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Sustainability report 2020

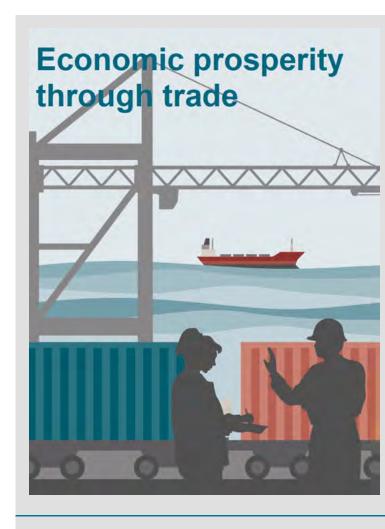


This report covers topics representing the greatest economic, environmental, and social impacts of the operations of the Port of Vancouver, and discusses the Vancouver Fraser Port Authority's initiatives designed to address these impacts.

The content in this report is informed by the Global Reporting Initiative (GRI) Standards' Principles for Defining Report Content. Additional details about our materiality process can be found in Report details.

We have defined what a sustainable port means to us. Our definition covers 10 areas of focus that represent the most significant sustainability challenges and opportunities facing the port community. These are our material topics, which form the foundation for this report. Through report-specific and ongoing engagement and consultation related to various projects, we have identified subtopics within each focus area that are important to stakeholders and interested groups. Our approach to managing these subtopics is discussed within the focus areas.

Report topics



Focus area	Subtopics
Competitive business	Supply chain efficiency and reliabil
Effective workforce	Labour force availability and stabili Worker health, safety, and wellness Diversity and inclusion
Strategic investment and asset management	Land use Infrastructure delivery

Healthy environment

Focus area	Subtopics
Healthy ecosystems	Water quality Biodiversity
Climate action	Air quality and greenhouse gas emissions Climate adaptation
Responsible practices	Sustainable infrastructure Responsible supply chain practices

Thriving communities

Focus area	Subtopics
Good neighbour	Proactive and ongoing engagement Responding to concerns
Community connections	Local and national economic activity Community investment
Indigenous relationships	Indigenous engagement Opportunities for Indigenous people
Safety and security	Safety and security of public, vessels, and infrastructure Emergency preparedness

All uses of "we" and "our" in this report refer to the Vancouver Fraser Port Authority.

Click this icon throughout this report to adjust how data is presented and to see additional data.

Throughout the report, a $\sqrt{}$ denotes metrics for which independent assurance has been obtained.

Message from the President and Chief Executive Officer

"We are committed to being a sustainability leader and advancing sustainability at the Port of Vancouver and within the global maritime sector."

Globally, 2020 was one for the history books. We saw broad lockdowns and a global race for a vaccine as a result of an international pandemic, as well as sweeping movements for social change. For the terminals, tenants, and businesses that make up the Port of Vancouver, 2020 was no less memorable. Together we faced unprecedented challenges created by the COVID-19 pandemic—including the cancellation of cruise season—and implemented protocols and procedures to protect the health and safety of our employees and those of the broader port while keeping the port open and goods moving. At the port authority, like many others, we moved most of our employees from being office-based to working remotely, and we transitioned our key Canada Place community events—Canada Day at Canada Place, Christmas at Canada Place, and others—from in-person to virtual.

But through all of this, 2020 also showcased the value and resilience of the Port of Vancouver. Through the dedicated efforts of marine carriers and pilots, longshore workers, terminal operators, railway workers, trucking companies and drivers, along with many others who make up the port community, trade through the port continued to flow. We appreciate the efforts and commitment of the entire port community, who have worked through very challenging circumstances to keep the port open around the clock, day in and day out, and to keep Canadians across the country supplied with essential goods. As a result of this hard work, cargo through the port increased by 1% from 144.2 to 145.5 million metric tonnes (MMT) over the same period the previous year, with new annual records set for grain, potash, and container trade.

The events of 2020 also put a focus on the future challenges we face and opportunities we can leverage to not only fulfill our mandate as a Canada Port Authority, but to progress toward our vision of making the Port of Vancouver the world's most sustainable port. To us, a sustainable port is one that delivers economic ports are the contractions.

world's most sustainable port. To us, a sustainable port is one that delivers economic prosperity through trade while also maintaining a healthy environment and enabling thriving communities. We are committed to being a sustainability leader and advancing sustainability at the Port of Vancouver and within the global maritime sector. We believe that investing in gateway infrastructure, expanding the port's environmental influence globally, and contributing to the resilience of communities will move us forward.

With regard to the first of these three opportunities, we've seen that projections for both trade and population growth through our region underline the need for well-designed, sustainable, community-supporting infrastructure, such as our gateway projects. These projects are designed to support trade capacity throughout the region by making goods movement more efficient. They also serve to reduce the impact of trade on local communities by addressing traffic congestion and lowering emissions. Longer term, these projects will strengthen the region's competitiveness as a west coast trade hub, which will benefit not only the Lower Mainland, but Canada as a whole.

In a similar vein, we are also leading projects that address the pressing issue of dwindling container terminal capacity on Canada's west coast. One of these projects is the proposed Roberts Bank Terminal 2 project in Delta. It is a nationally critical project which, if built, will increase the port's container capacity by one-third, maintaining global market access for Canadian exporters, and efficient access to imported goods for consumers through the two more decades. Continued infrastructure investment, as well as access to trade-enabling land, will be essential to support Canada's economy and the Port of Vancouver's competitiveness here at home and on a global scale.

A second opportunity lies in leveraging our environmental influence. We are focused on leading and participating in air quality and climate action programs designed to help conserve energy, reduce air contaminants and greenhouse gas emissions, and promote alternative energy sources. We recognize the importance of leading by example through our own practices, and we are proud of our commitment to reduce our corporate greenhouse gas emissions by 40% by 2030, and achieve net zero emissions by 2050. We are also working to support the transition to LNG— liquefied natural gas—as a marine fuel, with a goal of being able to provide LNG bunkering services at the port as early as 2022. The growing interest in the use of LNG for the marine industry is starting to deliver a potentially material global reduction in air pollutants and greenhouse gas emissions.

