed Land Use Plan for adoption by Port Metro Vancouver's Board of Directors
- Release the adopted Land Use Plan

2014

5.0 Land Use Plan Context

Port Metro Vancouver operates within a complex social, environmental and economic landscape. The following sections present the context for the Plan and highlight some of the land use challenges that the Port will face over the next 15 to 20 years.



5.1 Legislative Context

The Vancouver Fraser Port Authority, doing business as Port Metro Vancouver, was created in January 2008 by the Government of Canada through the amalgamation of the North Fraser Port Authority, Fraser River Port Authority and Vancouver Port Authority, in accordance with the *Canada Marine Act*. Port Metro Vancouver is accountable to the federal Minister of Transport, and 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 port authorities.

The *Canada Marine Act* was established to, among other things, 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. This land use plan needs to contain objectives and policies for the physical development of real property and other assets it manages. In addition, it must take into account relevant social, environmental and economic matters and zoning bylaws that apply to neighbouring lands. The legislation also establishes the basic requirements for notification and 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.

Port Metro Vancouver Jurisdiction

The Port's jurisdiction under the Letters Patent borders 16 municipalities, one electoral area 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 certain 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 that 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.

5.2 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.

Communities

Port Metro Vancouver has developed a number of ways to engage with local communities, ranging from community meetings and open houses to 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 port 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 port operations on the community.

In East Vancouver, the Burrardview Community Association, Canadian Pacific Railway (CP) and the City of Vancouver participate with Port Metro Vancouver in the East Vancouver Port Lands Liaison Group. 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 communication 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 train whistling.

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

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.

With this in mind, it is important to recognize 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 port operations and development.

5.3 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.

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, projects, physical works and activities conducted within Port Metro Vancouver’s jurisdiction must undergo an environment review carried out by the Port to comply with the *Canadian Environmental Assessment Act, 2012 (CEAA)* and the Port’s Environment Policy. In addition, the Port is subject to other federal legislation, including the *Fisheries Act* and the *Species at Risk Act (SARA)*.

Port Metro Vancouver staff with expertise in environmental science, biology, chemistry, sustainability, air quality and energy management conduct reviews of all activities affecting port lands and waters, 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, any new development within Port jurisdiction is required to appropriately avoid or mitigate potential adverse impacts on fish or wildlife habitat. Projects that have an 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 – this reef is now inhabited by octopus, rock fish, crabs, sea anemones and shrimp.

Environmental Initiatives

Port Metro Vancouver has created a suite of industry-leading programs to promote a healthy ecosystem, minimize environmental impacts from port operations and grow a sustainable Gateway.



Air Action Program

Port Metro Vancouver's Air Action Program focuses on reducing air emissions from ocean-going vessels, cargo handling equipment, rail and truck sectors, and includes a variety of programs.

● *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, improving air quality and reducing noise. By 2020, it is anticipated that the majority of container vessels calling on the Port will be shore power-enabled. We are working with BC Hydro and container terminals to expand shore power infrastructure and enable container vessels to plug-in while docked.



DID YOU KNOW?

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

- **Corporate Emissions**

At Port Metro Vancouver we measure our corporate greenhouse gas emissions annually, in accordance with ISO 14064 – part 1, and purchase carbon offsets to make our operations carbon neutral.

- **Non-Road Diesel Emissions Initiative**

This initiative aims to reduce diesel particulate matter emissions from cargo-handling equipment, such as top picks, forklifts, cranes, yard trucks and construction equipment. By phasing out older, high-emitting equipment, advancing idle reduction and promoting innovative clean technologies, this program will reduce diesel particulate matter emissions and improve air quality for port users and local communities.

- **Northwest Ports Clean Air Strategy**

Port Metro Vancouver is working with the Ports of Seattle and Tacoma and government agencies, such as Environment Canada, to reduce port-related air emissions in the Georgia Basin/Puget Sound airshed through the Northwest Ports Clean Air Strategy. This strategy establishes air quality and greenhouse gas emissions reduction goals through to 2020.

- **EcoAction Program**

The Port's EcoAction Program promotes emission reductions by offering discounted harbour dues rates to ocean-going vessels that have implemented emission reduction measures and other environmental practices. A variety of fuel quality, technology and environmental management practices are eligible to receive discounted harbour dues rates.

- **Landside Emissions 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 to bring the fleet up to the equivalent particulate matter emissions of a 2007 truck or newer by 2017.



Energy Action Program

Port Metro Vancouver's Energy Action Program focuses on promoting energy conservation and the use of reliable, clean energy across port 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 that any contamination is addressed to meet regulatory and additional Port requirements.

BIEAP and FREMP

The Burrard Inlet Environmental Action Program (BIEAP) and the Fraser River Estuary Management Program (FREMP) 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. Program partners included representatives from Environment Canada, Fisheries and Oceans Canada, Transport Canada, the British Columbia Ministry of Environment, Metro Vancouver and Port Metro Vancouver.

Due to the changing mandates of the partner agencies, in March 2013, the BIEAP and FREMP office closed and the programs, including the "single-window" external project environmental review committees, ceased functioning. Port Metro Vancouver continues to apply the FREMP habitat colour-coding system as an important input to development review.

DID YOU KNOW?

Log storage throughout the port has co-existed in areas of FREMP red-coded habitat for many years. During the area designation process undertaken by FREMP, log storage was one of three designations permitted adjacent to red-coded habitat: the other two were conservation and recreation based designations. Log storage areas play a valuable role in buffering marsh habitat, with piles and dolphins (mooring structures that contains multiple piles) also acting as bird habitat.



Flood Management

Studies indicate that climate change will result in a local sea level rise of between 20 and 60 centimetres over the next 100 years. Climate change is also expected to increase severe weather events, which could lead to more frequent incidents 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 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. The Port is also working

with the Fraser Basin Council along with local, provincial and federal partners, in order to develop a Business Plan for a Regional Flood Management Strategy for the Lower Mainland.

The Port is a member of the Joint Program Committee for Integrated Flood Hazard Management, which is 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. 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.



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.

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.
- 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, that provide additional marine hiding areas or refuge from predator species.

Figure 5: Land and Marine Transportation Network



- Major Rail Lines
- Major Truck Routes
- Provincial Highways
- Trans-Canada Highway
- Port Metro Vancouver Navigational Jurisdiction

Note: This transportation network map is for illustration purposes only, and includes a depiction of TransLink's Major Road Network. For the most current definition of the Major Road Network, please consult TransLink.

5.4 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 that delivers goods from origin to destination. For a port tenant or terminal operator to be able to effectively manage this service, port lands and waters 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. 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. These transportation corridors 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.

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 Railway (CN), Canadian Pacific Railway (CP), and Burlington Northern Santa Fe Railway (BNSF) as well as a local short-line rail service, Southern Railway of British Columbia (SRY). Rail lines are generally owned and managed by specific rail operating companies. A portion of rail line in Delta connecting to Deltaport is owned by the British Columbia Railway

Company (BCRC), which is accessed by BNSF, CN, and CP. Furthermore, the shared use of rail lines to enable efficient movement of goods is occurring through co-production agreements in Metro Vancouver.

Marine Navigation

Providing marine vessels with safe and unimpeded access to port 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 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. Port marine operations also include the design of navigational channels according to national and international guidelines. Navigational channels within the Port’s jurisdiction 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 Port also identifies the marine safety channel where development is not permitted to occur, and which acts as a buffer adjacent to the navigational channel.

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 and Roberts Bank dredging primarily consisting of capital dredging works and the Fraser River requiring annual maintenance dredging.

Figure 6: Major Marine Terminals and Off-Dock Facilities



- Major Marine Terminals
- Major Off-Dock Facility
- Proposed Roberts Bank Terminal 2
- ⊕ Major Rail Lines

5.5 Major Facilities and Assets

The Port consists of 28 major marine cargo and passenger terminals, and connects with three Class 1 railroads and one local railroad, providing a full range of facilities and services to the international and domestic shipping community. These terminals service the following business sectors:

Automobiles

Port Metro Vancouver handles approximately 400,000 vehicles annually, making the port one of the top three ports on the west coast of North America for vehicle transshipment. As the most efficient Gateway for automobiles from Asia that are destined for Canada, Port Metro Vancouver currently 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.

Breakbulk

Port Metro Vancouver is the major consolidation centre on Canada's west coast for breakbulk cargo such as forest products, steel and machinery. In 2013, 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 product exports, and pipe, steel, machinery and project cargo imports on Canada's west coast.



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 the availability of diverse western Canadian commodities for export. The Port also has substantial imports of bulk products including petroleum products, concentrates, salt, gravel and aggregate, and phosphate rock.

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.
- 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 bleaching paper products, as well as acid used in a variety of industrial processes.
- Cargill is a grain terminal located on the north shore of Burrard Inlet, operated by Cargill Ltd., that handles wheat, canola, barley and grain byproducts.
- Cascadia is a grain terminal located on the south shore of Burrard Inlet, operated by Viterro Inc., which handles wheat, canola, barley, rye, oats and byproducts.
- 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 and handles breakbulk, agricultural products, the import and export of containers, and project cargoes.
- Imperial Oil Terminal is a petroleum terminal located in the eastern end of Burrard Inlet. 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, and jet fuel, all transported via the Trans Mountain pipeline system.
- Lantic Inc. (Rogers Sugar) terminal is located on the south shore of Burrard Inlet and 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 steelmaking and thermal coal, phosphate rock, potash, animal feed and canola oil.
- Pacific Coast Terminals is located in Port Moody. It currently handles sulphur, ethylene glycol, and is considering handling additional bulk products, such as canola oil and potash.
- Pacific Elevators is located on the south shore of Burrard Inlet and is operated by Viterro Inc. It handles canola, flax, peas, and various bulk manufactured agri-forage and byproducts.
- Richardson International grain terminal, 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 isooctane.
- Suncor Energy's Burrard Products Terminal is located in Burnaby and handles petroleum products.
- 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 animal fats and recycled vegetable oils, canola oil, protein meals and animal feed products.
- Westshore Terminals is located at Roberts Bank in Delta and is a major metallurgical steelmaking and thermal coal terminal.

Container

The Port offers four common-user container terminals with extensive on-dock rail facilities. In 2013, container cargo accounted for approximately 20 per cent of the Port's annual tonnage throughput.

Container Terminals

- Centerm, located on the south shore of Burrard Inlet, operates six gantry cranes on two berths, on-dock rail facilities and an advanced operating system that tracks a variety of containerized cargo in real time.
- Vanterm, located on the south shore of Burrard Inlet has six gantry cranes and is operated by TSI Terminal Systems Inc. It has on-dock rail facilities for containerized cargo, and handles containerized cargo, project cargo and bulk oils from the adjacent West Coast Reduction facility.
- Deltaport, with 10 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 or 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.

Container Handling Facilities

The 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.

Facilities within Port Jurisdiction

- » Acklands-Grainger
- » Coast 2000 Terminals Inc.
- » Columbia Containers
- » ContainerWorld
- » Damco
- » Delcan
- » Euro Asia Transload Inc.
- » HBC Logistics
- » International Forest Products
- » Kindersley Transport
- » Kintetsu Worldwide
- » Kuehne & Nagel
- » Mazin Furniture
- » Mountain View Reload Inc.
- » Nippon Express Ltd.
- » Nordel Transload
- » Pacific Reload
- » Pro West Transport
- » Simard
- » TMS Transportation/Rabanco
- » Tolko Industries Ltd.
- » Transource
- » Western Canada Express
- » Western Navigation
- » Westran Intermodal Ltd
- » YRC Logistics

Container Storage and Maintenance Facilities

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

Cruise

As the home port for the Vancouver-Alaska cruise industry, Port Metro Vancouver welcomes hundreds of thousands of passengers annually. In 2013, primarily at Canada Place, the Port welcomed 812,398 passengers on 235 calls by 29 cruise ships, a 22 per cent increase in passengers over 2012.

Cruise Terminals

- 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 redeveloped for other uses.



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

5.6 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 2011, 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.

Jobs in Canada	Wages	GDP	Contributed to Canada's economy
98,800	\$6.1 b	\$9.7 b	\$20.3 b

DID YOU KNOW?



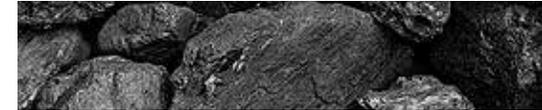
Forest Products

Forest products are exported to over 100 trading partners globally, led by China, Japan and the United Kingdom. Canada's forest products industry is a \$58 billion dollar a year industry that represents 9 per cent of Canada's manufacturing GDP. Forest products are processed and manufactured items ranging from logs to fabricated structural materials such as lumber, strand board, and panels, as well as commodities like wood pulp and wood pellets.



Wheat

Wheat is exported to over 30 trading partners globally, led by Japan, China and Indonesia. Wheat crops contribute \$11 billion annually to Canada's economy. Wheat is one of the world's most favoured staple foods, currently second only to rice as a main human food crop. Canadians and our trade partners rely on wheat for making common household foods such as bread, pasta, pizza and noodles, as well as for feeding livestock. Nearly all of the Port's wheat exports are loaded into vessels as dry bulk cargo, with a small amount exported in containers.



Coal

Coal is exported to five of the world's seven continents, with South Korea, China and Japan as top destinations. Canada is the third-largest exporter of steelmaking coal behind Australia and the United States. Canadian metallurgical coal is among the highest quality in the world. It is used primarily in the manufacture of steel to make construction materials like pipes and beams, as well as automobiles. Thermal coal is used mostly for energy generation in coal-fired electrical plants.

Forecasted Increase
in Trade (2011–2018)

38%

As illustrated in the figures to the right, forecasts indicate that 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 facilitate and manage the anticipated growth will depend largely on its ability to develop the required additional 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 considers the interests of local communities. The Land Use Plan provides strategic guidance to ensure that the Port is prepared to accommodate that growth so Canadians can continue to benefit from the resulting economic activity.

Figure 7: Port Metro Vancouver Trade Forecast

Sector (million tonnes)	2011	2012	2013	2014F	2015F	2016F	2017F	2018F
Auto Carrier	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3
Breakbulk	3.8	3.9	3.5	3.8	4.0	4.2	4.4	4.6
Container	21.7	23.0	24.8	25.1	26.4	27.8	29.1	30.5
Liquid Bulk	7.3	8.2	8.6	8.9	9.3	9.7	9.9	10.4
Dry Bulk	62.5	61.4	68.3	69.7	74.9	81.4	88.4	94.5
Domestic*	26.9	27.1	29.3	27.4	27.8	28.4	28.7	29.1
Total Cargo	122.5	123.9	135	135.3	142.7	151.7	160.8	169.5
Cruise ('000s passengers)	663	666	812	816	840	875	890	905
Auto ('000s units)	298	384	379	317	324	318	311	319

*Domestic cargo means both the cargo's origin and destination are in Canada. Cargo is moved from one Canadian location to another Canadian location.

Figure 8: Port Metro Vancouver Trade Forecast

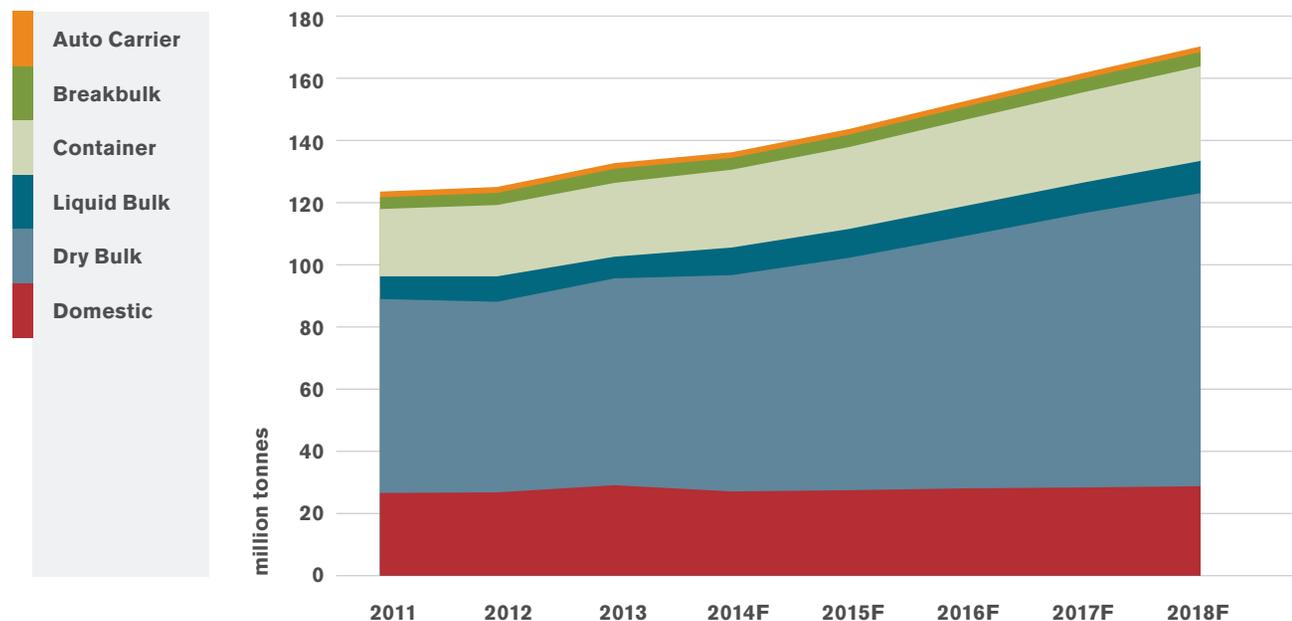
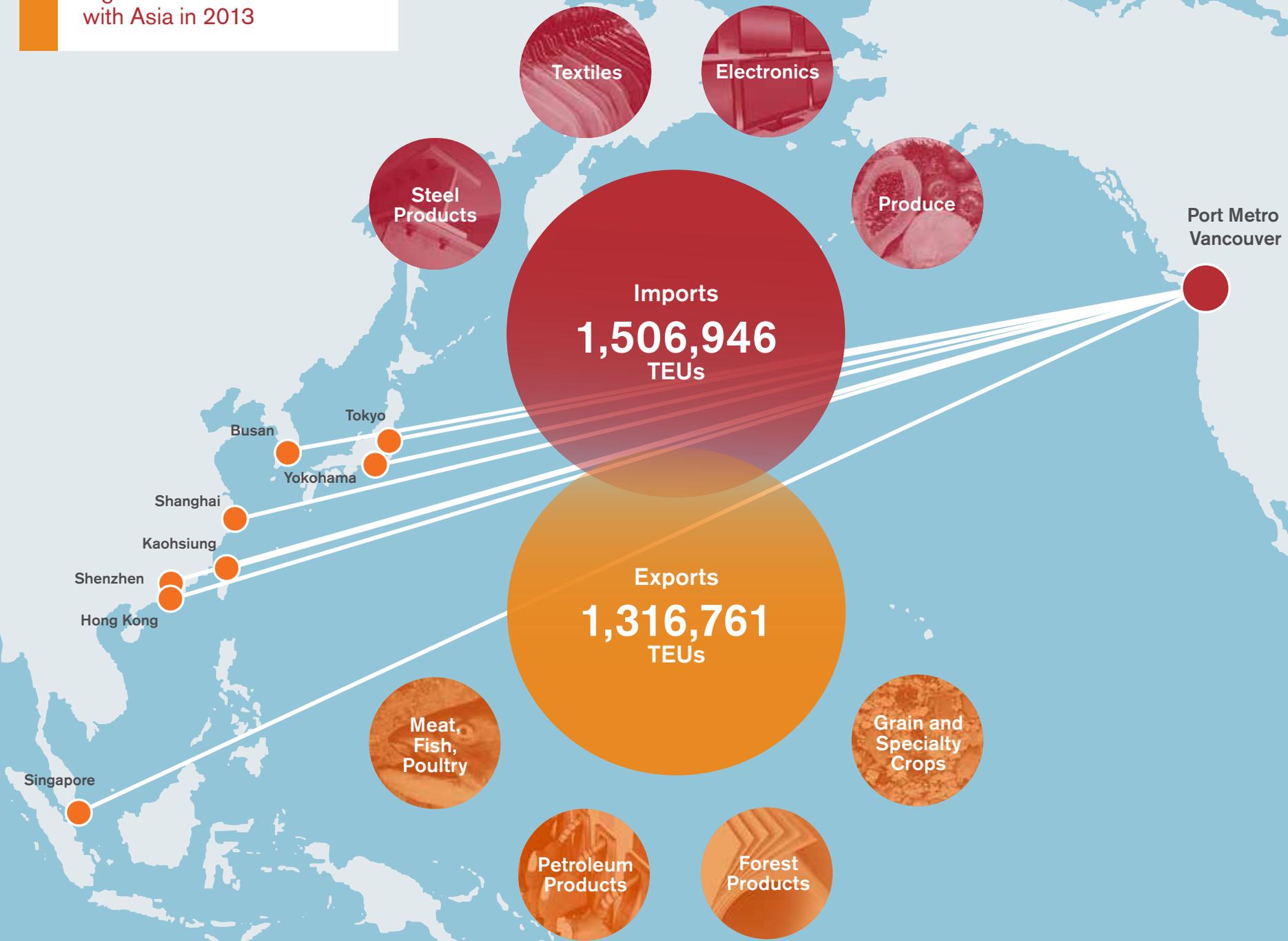


Figure 9: Container Trade with Asia in 2013



Note: This graphic does not include all of Port Metro Vancouver's trading partners.