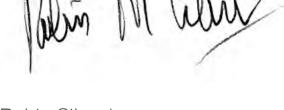
As leaders in sustainability, we're bringing Canadian environmental expertise to the port industry globally through efforts such as the port authority-led Enhancing Cetacean Habitat and Observation Program. By implementing voluntary slowdowns and displacement trials for ships moving through feeding areas of the southern resident killer whales, this award-winning program is gathering valuable data about how underwater noise created by vessels impacts these vulnerable populations. It's significantly reducing noise that affects these iconic mammals—a 50% reduction in underwater noise in 2019. We are using this program to inform the future of marine shipping not only at the Port of Vancouver, but around the world too.

Finally, we continue to identify opportunities to contribute to being a good neighbour to local communities. One way we're doing this is through trade-enabling infrastructure projects. Our port authority-led infrastructure projects are providing jobs and helping drive this region's economic recovery at a pivotal time, and they have kept people employed through one of the most challenging of years. We also recognize the importance of appropriately and effectively engaging with the many Indigenous groups who have asserted or established Aboriginal and treaty rights, and related interests, that may be affected by these projects. To that end, we have entered into mutual benefit agreements with Indigenous groups to share benefits of the project, and continued discussions around opportunities and benefits with other groups.

we also invest directly in our local communities. In 2020, we funded 39 community organizations, events, and institutions with more than \$700,000 through our community investment program and another 11 through the Centerm Community Fund, \$2-million fund established support community initiatives near the Centerm terminal in Vancouver's downtown.

authority employees. Given the complexity and importance of our agenda, the team at the port authority, has worked tirelessly to keep this agenda on track through this incredibly challenging year and I want to thank each one of them.

The unprecedented challenges of 2020 showcased—and amplified—the resilience and value of Canada's largest port. To close, I want to give kudos to port



Robin Silvester
President and Chief Executive Officer

About the Vancouver Fraser Port Authority



Our mission

To enable Canada's trade objectives, ensuring safety, environmental protection and consideration for local communities

Our vision

For the Port of Vancouver to be the world's most sustainable port

A sustainable port delivers economic prosperity through trade, maintains a healthy environment, and enables thriving communities through meaningful dialogue, shared aspirations, and collective accountability

Our values

Accountability
Continuous improvement
Collaboration
Customer responsiveness

The Vancouver Fraser Port Authority is responsible for the stewardship of the federal lands and waters of the Port of Vancouver on behalf of Canadians and in support of national trade objectives. As a non-shareholder corporation established by the Government of Canada in January 2008, pursuant to the <u>Canada Marine Act</u>, we are accountable to the federal minister of transport. Like all Canada Port Authorities, we are financially self-sufficient, collecting rental income from terminals and other tenants as well as various commercial fees. We invest most of our free cash flow after operations in port-related infrastructure to increase capacity to accommodate Canada's growing trade.

The mandate of Canada Port Authorities, as outlined in the Canada Marine Act, is to:

- Contribute to the competitiveness, growth, and prosperity of the Canadian economy
- Organize marine transportation services to satisfy the needs of users at a reasonable cost
- Provide a high level of safety and environmental protection
- Be responsive to local needs and priorities
- Encourage and take into account input from users and local communities

We ensure operations are secure, reliable, and sustainable, with consideration for the quality of life of our neighbours. This includes advancing environmental initiatives, and conducting project and environmental reviews of works and projects proposed for port lands and waters.

Governance

The board of directors of the Vancouver Fraser Port Authority provides governance, oversight, and approval of strategic direction. The *Canada Marine Act* and our Letters Patent set out the appointment and responsibilities of the 11-member board, four members of which are appointed by federal, provincial, and local governments. The remaining seven members are recommended by the federal minister of transport in consultation with port users and appointed by the federal governor-in-council.

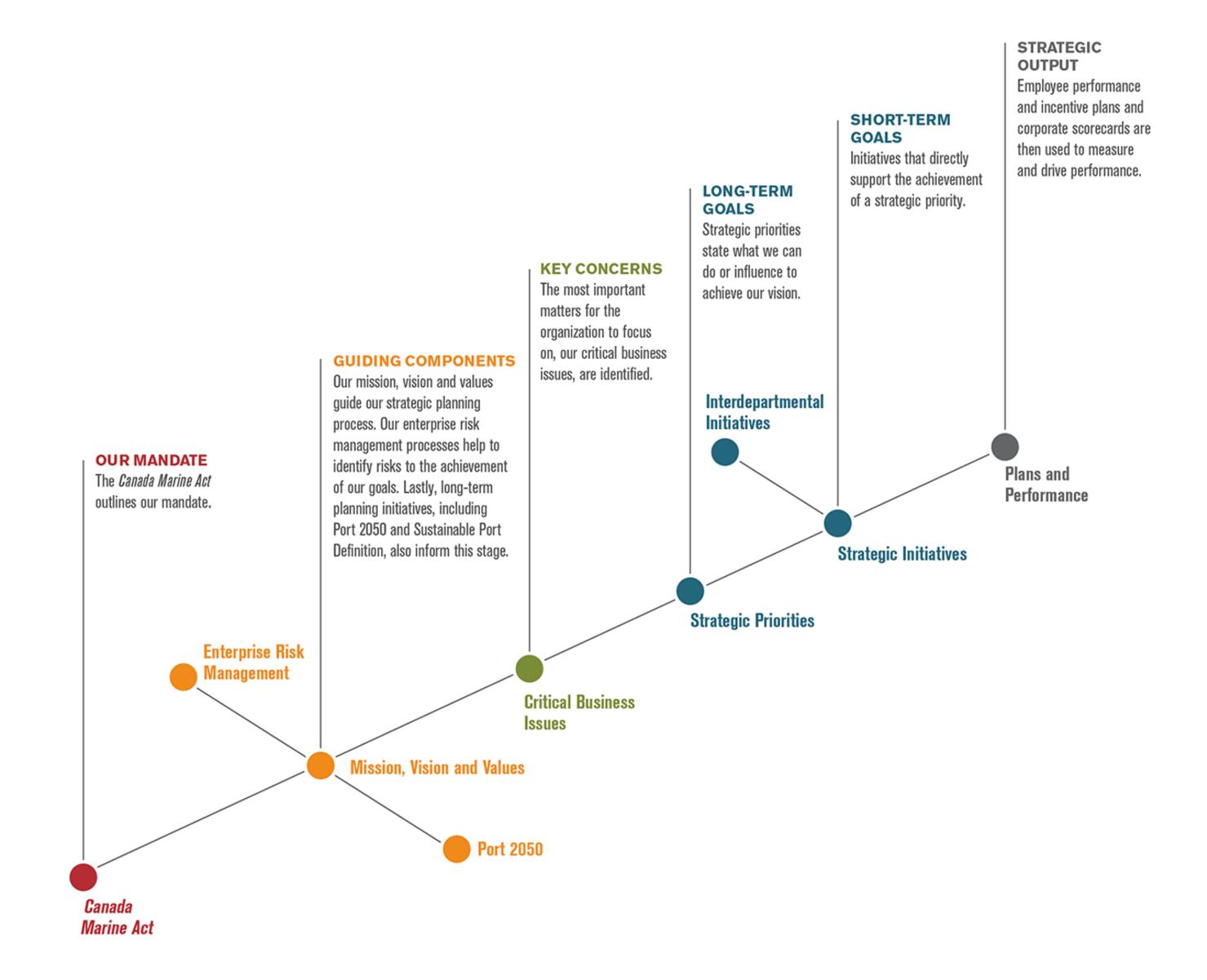
There are four board committees, all of which have accountability for some aspects of sustainability; however, the governance and external relations committee provides overall oversight and guidance on sustainability matters and external relationships in areas of greatest impact. The committee reviews the main sustainability-related policies annually, oversees sustainability risks, reviews and monitors sustainability metrics, and provides direction on sustainability reporting.