Major Capacity Initiatives Underway

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

Container Terminal Capacity Improvements

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 twenty-foot equivalent units (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 8.6). The proposed Roberts Bank Terminal 2 Project is a 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 permitting and environmental approvals, the project could be fully operational by the early 2020s.



Terminal Improvements

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, and the addition of phosphate rock imports within their existing site footprint.

Westshore Terminals at Roberts Bank has undertaken similar work to increase capacity for handling coal. Several of the grain terminals in Burrard Inlet are expanding or upgrading their existing facilities and replacing aging equipment to improve operational efficiencies.

On the marine side, Chevron in Burnaby recently completed dredging its ship and barge berths to accommodate greater vessel drafts and full loading of double-hulled vessels. While the maximum size of vessels calling on their Burnaby terminal will not increase, Chevron now has 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 that 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 Streets in Vancouver.
- The more than \$300 million invested by 12 different government, industry and agency partners into the nine Roberts Bank Rail Corridor grade separations.

Through a collaborative approach to planning and development, the Port will continue to manage growth in partnership with interested parties to respond to forecasted demand.



5.7 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 last three decades: approximately 7,400 acres of industrial land in the region has been redesignated for other uses such as residential and commercial during this period. Combined with industrial market absorption, this results in a dwindling supply of market-ready lands available for new investment in industrial activities that directly or indirectly support Canada's trade. Research suggests that the current inventory of market-ready industrial lands is sufficient to meet demand for only about 8 to 15 years, depending on a variety of factors.

Port Metro Vancouver owns approximately 3,600 acres of land, most of which is occupied. Only about 200 acres of undeveloped land remain under Port Metro Vancouver's jurisdiction. Recent studies indicate that the Vancouver Gateway will need approximately 2,300 additional acres by 2025 to meet increasing cargo demand.

One way to respond to this demand is to use the region's industrial lands more intensively. Research is underway to look at how this might be achieved in port and non-port settings. For port lands, more intensive use is generally achieved through better site utilization, investments in equipment and operating procedures that increase throughput efficiency, and increased transportation capacity. In some cases, innovative building and design solutions appropriate to an industrial setting can also result in increased efficiency. The Deltaport Terminal, Road and Rail Improvement Project is an example of how the Port is increasing operational efficiencies and improving existing infrastructure to handle more cargo on existing port lands.

As former industrial lands in neighbouring municipalities are redeveloped for 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 and to design communities 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.

The successful preservation of industrial lands will depend on the decisions of all jurisdictions that have authority over land use in the region. It is vital that all such authorities work together to ensure that adequate protection is put in place to protect remaining industrial lands and jobs, and to provide an adequate industrial land base for future generations. In particular, the Port is seeking to protect industrial land through an "Industrial Land Reserve" that would protect existing industrial lands, help balance land use decisions and explore innovative ways to establish new lands for growing industries.

Port Metro Vancouver supports ongoing efforts to identify strategies that provide effective protection of the industrial land base. The Port will continue to provide input to municipal and other planning processes that may impact the industrial land supply, and engage the region in a constructive and meaningful dialogue to find solutions to this critical challenge.

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.





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GOALS

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

Looking forward over the next 15 to 20 years, growth is forecast across most port business sectors. 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 available lands. While various land uses within the region – such as commercial, industrial, residential, and agricultural – are interdependent, 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 that intensified use may have on adjacent communities, transportation networks and the environment, and mitigating resulting impacts where appropriate.

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 with local governments and agencies, where appropriate, to anticipate and respond 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 that delivers goods from origin to destination. For a port tenant or terminal operator to be able to effectively deliver this service, port lands and waters 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 that 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 land use and 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 with incorporating 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 are 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 Avoid or 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 on environmental initiatives and in the monitoring, protection and enhancement of 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 greenhouse gases 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 reviews 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, construction, operation, 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 for 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 such as noise, traffic congestion and environmental impacts. The Port endeavours to address these challenges in consultation with neighbouring communities and First Nations 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 public use, safety and enjoyment of foreshore and intertidal areas.

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 are identified and appropriately avoided, 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 ongoing 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 Ensure potential impacts from port developments and activities on archaeological resources are identified and appropriately minimized and/or mitigated through a Project Review Process that solicits and incorporates input from First Nations.

4.3.5 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 to 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 publicly available information on 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.

7.0 Land Use Plan Designations

Port Metro Vancouver's Land Use Plan includes eight land use designations that are consistent across the Port's jurisdiction, each having a specific intent and list of associated uses. A set of detailed land use designation maps is available on Port Metro Vancouver's website.

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. The designations apply to all lands and waters within the Port's jurisdiction, and identify the types of uses that may be considered on each site. For administrative purposes, land use designations generally extend to the navigation channel. However, the actual water area available for development and vessel moorage will vary and may be restricted by local water depth, environmental and navigational considerations, and other factors. All developments and activities proposed within the Port's jurisdiction are subject to the Port's Project Review Process and approvals, and must be consistent with the uses permitted under the *Canada Marine Act* and the Port's Letters Patent.

LAND AND WATER DESIGNATION CHARACTERISTICS

The land and water designations have the following characteristics:

- **Applicable to all areas:** the designations apply to all lands and waters within the Port's jurisdiction.
- **Provide flexibility:** the designations indicate the general use of a site while identifying other potential uses on a primary, ancillary or conditional basis.
- **Clear and accurate mapping:** the system of designations 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 the Port's Letters Patent.



7.1 Land Use Policies

The following are land and marine use policies that apply to all areas of the port.

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, subject to applicable regulations and guidelines.

Utilities and Telecommunications

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

- Utility uses include electrical, 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.

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. All recreational docks will be reviewed on a case-by-case basis and will be subject to the Port's recreational dock policies and guidelines. Port Metro Vancouver will also consider the applicable policies of the upland 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) it is a replacement of an existing float home; or 2b) it 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. Note: after 2014, the Province of British Columbia will resume responsibility for managing the provincial bed of the Fraser River.

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 may be considered, as appropriate, on individual sites to support the primary use.

CONDITIONAL USE is a use that may be 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's determination of their appropriateness in a given context.

7.2 Land Use Designation Descriptions

Each land use designation is described below. These include designations that relate to both land and marine uses. Primary and conditional uses associated with these designations are outlined in Figure 10.

Port Terminal

Port Terminal areas are primarily designated for deep-sea and marine terminals that handle a variety of commodities, including autos, breakbulk, dry bulk, liquid bulk and containers, as well as cruise passengers. This includes primary uses that support shipping, transportation of goods and passengers, handling of goods, and other uses. Ancillary uses may include offices, storage areas, caretaker facilities, utilities, parking and other uses required to support the primary use.

Industrial

Industrial areas are primarily designated for light to heavy industrial activities in support of port operations and marine support services, including shipping, transportation and the handling of goods, and in some cases including the manufacturing of goods. Primary uses may include intermodal yards, container storage facilities, transloading facilities, ship repair and barge moorage activities. Ancillary uses may include offices, storage areas, caretaker facilities, utilities, parking and other uses required to support the primary use.

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. Primary uses in the Commercial designation may include marinas, float plane terminals, warehouses, and tourism-related businesses. Ancillary uses may include offices, storage areas, caretaker facilities, utilities, parking and other uses required to support the primary use.

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 and New Brighton Park in Vancouver, and the public viewing platforms on the south side of Queensborough in New Westminster.

Conservation

Conservation areas are primarily designated for habitat conservation, enhancement, restoration, banking and similar uses, and may be publicly 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 that are generally intended for shipping, navigation and anchorages.

Special Study Area

Special Study Areas are sites 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.

Figure 10: Primary and Conditional Uses

The following figure outlines the primary and conditional uses associated with each land use designation. Note that this figure does not provide an exhaustive list of all potential activities that could be considered under this Land Use Plan within a given designation.

		Port Metro Vancouver Land Use Designations							
		Port Terminal	Industrial	Commercial	Log Storage and Barge Moorage	Recreation	Conservation	Port Water	Special Study Area
		Primary Uses	Conditional Uses						
		Terminal (Auto, Bulk, Breakbulk, Liquid Bulk, Containers, Cruise)							
		Transportation of Passengers							
		Intermodal Yard							
		Shipping and Transportation of Goods							
		Materials Processing and Manufacturing							
		Tug and Barge Operations							
		Log Processing							
		Marine Support Services							
		Warehousing and Distribution Centres							
		Marinas							
		Float Plane Terminals							
		Tourism-related Businesses							
		Log Storage							
		Booming Grounds							
		Barge Moorage							
		Boat Moorage							
		Public Parks							
		Public Recreation Areas							
		Public Wharves							
		Conservation Areas							
		Habitat Compensation							
		Habitat Restoration							
		Habitat Banking							
		Shipping (General)							
		Navigation							
		Commercial Anchorages							
		Existing Use							

8.0 Planning Areas

Port Metro Vancouver's lands and waters are organized into seven 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 Plan maps are available on Port Metro Vancouver's website.