Learn more at portvancouver.com/governance

Strategic planning

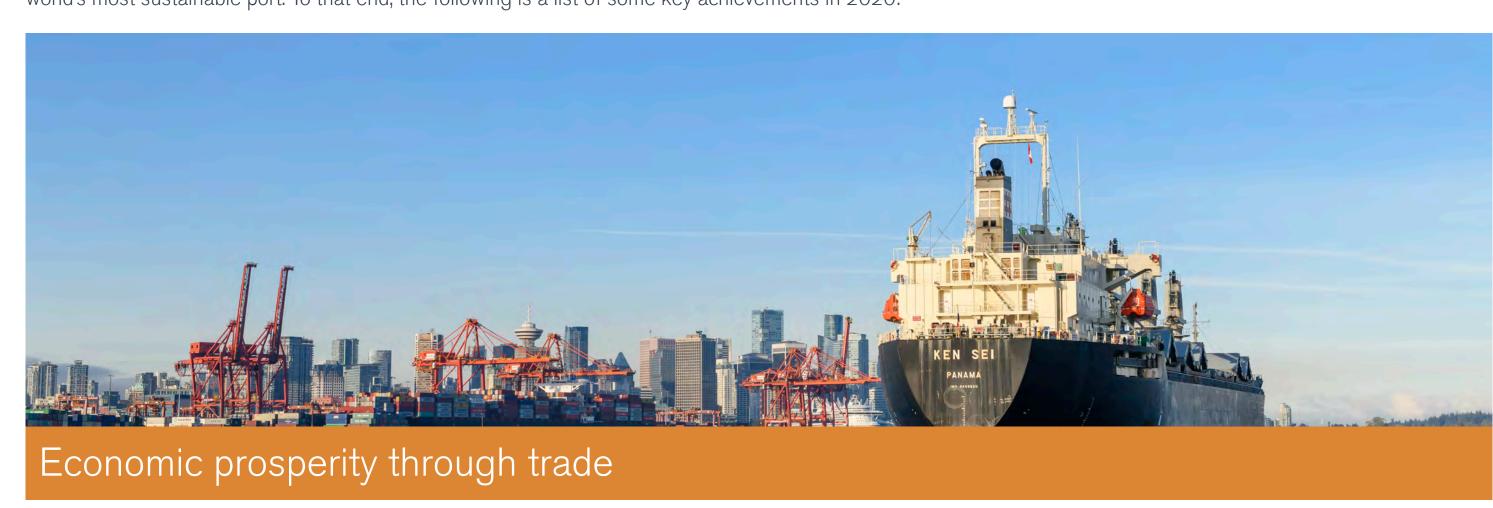
Through our strategic planning process, the Vancouver Fraser Port Authority identifies the critical business issues and priorities that need our attention, efforts, and resources. The process is guided by our mandate as established by the *Canada Marine Act* and by other inputs that we call our guiding components. These components include our long-term planning initiatives and our definition of a sustainable port, along with our mission, vision, values, enterprise risk management, and value mapping work.

In 2020, we identified over 20 risks that presented the highest potential impact on the port authority, such as the lack of suitable land to accommodate trade growth, an inability to finalize commercial agreements for major projects, climate change impacts, and others. Considering those risks and in accordance with our guiding components, we identify our key concerns and our long- and short-term goals. We then align our people and financial resources, and measure our performance through scorecards and employee performance and incentive plans. This cycle allows us to set the strategic direction of, and to execute, our initiatives while considering sustainability across all activities.



2020 highlights

The Vancouver Fraser Port Authority works to fulfill our federal mandate and mission to facilitate Canada's trade while striving for the Port of Vancouver to be the world's most sustainable port. To that end, the following is a list of some key achievements in 2020:





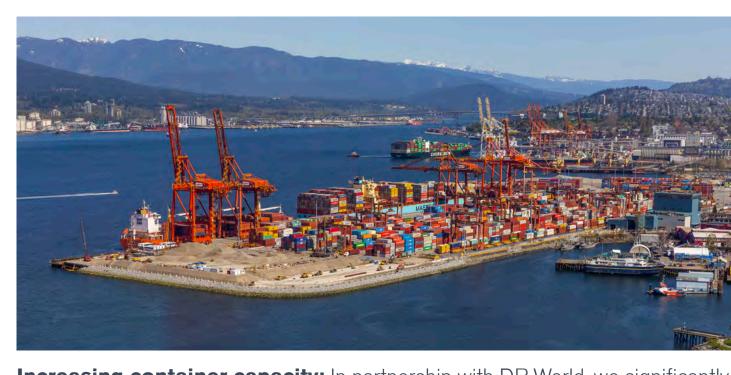
Building a new truck staging facility: In partnership with Transport Canada and the British Columbia Ministry of Transportation and Infrastructure, we completed construction of the Deltaport Truck Staging Facility in Delta, part of the Deltaport Terminal, Road and Rail Improvements Project—a series of improvements that increased capacity for containers in and out of Roberts Bank from 600,000 to 2.4 million 20-foot-equivalent (TEU) containers per year.



Updating our five-year land use plan: We updated our land use plan to describe our long-term land use policy direction and our commitment to accommodating future trade growth in a socially, environmentally, and economically responsible way.



Supporting grain cargo through the port: Work continued on several road and rail projects that will improve grain capacity at the port, including the Burnaby Rail Corridor Improvements Project and Commissioner Street Road and Rail Improvements Project.

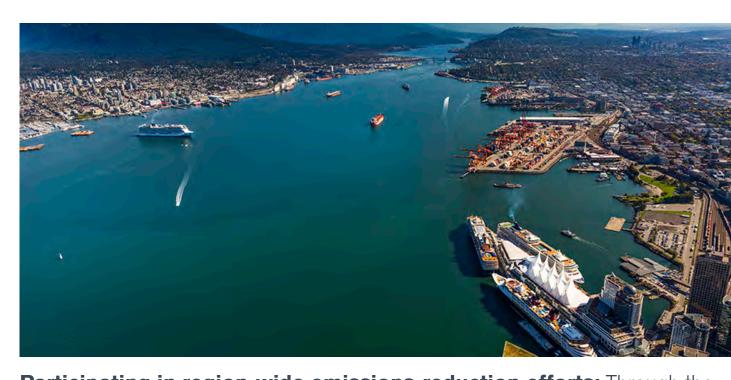


Increasing container capacity: In partnership with DP World, we significantly progressed construction activity on the expansion of the Centerm container terminal—a project that will increase capacity of the terminal by 60% while expanding its footprint by just 15%. In response to a federal review panel's environmental assessment report, we worked through project design updates, permits and authorization, and furthered environmental studies for the Roberts Bank Terminal 2 Project, proposed to add 2.4 million 20-foot-equivalent (TEU) containers per year of container capacity to the Port of Vancouver.



Enhancing marine habitat for fish, birds, and other wildlife: We completed construction on the Maplewood Marine Restoration Project to enhance approximately five hectares of marine habitat from low-value to productive marine habitat. This involved creating a 1.5-hectare eelgrass bed from approximately 150,000 eelgrass shoots, providing important refuge and nursery habitat for juvenile fish.





Participating in region-wide emissions-reduction efforts: Through the 2020 Northwest Ports Clean Air Strategy, we helped lead the development of a region-wide emissions-reduction strategy with a vision to reduce, and ultimately eliminate, seaport-related emissions in the Georgia Basin-Puget Sound airshed.



Encouraging environmental best practices: Through the port authority's EcoAction Program, we offer the operators of the cleanest and quietest ships up to a 47% discount on port fees to promote the adoption of sustainable practices and technologies. In 2020, we added new qualifications that reward ship operators for taking measures to reduce underwater and terrestrial noise.



Enabling cleaner marine fuels: We're working to facilitate the use of alternative marine fuels such as <u>liquefied natural gas (LNG)</u> to reduce air emissions from ships. In 2020, we participated in the LNG Bunkering Summit and other industry events to raise awareness of the benefits of LNG as marine fuel.

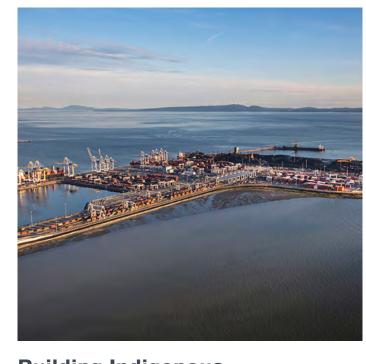


Managing the impacts of marine shipping on at-risk whales: In 2020, the port authority-led Enhancing Cetacean Habitat and Observation (ECHO) Program achieved record-high participation rates in two voluntary initiatives focused on reducing underwater noise in key feeding areas for southern resident killer whales.



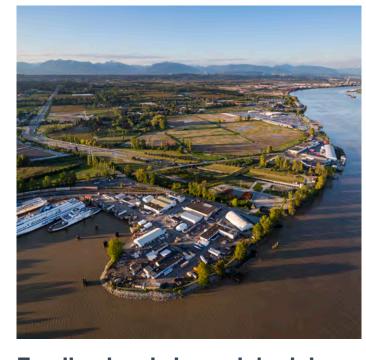


Monitoring noise in real time: Through our noise monitoring program, we created a new web portal to provide real-time data on noise levels throughout port lands and waters.



Building Indigenous relationships: As part of the Roberts Bank Terminal 2 Project, we secured agreements with Indigenous groups that offer mutual benefits.

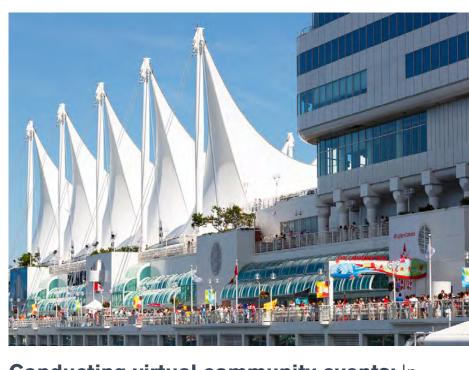
Vancouver.



Funding local channel dredging activities: We provided \$116,000 to <u>dredge small, non-commercial water</u> channels to provide safe access for fishers, recreational boaters, and residents.



Contributing to our communities: We provided \$700,000 across 39 organizations and initiatives in British Columbia.



Conducting virtual community events: In response to COVID-19, we pivoted our plans for our community events—Canada Day at Canada Place, World Maritime Day, Christmas at Canada Place, and others—from in-person to online due to provincial

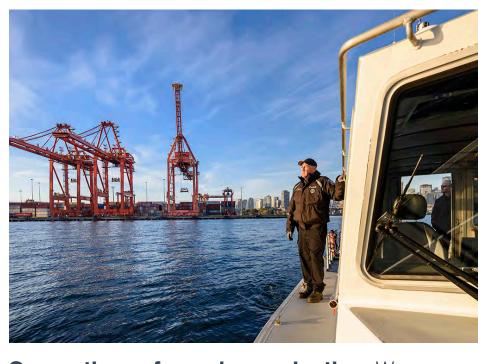
health restrictions.



podcast series called **Breaking Bottlenecks**, featuring port authority, port, and industry

representatives who shared their experiences and

insights into the inner workings of the Port of



Supporting safe marine navigation: We delivered a range of navigational safety improvements, including new lights on Lions Gate Bridge and new requirements for bunker suppliers, to enhance the <u>safe and efficient movement of ships</u>

within port waters.