Figure 11: Planning Areas

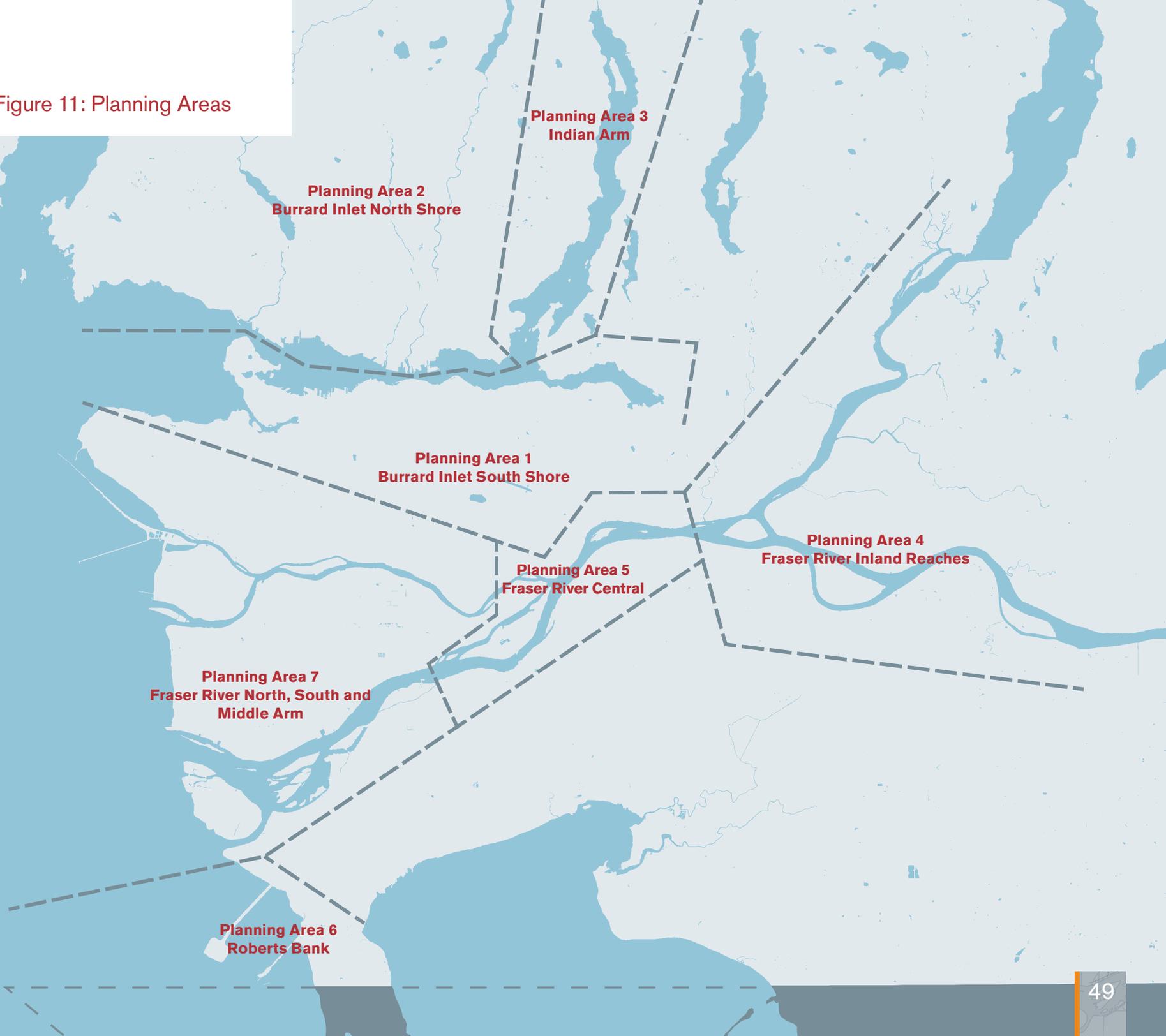


Figure 12: Planning Area 1 Burrard Inlet South Shore



- First Nation Reserves
- Water outside of Port Metro Vancouver Management Jurisdiction

Land Use Designations

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

For detailed Land Use Plan maps, please visit Port Metro Vancouver's website.

8.1 Planning Area 1

Burrard Inlet South Shore

Burrard Inlet South Shore 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 Boundary Road and Commissioner Street to McGill Street in Vancouver. This sub-area has its own area plan containing specific policies related to port development.

Planning Area 1, along the south shore of Burrard Inlet, borders the municipalities of Vancouver, Burnaby and Port Moody, and the reserve lands of the Squamish Nation.

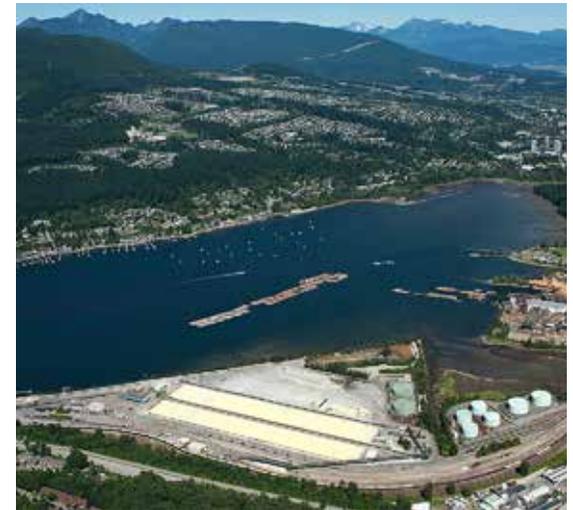
In 2013, the area handled over 30 million metric tonnes of cargo and over 812,000 cruise passengers. Major terminals along the South Shore include Canada Place, Centerm, Vanterm, Cascadia, Stanovan, Shellburn, Kinder Morgan Westridge, Burrard Products Terminal and Pacific Coast Terminals. Collectively, these terminals move cruise passengers, containers, dry bulk, liquid bulk, and breakbulk cargo. The area is connected to the main Canadian Pacific Railway (CP) corridor, with access for Canadian National Railway (CN) and Burlington Northern Santa Fe Railway (BNSF), and regional truck routes to the rest of Canada.

The South Shore 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 the region 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.



The South Shore is one of the major trading areas in Port Metro Vancouver and benefits from a deep-sea shipping channel.

Figure 13: Planning Area 2 Burrard Inlet North Shore



- First Nation Reserves
- Water outside of Port Metro Vancouver Management Jurisdiction

Land Use Designations

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

For detailed Land Use Plan maps, please visit Port Metro Vancouver's website.

8.2 Planning Area 2

Burrard Inlet North Shore

The North Shore extends from the southeast area of Ambleside Park in West Vancouver to Cates Park/Whey-ah-Wichen in the District of North Vancouver.

Planning Area 2, along the north shore of Burrard Inlet, borders the District of West Vancouver, the City of North Vancouver, the District of North Vancouver, and the reserve lands of the Squamish and Tsleil-Waututh Nations.

This Planning Area borders a deep-sea shipping channel and is one of the major trading areas in the port. In 2013, the North Shore handled over 23 per cent of all cargo volume through the port, 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. It also provides important import services for products such as metal concentrates, phosphate rock, petroleum products, salt, steel, pipe and project cargo.

Major terminals and industrial activities in this area include Richardson International, Cargill, Neptune, Lynnterm, Univar Canada, Canexus, Vancouver Wharves, Fibreco, and Seaspan. Collectively, these terminals move project cargoes, dry bulk, liquid bulk and breakbulk products, and Seaspan Terminal provides various marine services including shipbuilding. There are some industrial

and commercial uses, anchorages, as well as conservation and recreation activities in the area. This area includes a main rail line for Canadian National Railway (CN).

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 the region 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 careful planning and collaboration between the Port and adjacent municipalities and First Nations.



In 2013, the North Shore handled over 23 per cent of all cargo volume through Port Metro Vancouver, and remains an integral connection for Canadian exports to overseas markets.

Figure 14: Planning Area 3 Indian Arm

First Nation Reserves
 Water outside of Port Metro Vancouver Management Jurisdiction

Land Use Designations

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

For detailed Land Use Plan maps, please visit Port Metro Vancouver's website.



8.3 Planning Area 3

Indian Arm

Planning Area 3 extends from Cates Park/Whey-ah-Wichen in the District of North Vancouver to the Indian Arm Estuary. Indian Arm is a natural fjord characterized by deep water, steep slopes and undeveloped upland forests.

The area borders the District of North Vancouver, the Villages of Belcarra and Anmore, Port Moody, Electoral Area A, and the reserve lands of the Tsleil-Waututh Nation.

A majority of the upland area in Indian Arm consists of local, regional and provincial parks. Cates Park/Whey-ah-Wichen, meaning “Facing the Wind”, and Indian Arm Provincial Park/Say Nuth Khaw Yum, named after the fierce serpent that once laid across the fjord, reflect the area’s rich First Nations history and culture. Indian Arm also includes two Metro Vancouver Regional Parks: Thwaytes Landing 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.



Cates Park/Whey-ah-Wichen, meaning “Facing the Wind”, and Indian Arm Provincial Park/Say Nuth Khaw Yum, named after the fierce serpent that once laid across the fjord, reflect the area’s rich First Nations history and culture.