Our sustainability approach



Our vision is for the Port of Vancouver to be the world's most sustainable port.

As stewards of Canada's largest port, we have a responsibility to lead the sustainable development of port operations that are critical to delivering our mandate to facilitate Canada's trade, advancing our vision, and ensuring the long-term success of the Port of Vancouver for the benefit and well-being of all Canadians. We are committed to being a sustainability leader and advancing sustainability within the Port of Vancouver and the global maritime sector. To do this, we focus on integrating sustainability into all aspects of our business, on providing leadership, on collaborating with others to achieve shared sustainability objectives and continually improve sustainability performance, and on measuring and communicating progress.

Our journey so far

In 2010, we embarked on Port 2050—a long-range scenario planning process—with over 100 individuals and organizations with a stake in the future of the port. The process identified four plausible scenarios for the future, including one we aspire to: The Great Transition. This scenario represents a shift to a low-carbon economy that balances economic, environmental, and social sustainability.

To contribute to this desired future, we engaged industry, government, Indigenous peoples, communities, and other stakeholders to envision our shared future and define what sustainability means for the Port of Vancouver. The resulting sustainable port definition led to the creation of our vision, and continues to guide how we operate and provide a framework for achieving that vision.

To help measure progress towards our vision, we developed a suite of sustainability performance indicators. These indicators align with the focus areas of our sustainable port definition and help inform our strategy. This report provides data for eight of the indicators. Four indicators are still under development.

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Focus areas	Sustainability performance indicators (port-wide unless otherwise indicated)		
Competitive business	Intermodal transit time for import rail containers Average gateway cycle time for bulk cargo		
Effective workforce	Lost-time injury rate (port authority only) Women in the workforce (port authority only)		
Strategic investment and asset management	Trade-enabling land availability (under development)		
Healthy ecosystems	Aquatic ecosystem health index (under development)		
Climate action	Greenhouse gas emissions from port-related activities		
Responsible practices	Large tenant-led infrastructure projects using Envision or LEED rating systems (under development)		
Good neighbour	Public opinion of the port as a good neighbour		
Community connections	Gross domestic product contribution		
Indigenous relationships	Relationships with Indigenous groups (port authority only; under development)		
Safety and security	Safety and security incidents		

A sustainable port

A sustainable port delivers economic prosperity through trade, maintains a healthy environment, and enables thriving communities. Our definition includes 10 areas of focus and 22 statements that define success, which together describe the attributes of a sustainable port.



Economic prosperity through trade

A sustainable port:

Healthy environment

A sustainable port:

Thriving communities

A sustainable port:

Competitive business

- Continuously improves efficiency and reliability, providing exceptional customer service
- Is profitable, delivering lasting value locally and nationally
- Reinforces innovation, diversity, resilience and adaptability

Effective workforce

- Maintains a skilled and productive workforce to meet current and future needs
- Provides an attractive work environment and rewarding career choices

Strategic investment and asset management

- Optimizes the use of land and infrastructure assets
- Anticipates and delivers infrastructure to meet capacity needs in a timely way

Healthy ecosystems

- Takes a holistic approach to protecting and improving air, land, and water quality to promote biodiversity and human health
- Champions coordinated management programs to protect habitats and species

Climate action

- Is a leader among ports in energy conservation and alternative energy to minimize greenhouse gas emissions
- Protects its assets against potential impacts of climate change

Responsible practices

global supply chain

- Improves the environmental, social, and economic performance of infrastructure through design, construction and operational practices
- Supports responsible practices throughout the

Good neighbour

- Proactively considers effects on communities in planning and managing operations
- Identifies and responds to community interests and issues

Community connections

- Strengthens national, regional, and local prosperity, delivering regional benefits
- Engages communities and inspires pride in Canada as a trading nation

Indigenous relationships

- Respects First Nations' traditional territories and value traditional knowledge
- Embraces and celebrates Indigenous culture and history
- Understands and considers contemporary interests and aspirations

Safety and security

- Upholds safety and security to protect port users and neighbouring communities
- Promotes a culture of emergency preparedness that supports rapid restoration of essential community services and business activities

Embedding sustainability

In 2021, we will focus on the following to further embed sustainability within the organization:

throughout our strategic planning processes, decision-making, and operations.

- Strengthening governance: Developing a new sustainability policy to clearly articulate our sustainability commitments and strengthen sustainability governance within the organization
- Clarifying priorities: Facilitating strategic internal conversations to identify priority sustainability issues that present the greatest opportunities to accelerate

With the help of a dedicated inter-departmental team, we continue to increase visibility and understanding of sustainability performance, and embed sustainability

progress towards our vision • Aligning our goals and targets: Mapping alignment of our business strategy with the United Nations Sustainable Development Goals to identify our greatest

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opportunities to support these commitments • Measuring progress: Evolving our sustainability performance indicators to further integrate them into our internal and external reporting

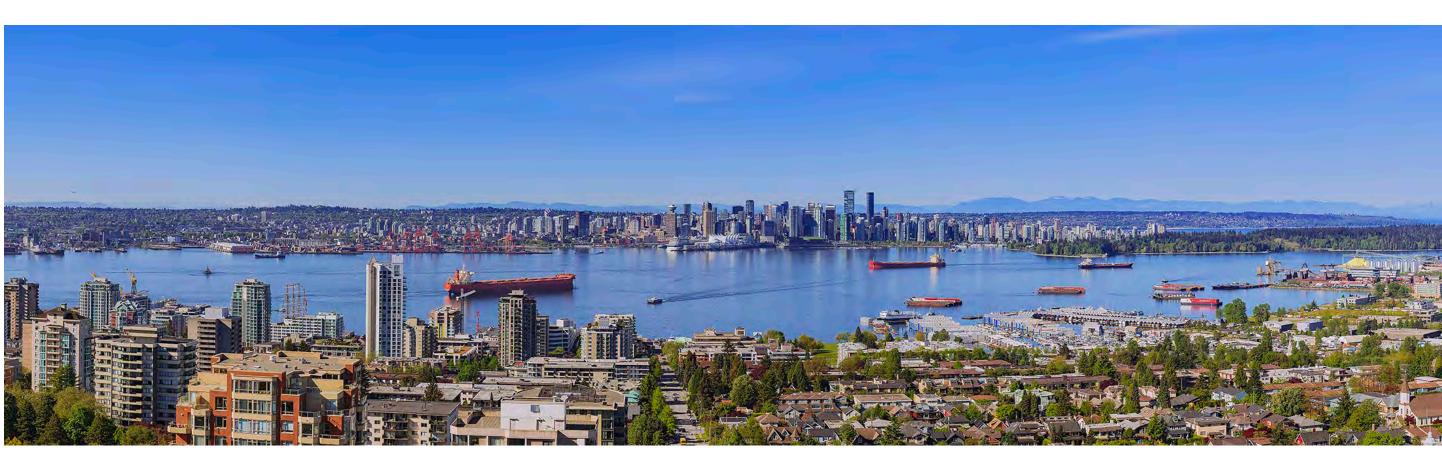
Collaboration

The Vancouver Fraser Port Authority engages and collaborates with a wide variety of groups with an interest in the port. We take an inclusive approach to identifying stakeholders and interested groups, and focus our efforts on understanding and responding to their material interests.

Groups that we regularly engage and collaborate with include:

Group	Description	Collaboration
Terminal operators	Terminal operators manage the day-to-day operations of the 29 terminals at the Port, offering berths for ocean-going ships that handle cargo across five sectors.	We work with terminal operators to develop trade opportunities, promote continuous environmental improvement, and minimize impacts on communities through regular outreach, working groups, and consultation activities.
Other tenants	In addition to terminal operators, other tenants lease land from the port authority and operate a variety of commercial interests, ranging from construction and fishing to recreational marinas and container transload facilities.	We work with tenants to manage issues in relation to their lease agreements and their operations on federal port lands.
Marine carriers	Marine carriers operate ocean-going ships that carry cargo to and from the Port of Vancouver.	We work with marine carriers to optimize ship arrivals and anchorage use, and to ensure regulations are followed to keep the port safe, reliable, and efficient. Collaboration includes meetings and working groups.
Major shippers	Major shippers are the importers and exporters who ship goods through the port.	We work with major importers and exporters to understand their business and supply chain needs, and to facilitate gateway capacity development.
Service providers	Service providers provide a vast array of services that facilitate the handling of goods, including transloading, rail, trucking, warehousing, distribution, and marine services.	We collaborate with service providers to develop short- and long-term strategies to enable fluid cargo movement, promote efficient and reliable service, and address supply chain challenges.
Labour	Thousands of workers keep the port operational and the supply chain moving. In general, the British Columbia Maritime Employers Association (BCMEA) oversees the training and recruitment of workers belonging to the International Longshore and Warehouse Union (ILWU), and the daily dispatch of longshore labour to port terminals. Many other unions and employers are also involved in the gateway system.	We engage with the unions and associations that represent the thousands of workers at the port on issues of mutual concern.
Industry associations	Industry associations represent port users as well as related or impacted industries such as shipping, tourism, and agriculture.	We work with industry associations on matters of mutual interest and advocacy.
Indigenous peoples	The elected chiefs and councils, hereditary chiefs, staff, and community members of Indigenous groups with asserted and established traditional territories and treaty lands within port authority jurisdiction, as well as other Indigenous groups across British Columbia and Canada.	We regularly engage with Indigenous groups to develop a better understanding of their diverse interests and concerns, and to create deeper and more meaningful relationships. We are working to improve communication and increase opportunities for Indigenous groups to contribute to project planning and receive economic benefits.
Federal and provincial governments	The elected and non-elected officials and staff of the governments of Canada, British Columbia and other provinces across the country.	We work with provincial and federal governments and agencies to ensure port activities are conducted in a safe and environmentally responsible manner; to pursue funding opportunities to increase gateway efficiency, capacity, and sustainability; and to advocate for and develop policy and regulations.
Local and regional governments	The elected and non-elected officials and staff of the 16 local municipal governments that border the Port of Vancouver, the regional Metro Vancouver government, and other local governments across Canada.	We work with local and regional governments to facilitate open communication, share ideas, resolve issues, and build productive, long-term relationships through ongoing executive outreach, meetings, briefings, and roundtables.
Communities	Communities include the general public and community organizations and groups in our 16 neighbouring municipalities.	We engage with port communities to better understand their concerns and aspirations, and build strong relationships through regular meetings with community liaison committees, community relations activities, our community feedback process, a variety of events, and our community investment program.
Non-governmental organizations and academic partners	Non-governmental organizations and academic partners are organizations, academic institutions, and individuals that focus on issues of mutual interest.	We engage with non-governmental organizations and academic partners through meetings, sponsorships, and consultation activities to share knowledge and collaborate on issues of shared interest.

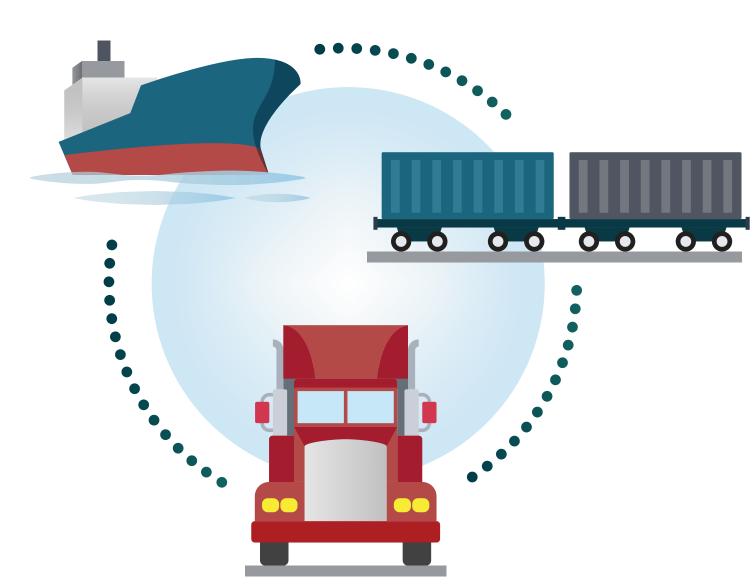
About the Port of Vancouver



The port of Vancouver is Canada's largest port, and third largest in North America in terms of annual tonnes of cargo. Positioned on the southwest coast of British Columbia, the port is home to 29 major marine cargo terminals and served by <a href="https://example.com/the-color=

The <u>port authority's jurisdiction</u> includes 16,000 hectares of water, more than 1,500 hectares of land and hundreds of kilometres of shoreline. It borders 16 municipalities and intersects the asserted and established territories and treaty lands of several Coast Salish First Nations.