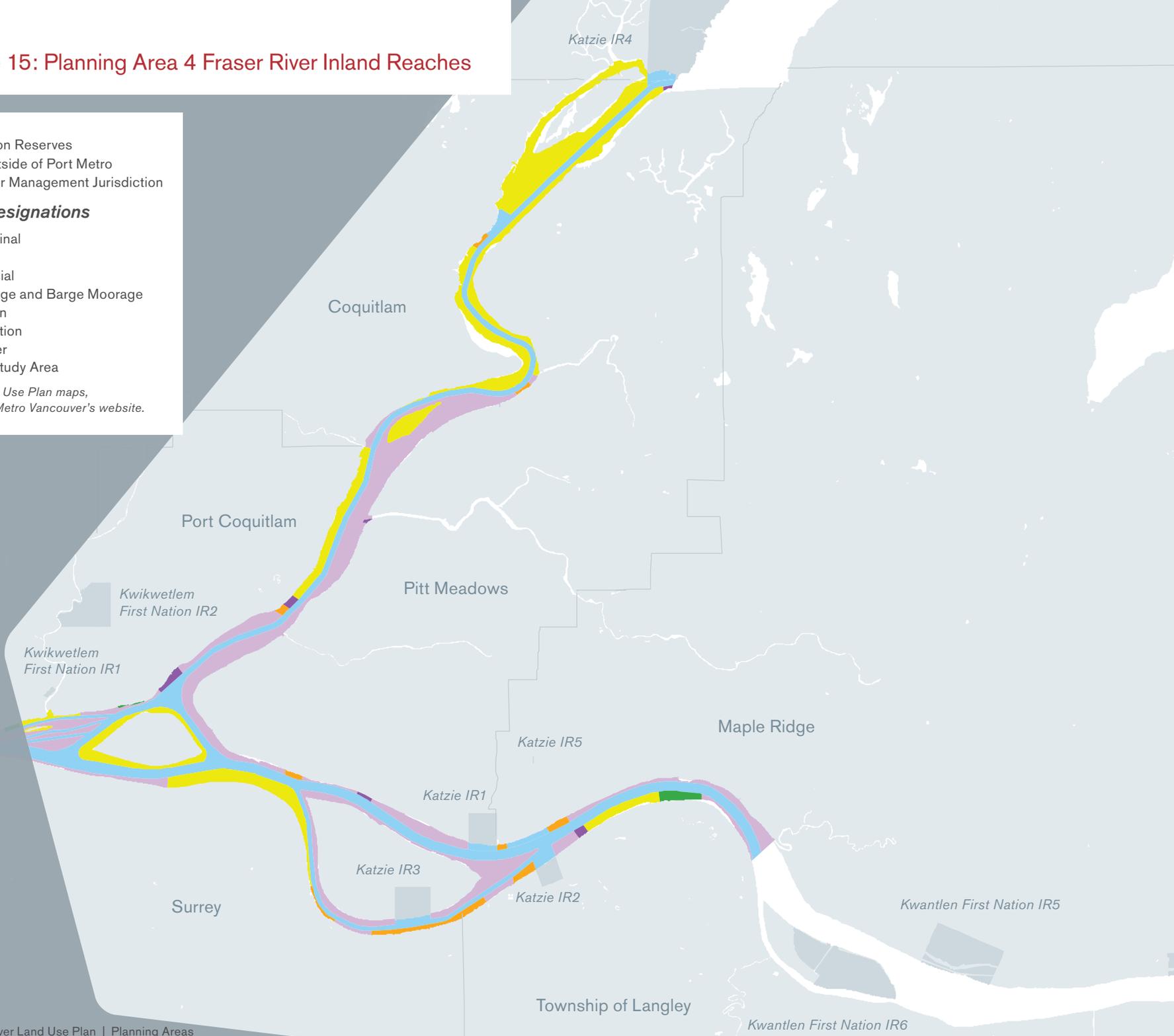
Figure 15: Planning Area 4 Fraser River Inland Reaches

First Nation Reserves
 Water outside of Port Metro Vancouver Management Jurisdiction

Land Use Designations

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

For detailed Land Use Plan maps, please visit Port Metro Vancouver's website.



8.4 Planning Area 4

Fraser River Inland Reaches

Planning Area 4 extends east from the Port Mann Bridge to Pitt River and Kanaka Creek in Maple Ridge.

The Inland Reaches in the Fraser River border the municipalities of Port Coquitlam, Pitt Meadows, Surrey, the Township of Langley, the District of Maple Ridge and the reserve lands of the Katzie First Nation.

The Fraser River Inland Reaches area mainly 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 the forest products moving through the Fraser River Inland Reaches include domestic logs and domestic woodchips. Other forest products include lumber, pulp, and paper which are moved in containers or as breakbulk through other terminals.

Figure 16: Planning Area 5 Fraser River Central

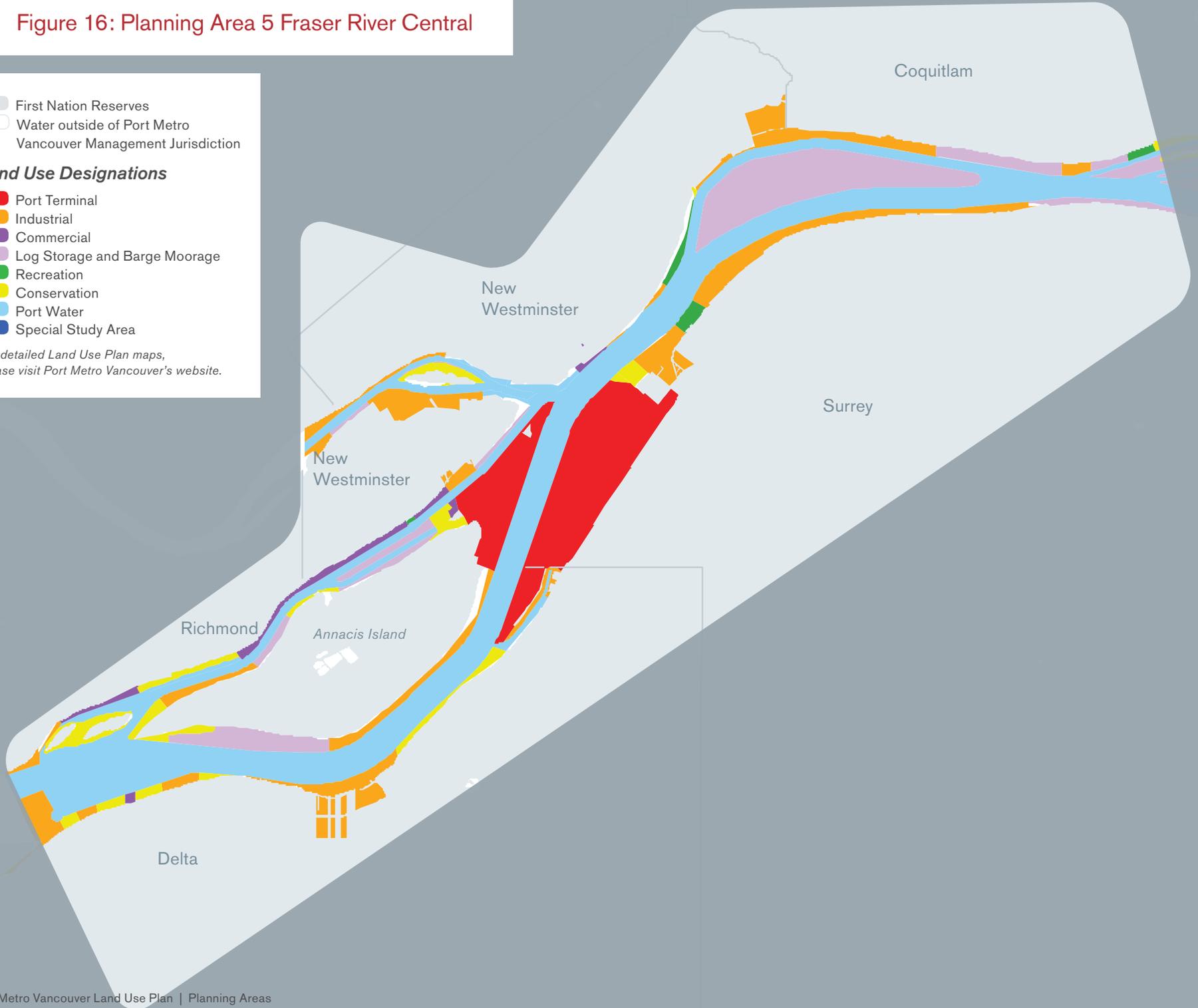
Legend:

- First Nation Reserves
- Water outside of Port Metro Vancouver Management Jurisdiction

Land Use Designations

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

For detailed Land Use Plan maps, please visit Port Metro Vancouver's website.



8.5 Planning Area 5

Fraser River Central

Planning Area 5 extends from approximately three kilometres 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.

Fraser River Central borders the municipalities of Richmond, Delta, New Westminster, Surrey and Coquitlam. The western 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 also a wide variety of port-related industrial and commercial uses such as barge moorage, ship repair, shipbuilding, marinas, fuelling facilities, log storage and river-related commercial activities. Conservation and recreational uses also exist throughout this area.

As potential growth becomes limited in the Burrard Inlet North and South Shore Planning Areas, it is possible that more upland and foreshore areas of Planning Area 5 will be developed to accommodate port-related activities, particularly if the navigational draft increases.

It is likely that there will be further intensification of port-related industrial uses on existing sites, particularly as industrial lands in the region 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 increase the potential for conflicts between port-related and non-industrial uses in the community. Solutions will require careful planning and collaboration between the Port and adjacent municipalities and First Nations.



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 cargo sectors.