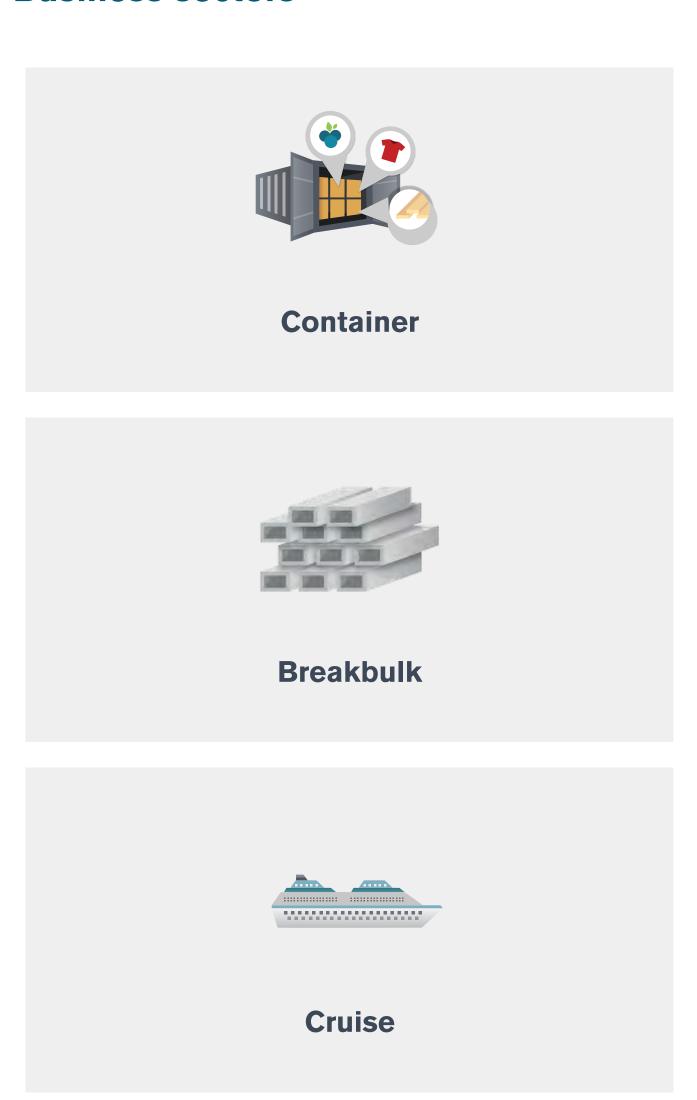
Moving goods at the Port of Vancouver

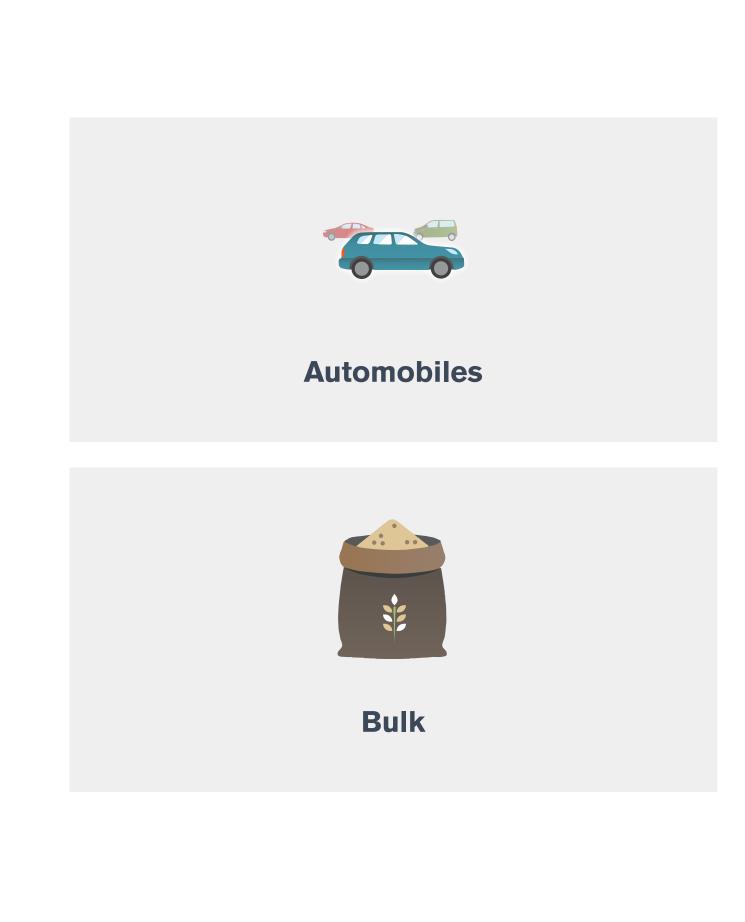


Many different enterprises operate in the port. Goods arrive and depart by sea on ships owned and operated by global shipping companies, and supported by tugboats, shippards, shipping agents, and freight forwarders. Terminals are operated and managed by independent third-party operators.

Railways and trucking companies move goods to and from terminals by land. Goods are sorted, stored, and transferred by companies at facilities and warehouses, and inspected by the Canada Border Services Agency on terminal or at facilities across the region.

Business sectors



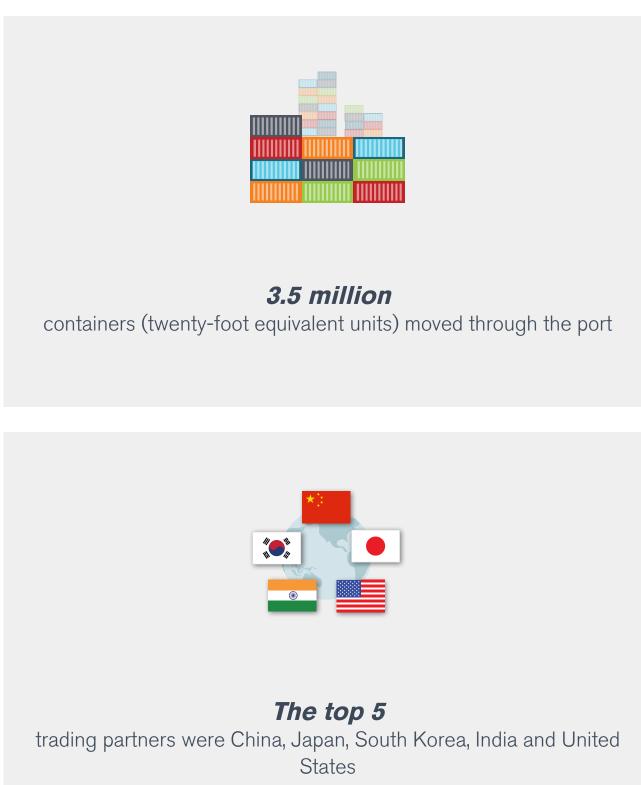


2020 Key facts















*Due to the COVID-19 pandemic, the federal government prohibited cruise ships from docking at Canadian ports throughout the 2020 and 2021 season

**Figures from the 2016 Port of Vancouver Economic Impact study

Learn more port facts and statistics at portvancouver.com/factsandstats

Economic prosperity through trade

A sustainable port delivers economic prosperity through trade by focusing on competitive business, an effective workforce, and strategic investment and asset management.