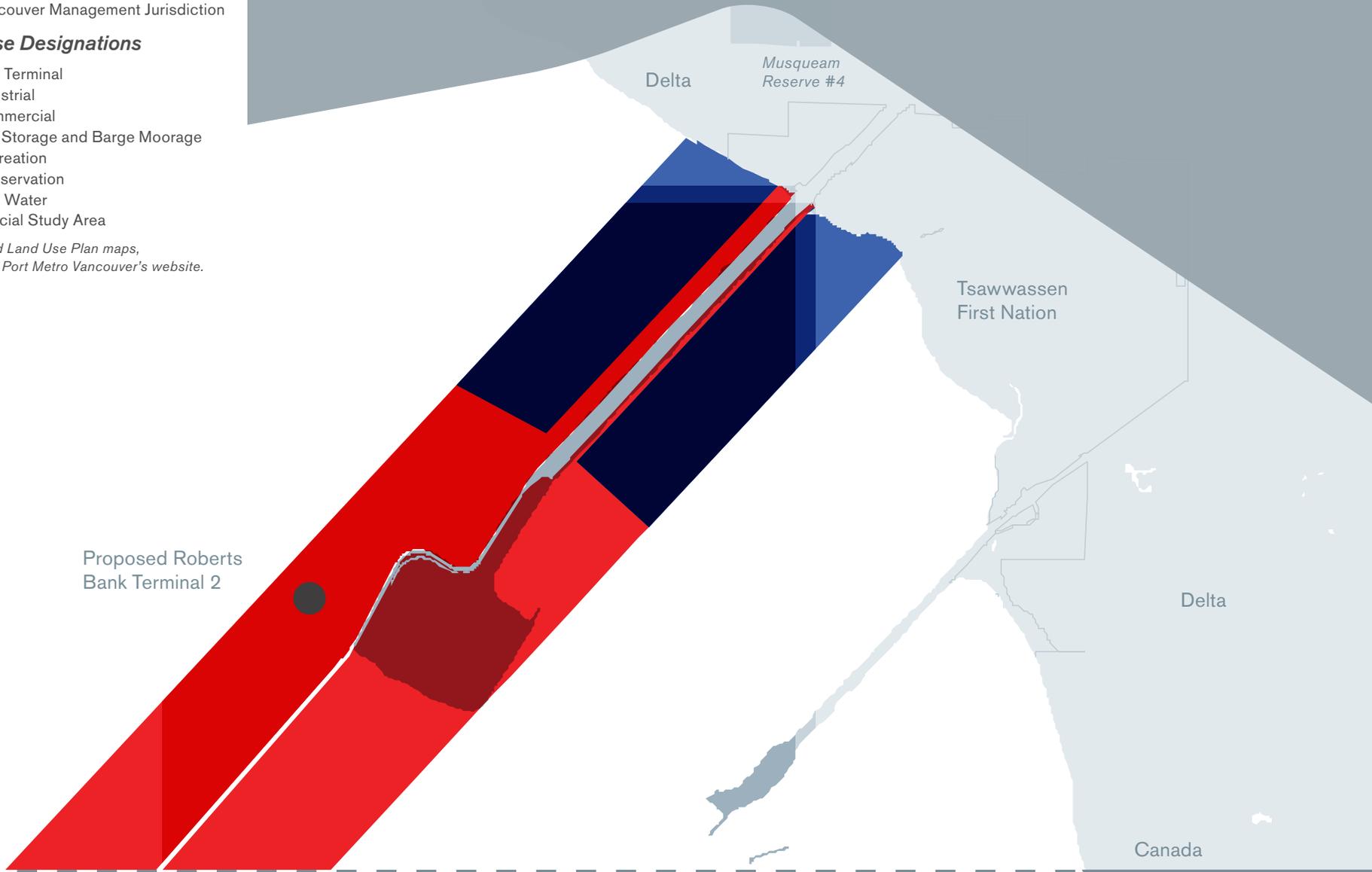
Figure 17: Planning Area 6 Roberts Bank

- First Nation Reserves
- Water outside of Port Metro Vancouver Management Jurisdiction

Land Use Designations

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

For detailed Land Use Plan maps, please visit Port Metro Vancouver's website.



8.6 Planning Area 6

Roberts Bank

Planning Area 6 in Roberts Bank extends into the Strait of Georgia from the foreshore of the Corporation of Delta and the Tsawwassen First Nation 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 1960s, expanded in the 1980s, and expanded further by the Port in 2009 with the Deltaport Third Berth project.

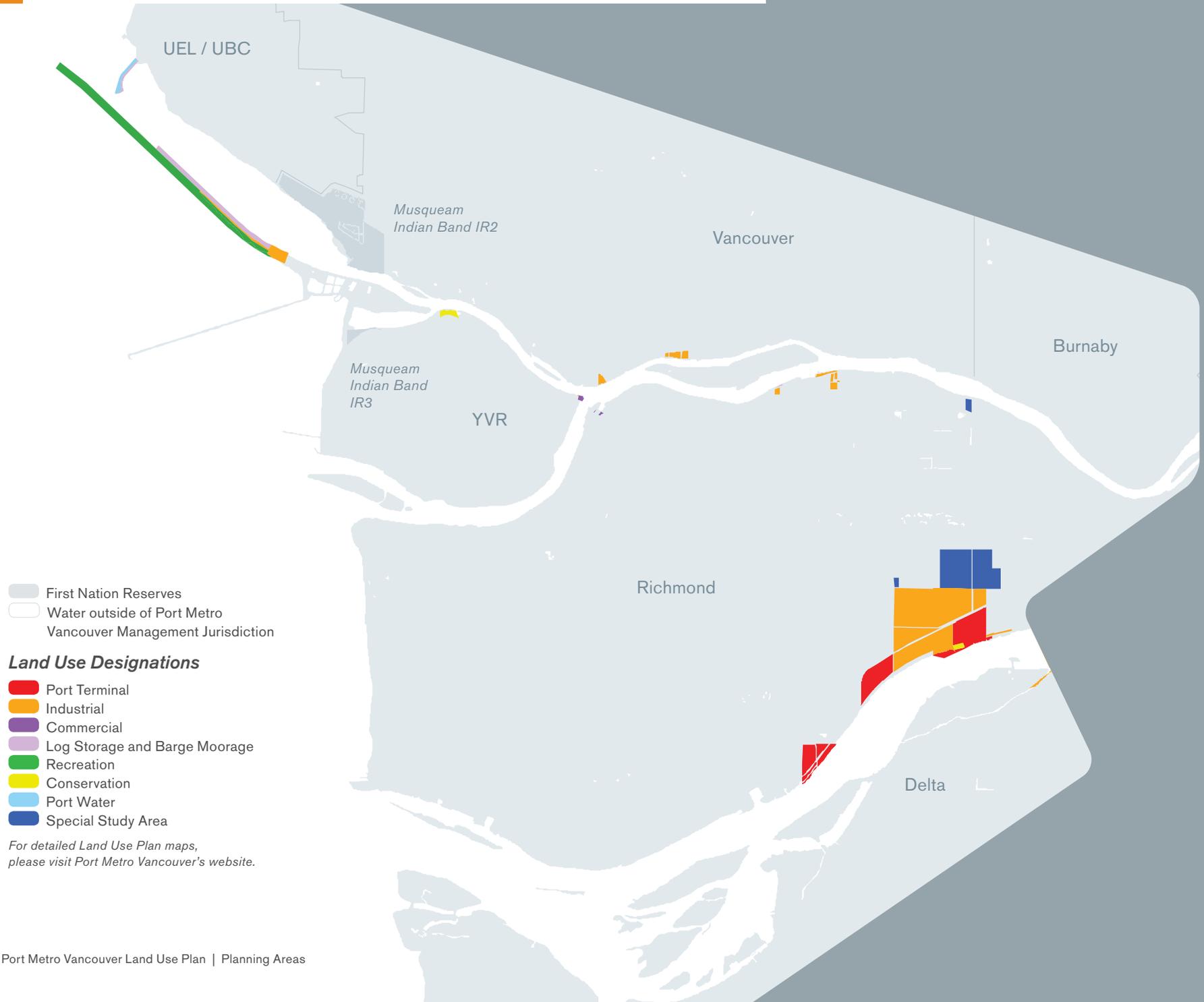
Roberts Bank is one of the main trading areas of the Port, and contains one of the Port's largest bulk facilities, Westshore Terminals, and its largest container terminal, Deltaport. In 2013, over 43 million metric tonnes of container and bulk cargo flowed through Roberts Bank. It is served by a rail and road system that connects to major regional, national and United States rail and 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 (CCIP), a long-term strategy to deliver projects to meet anticipated growth in container capacity demand through a series of terminal road and rail improvements. This Planning Area also includes the proposed new container terminal known as the Roberts Bank Terminal 2 project that would significantly expand container capacity 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. Current projections indicate approximately four million TEUs (twenty-foot equivalent units) of additional capacity will be needed to meet Canada's west coast container demand by 2030.

Figure 18: Planning Area 7 Fraser River North, South and Middle Arm



8.7 Planning Area 7

Fraser River North, South and Middle Arm

Planning Area 7 extends from the North Arm Jetty and Sturgeon Bank to the north end of Boundary Road in New Westminster, and from the Sand Heads to just east of Tilbury Island.

This Planning Area in the North, South (also referred to as the Main Arm) and Middle Arms of the Fraser River borders The University of British Columbia, Vancouver International Airport (YVR), the municipalities of Vancouver, Richmond, Burnaby, Delta and 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 are included within a Head Lease with the Province of British Columbia until the end of 2014. After 2014, the Port maintains navigational jurisdiction in these waters, and still holds a number of properties in the upland to support trade activities. Future use of these lands is likely to be similar to current uses, although more intensive use of sites on the South Arm can be anticipated to support the growth in Canada's trade.

The Fraser Richmond port lands, including the Richmond Logistics Hub, is a 700-acre industrial area with excellent transportation access, through CN Rail, the Fraser River, arterial roadways and major highways. This area forms a strategically-located logistics and distribution hub important for the efficient movement of goods to and from the Lower Mainland's four container terminals (Deltaport, Vanterm, Centerm, and Fraser Surrey Dock). As one of the most significant off-dock industrial areas in the Lower Mainland, the Fraser Richmond port lands has some of the highest volumes and most concentrated drayage truck activity in the region. This planning area includes terminal sites capable of supporting substantial growth in trade activity.



After 2014, the Province of British Columbia will resume responsibility for managing the waters and foreshore lands associated with the provincial bed of the Fraser River. The Port will maintain navigational jurisdiction and will continue to hold a number of upland properties to support trade activities.

9.0 Project and Environmental Review

The project and environmental review 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, and sometimes a Port Building Permit. All works on Port lands and waters must be reviewed under the Port's Environment Policy even if a Project Permit is not required.

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.

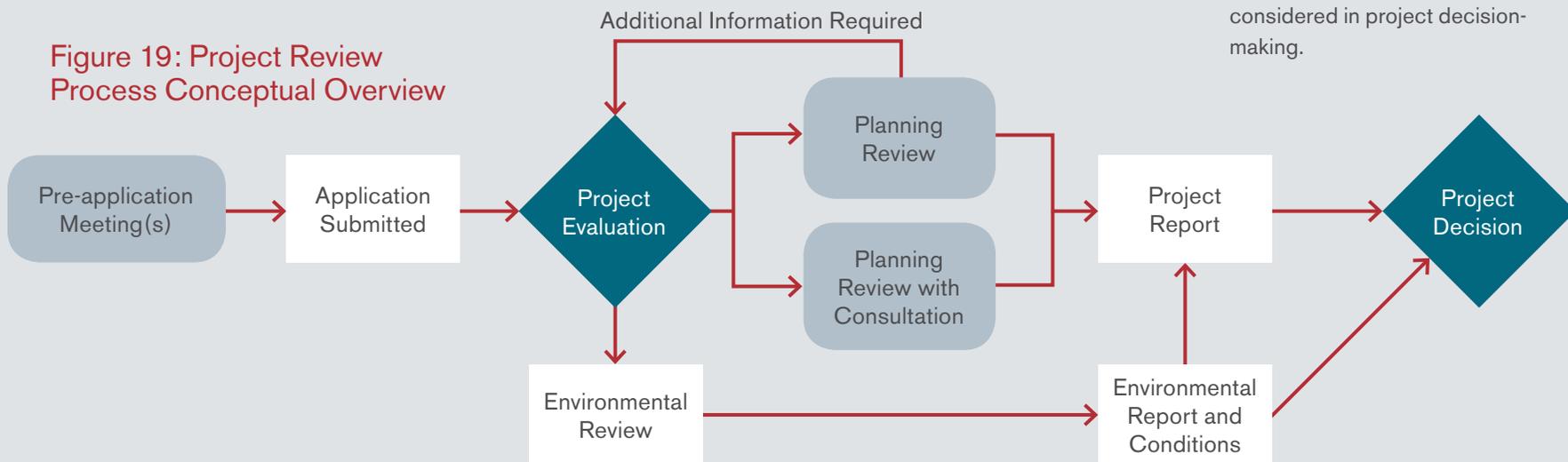
The Project Review Process also determines the necessary consultation requirements, which may include referring the project to relevant local governments, First Nations, and/or stakeholders for review and comment, as well as other consultation activities depending on the project's scope and scale, and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

Any such requirements will be identified by the Port during either the pre-application discussions or the Project Review Process.

The Project Review Process ensures that:

- 1) All applicable projects and proposals in the Port's jurisdiction or authority are reviewed, whether they are led by the Port, tenants or others.
- 2) The Process includes planning best practices and environmental reviews mandated under legislation.
- 3) Potentially impacted local communities, First Nations, stakeholders, customers and tenants are consulted and their comments are considered in project decision-making.

Figure 19: Project Review Process Conceptual Overview



Note: A review of the Project Review Process is underway and may result in updates to the process.

9.2 Environmental Review

Under the *Canadian Environmental Assessment Act, 2012 (CEAA)*, Port Metro Vancouver is a federal authority responsible for assessing non-designated projects.

To fulfill its legal responsibility under the CEAA, the Port maintains an environment policy that outlines how to perform environmental reviews.

The Port's Environment Policy requires that all projects and activities that could have an effect on the lands and waters within the Port's jurisdiction undergo an environmental review, and that potential environmental effects are identified, evaluated, avoided and/or mitigated.

The Port's Environment Policy ensures that:

- 1) The Port reviews all projects and proposals in the Port's jurisdiction that are not "designated" projects under the CEAA.
- 2) The Port must not carry out a project on federal lands, or exercise any power or perform any duty or function that would permit a project to be carried out, in whole or in part, on federal lands, unless the Port first determines that the carrying out of the project is not likely to cause significant adverse environmental effects.



Under the *Canadian Environmental Assessment Act, 2012*, the Port must not make any decisions or carry out any non-designated projects unless the Port determines the project is not likely to cause significant adverse environmental effects.

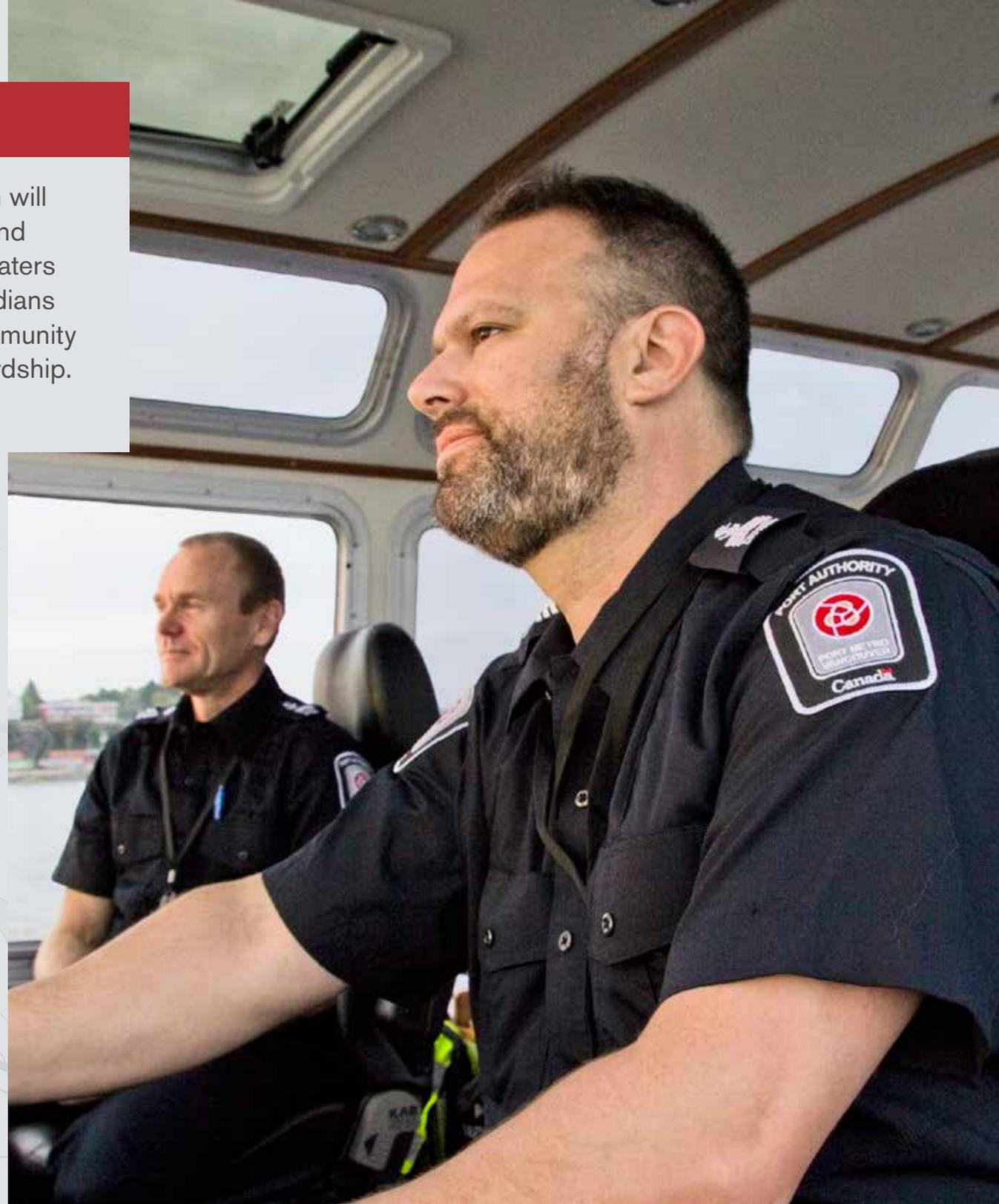
10.0 Implementation

Port Metro Vancouver's Land Use Plan will help guide and manage the planning and development of the Port's lands and waters 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 has primary responsibility 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 Section 10.3, and the measures 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 and Environmental Review Processes will continue to be key mechanisms for evaluating and consulting on proposed developments within the Port's jurisdiction, guided by the policies and directions established by the Plan.



10.2 Role of Partners

Port Metro Vancouver's partners will play a crucial role in the implementation of the Land Use Plan. In some 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:

Terminal operators, customers and tenants

Through their operations, new projects, corporate initiatives and investments in the Gateway.

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 that a thriving port can offer.

Senior government and regional agencies

Through collaborative planning and delivery of infrastructure that supports efficient and effective port operation and sustainable growth.

Transportation service providers

Through the delivery of efficient and effective road, rail and water-based transportation infrastructure and services that enable fluid cargo movement in a manner that is sensitive to the impacts on host communities and supply chain requirements.

Neighbourhoods and individuals

Through engaging with the Port in ongoing and new initiatives, and being aware of the role the Port plays in the livability and prosperity of the region.

FRASER RIVER IMPROVEMENT INITIATIVE

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 the Fraser River. Port Metro Vancouver will lead this initiative with municipalities and Metro Vancouver, targeting derelict vessels and structures that pose a risk to the environment, wildlife or navigational safety on the Fraser River.

10.3 Implementation Measures

The measures identified below 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.

Figure 20 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.

Figure 20: Port Metro Vancouver Land Use Plan Implementation Measures

No.	Implementation Measure	Timeline			
		Short 2014-16	Medium 2016-18	Long 2018+	Ongoing
1	Explore and pursue initiatives with local governments, the Province of British Columbia 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 the 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 a Special Study Area in the Land Use Plan to determine their suitable long-term use. This review will include consultation with affected communities, governments, agencies and stakeholders prior to the associated amendments 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.				
8	Pursue a Designated Anchorage Area Pilot Project specific to pleasure craft, in partnership with the City of Port Moody.				

No.	Implementation Measure	Timeline			
		Short 2014-16	Medium 2016-18	Long 2018+	Ongoing
9	Participate in TransLink's initiative to prepare a Regional Goods Movement Strategy as part of its overall transportation plan.				
10	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.				
11	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.				
12	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.				
13	Apply Port Metro Vancouver's Air and Energy Action Initiative to promote leadership in energy conservation and the use of alternative energy and clean technology.				
14	Continue to implement the five-year Fraser River Improvement Initiative to address the removal of derelict vessels and structures that pose a risk to the environment, wildlife or navigational safety on the Fraser River.				
15	Prepare and implement sustainable development guidelines for developing on port lands and waters.				
16	Strengthen and implement practices through ongoing development of Port Metro Vancouver's environmental management system, in order to promote continuous improvement of the surrounding environment.				
17	Implement and maintain Port Metro Vancouver's Aboriginal Business Directory.				
18	Maintain and monitor Port Metro Vancouver's Community Investment Program.				
19	Update and implement the Port's guidelines for recreational docks.				

No.	Implementation Measure	Timeline			
		Short 2014-16	Medium 2016-18	Long 2018+	Ongoing
20	Develop and implement the Smart Fleet Trucking Strategy to improve the efficiency of port-related truck traffic.				
21	Develop archaeological review guidelines to assist in the review of development proposals.				
22	Evaluate and determine if the East Vancouver Port Lands Area Plan needs to be updated, in consultation with the Burrardview Community Association, the City of Vancouver and area residents.				
23	Implement a Municipal Outreach Program in order to proactively guide efforts to maintain and further develop Port Metro Vancouver's working relationships with local governments and Metro Vancouver.				
24	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.				
25	Complete an evaluation of the Port's Project Review Process.				

10.4 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 the 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.

10.5 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. Port Metro Vancouver will consider the need for a major review of the Plan five years after its adoption or last major update. The Port may also consider an earlier review of the Plan, should it be deemed necessary.

In order to keep the Plan relevant and to adjust to changing circumstances in support of the Mission and Vision of Port Metro Vancouver, amendments to the Plan may be required from time to time outside of the five-year major reviews of the Plan. An amendment to one element of the Plan may affect several other elements of the Plan, as they may be interdependent. Therefore, any proposed amendment will require a thorough assessment of the potential impacts on the balance of the Plan.

Amendment Process

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



Minor Amendments

Minor amendments would not have a substantive impact on the policies and directions of the Land Use Plan. These may include minor wording refinements, technical updates, or minor designation boundary amendments to reflect lease area adjustments. Consultation is generally not required for such amendments. Port Metro Vancouver will post information on minor amendments, and maintain an up-to-date version of the Land Use Plan, on Port Metro Vancouver's website.

Substantive Amendments

Substantive or major amendments to the Plan would have a significant impact on the policies and directions of the Land Use Plan. These may include changes to land use designations for specific sites, inclusion of new acquisitions or dispositions of land, or substantive revisions to goals, objectives and/or policy directions as set out in the Land Use Plan.

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. Port Metro Vancouver will post information on substantive amendments, and maintain an up-to-date version of the Land Use Plan on Port Metro Vancouver's website.

Port Metro Vancouver will consider the need for a major review of the Plan five years after its adoption or last major update. The Port may also consider an earlier review of the Plan, should it be deemed necessary.

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: 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 2 metres, relative to the Canadian Hydrographic Service 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 transferred into ships in bulk, such as grain, sulphur, coal and metal and mineral concentrates.

Environmental Review: A review and evaluation of the possible impacts that a proposed project may have on the environment.

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

Green House Gases (GHG) Intensity*: A ratio to express GHG impact per unit of physical activity or unit of economic value (e.g., tonnes of CO₂-equivalent emissions per unit of electricity generated, grams of CO₂-equivalent emissions per TEU, grams of CO₂-equivalent emissions per tonne-kilometre, tonnes of CO₂-equivalent emissions per tonne of product, tonnes of CO₂-equivalent emissions per dollar revenue).

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

Letters Patent: 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.

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

Moorage: A specific location in the water where vessels such as ships, boats and barges are able to tie up at a berth or anchorage.

Off-Dock: Non-marine facilities that assist and extend a port's container and cargo-handling capability by shifting and performing services such as temporary storage, customs clearance and transloading of containers, containerized cargo and general cargo away from the port's main areas of marine and ship-handling activity. Off-dock facilities tend to be located in or near major cities and are typically well connected by road and rail, which facilitates the transfer of containers from the facilities to the seaports and vice versa.

Project Cargo: Cargo that is destined for major resource and energy construction projects in Western Canada. Typically they are overweight and/or over-sized cargoes.

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

Smart Fleet Trucking Strategy: Port Metro Vancouver's Smart Fleet Trucking Strategy 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, float plane or other floating craft.

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

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

Acknowledgements

Port Metro Vancouver would like to thank the following organizations and many other members of the community who participated and contributed to the development of this Land Use Plan.

ADESA Vancouver	Canadian Wildlife Service	Environment Canada	Ministry of Forest, Lands and Natural Resource Operations	British Columbia
Against Port Expansion (APE) Community Group	Canpotex Ltd.	Eric Vance & Associates	Musqueam Indian Band	Squamish Nation
Agricultural Land Commission	Catalyst Paper	Fisheries and Oceans Canada	Nature Canada	Sto:lo Tribal Council
Amix Group	Catherwood Towing Ltd.	Forrest Marine Ltd.	Nature Guides BC	Surrey Environmental Partners
Ashcroft Terminal	CBRE Limited	FortisBC	Nature Vancouver	Teck Coal Ltd.
Barclay Sound Services Ltd.	City of Burnaby	Fraser Health Authority	Neptune Terminals	TELUS
BC Ministry of Agriculture	City of Coquitlam	Fraser River Coalition	New Westminster Chamber of Commerce	Terminal Forest Products
BC Ministry of Community, Sport and Cultural Development	City of New Westminster	Fraser River Pile and Dredge	Norgate Park Community Association	TimberWest Forest
BC Ministry of Environment	City of North Vancouver	Fraser Surrey Docks	North Arm Transportation	Township of Langley
BC Ministry of Jobs, Tourism and Innovation	City of Pitt Meadows	GCT Global Container Terminals Inc.	North Delta Harbour Association	Trans Mountain Expansion Project
BC Ministry of Transportation and Infrastructure	City of Port Coquitlam	Gente Strategies	Northland Asset Management Company	TransLink
BC Ministry of Transportation and Infrastructure, Pacific Gateway Branch	City of Port Moody	Georgia Strait Alliance	Nuytco Research Ltd.	Transport Canada
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BC Trucking Association	City of Surrey	Guy Gentner, MLA, Delta North	Pacific Coast Terminals	TSI Terminal Systems Inc.
BC Waterfowl Society	City of Vancouver	Hapag-Lloyd	Pacific Metals Recycling International	Tsleil-Waututh Nation
Berezan Management (BC) Ltd.	City Transfer	Hemmera	Pacific Reload	Univar Canada
BIEAP-FREMP	CN Rail	High Water Ventures Ltd.	Pacific Salmon Foundation	Vancouver Airport Authority
BNSF Railway	Coast 2000 Terminals Ltd.	Hodder Tug Co. Ltd.	Pacific Spirit Park Society (PSPS)	Vancouver Airport Pipeline Opposition for Richmond (VAPOR)
Boundary Bay Conservation Society	Concert Properties	ILWU Canada	Pacific Streamkeepers Federation	Vancouver Coastal Health
Bowen Island Municipality	Corporation of Delta	Imperial Paving Ltd.	Pacific Wildlife Foundation	Vancouver Pile Driving
Budget Marine Crane Services	Council of Marine Carriers	Interfor (International Forest Products Ltd.)	Parklane Homes/Wesgroup Properties	Variety Marine Services Ltd.
Burke Mountain Naturalists	Cowichan Nation Alliance	International Longshore and Warehouse Union (ILWU)	Port Community Liaison Committee (Delta)	Vicki Huntington, MLA, Delta South
Burrard Inlet Marine Enhancement Society	Cushman & Wakefield	Joe Trasolini, MLA, Port Moody – Coquitlam	Qayqayt First Nation	Village of Ashcroft
Burrard Yacht Club	D L Larden & Sons Fishing Co.	Katzie First Nation	Rabbit River Farms	Village of Belcarra
Burrardview Community Association	David Suzuki Foundation	Kinder Morgan Canada	Reed Point Marina Ltd.	Village of Lions Bay
Canadian Fertilizer Institute	Delta Chamber of Commerce	Kingfisher Docks and Boats	Residential Waterlot Leaseholders Association	Viterra
Canadian International Freight Forwarders Association	Delta Farmers' Institute	Kwantlen First Nation	Richardson International Ltd.	Wesgroup Properties
Canadian Marine Environment Protection	Delta Naturalists	Kwikwetlem First Nation	Richmond Chamber of Commerce	West Coast Reduction Ltd.
	Department of Foreign Affairs, Trade and Development	Ladner Sediment Group	Save Our Shores Society	Western Stevedoring
	District of Maple Ridge	Lafarge Canada Inc.	Schnitzer Steel Canada Ltd.	Western Transportation Advisory Council (WESTAC)
	District of North Vancouver	Lehigh Hanson Materials Ltd.	Scotiabank	Westshore Terminals
	District of West Vancouver	Linwood Homes Ltd.	Seaspan	Wharf Street Committee
	Dogwood Initiative	Lyackson First Nation	Semiahmoo First Nation	Winvan Paving Ltd.
	DP World Vancouver	Manitoulin Transport	Shato Holdings	Wreck Beach Preservation Society
	Emerson Real Estate Group	Marine Life Sanctuaries Society of British Columbia	South Fraser Action Network	WWL Vehicle Services Canada Ltd.
		Mckeen & Wilson Ltd.	Southern Railway of	
		Meadows Marina		
		Metro Vancouver		
		Mill & Timber		

Our Mission

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

Our 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.

Our Values

Collaboration and Teamwork

We work together to achieve our greatest potential. We communicate openly and treat each other with trust and respect.

Customer Responsiveness

We strive to understand our customers' needs and to proactively provide them with distinctive value.

Innovation

We seek new ideas and creative solutions.

Leadership and Accountability

We lead by example, act with integrity and are accountable for our actions.

Our People

We are committed to continuous learning, diversity and balance.

Sustainability

We think long term, considering social, environmental and financial matters.



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