Working to meet Canada's growing trade needs during the COVID-19 pandemic

The declaration of COVID-19 as a pandemic by the <u>World Health Organization</u> on March 11, 2020 set in motion a chain of events—including lockdowns, requirements for physical distancing and mask wearing, cancellation of major events, and employees shifting to working from home—leaving few untouched by its effects.

In turn, these events forced many Canadians and Canadian businesses to adapt almost overnight to meet these new norms. Concerns over stock inventory of consumer goods caused panic buying of many food items and household goods during the early months of the pandemic.

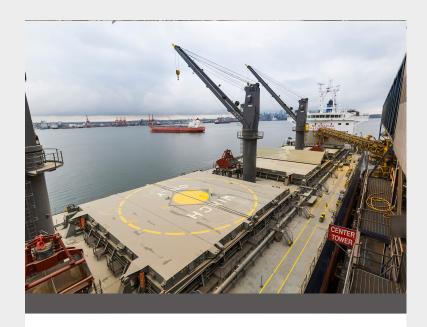
In collaboration with port industry, <u>Transport Canada</u>, and the provincial health officer, new safety measures for shipping protocols were introduced throughout the port to keep the workforce healthy and safe. The majority of Vancouver Fraser Port Authority employees transitioned to working from home to prevent transmission of the disease, and major in-person community events at Canada Place were cancelled.

Despite the challenges presented by COVID-19, goods continued to flow through the port, thanks to the hard work of terminal operators, truckers, railways, shipping lines, and other goods-movement companies. These stakeholders worked diligently to ensure essential and valuable goods such as food, pharmaceuticals, medical and safety supplies, and other household products reached Canadians across the nation, and maintained Canada's ability to trade internationally.

As a result, the port has played a vital role in driving Canada's economic recovery from the pandemic. <u>Year-end statistics</u> showed that cargo through the port in 2020 was at 145.5 million metric tonnes, a 1% increase over the previous year, with new annual records set for grain and potash. Shipping container quantities, measured in 20-foot equivalents (TEUs), also saw record quantities at 3.5 million TEUs, a 2% increase over the previous year.

As we chart our way forward in 2021 and beyond, we continue to focus on facilitating Canada's increasing trade demands. Success will be dependent on the ability of port businesses to keep goods moving as efficiently as possible, and on our ability to advance critical infrastructure projects. This work will enable the port to support Canada's growth in trade for years to come.

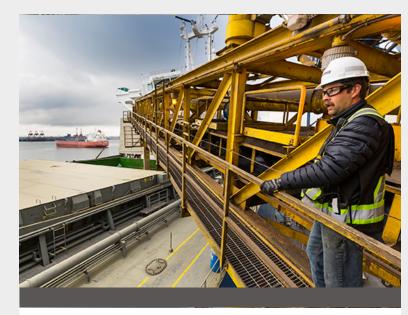
Discover more



Competitive business

ess

Supply chain efficiency and reliability



Effective workforce

Labour force availability and stability Worker health, safety, and wellness Diversity and inclusion



Strategic investment and asset management

>

Land use Infrastructure delivery

Competitive business

products from national and international markets.

Canada's economic prosperity relies on being able to import and export goods and resources to and from global markets efficiently and reliably. The Port of Vancouver handles more than one-third of the value of Canada's trade outside of North America, connecting Canadians with nearly 170 global economies. The port competes with other major ports on North America's west coast for international trade and for investment in capacity. A competitive, efficient, reliable, and financially stable port is essential for retaining and attracting business worldwide, and for enabling continued investment in operational and infrastructure improvements.

Moving goods within the port supply chain is complex. It requires supply chain companies and labour that are independent from the port authority—truck, rail, terminal operators, marine carriers, warehouse operators, transshipment operators, and longshore unions—to actively coordinate their operations to move goods through the port. This coordination is essential to facilitate Canada's trade and to meet the needs of Canadian businesses and consumers by connecting them with a variety of

About this focus area

Subtopics	Interested groups	What we've heard from stakeholders	Strategic priorities	Key risks
Supply chain efficiency and reliability	Governments	Ensure cargo moves safely, efficiently, and reliably	Increase supply chain efficiency and transparency,	Supply chain capacity imbalances
	Major shippers Service providers	Enhance the transparency of supply chain performance to increase efficiency	and optimize operational capacity to deliver enhanced customer and stakeholder value	Strike or similar disruptive action
	Terminal operators and tenants	Remain competitive in relation to other North		Loss of port competitiveness
		American ports Increase transparency of,		Epidemic or pandemic event leading to operations and/or trade disruptions
		and consultation on, decisions affecting customers		Climate change impacts on port operations, including
		Increase port capacity to manage congestion due to growth in trade		flooding from sea level rise and extreme weather events



Our approach Terminals, rail, trucking, and ocean-going ships

While the port authority is not responsible for the actual movement of goods or day-to-day operations at terminals, we work to enhance the efficiency and reliability of the supply chain. To accomplish this, we:

of supply chain metrics to help goods flow smoothly through the port • Provide rebates on wharfage fees to recognize ocean carriers that achieve a high percentage of on-time arrivals through our Container Vessel On-Time

• Work with port users, supply chain partners, and stakeholders to share information, identify opportunities for data-based solutions, and improve transparency

- Incentive Program • Maintain the Truck Licensing System, which requires that trucking companies moving containers to and from port terminals follow specific criteria related to minimum truck age, safety, and environmental requirements
- **Cruise ships**

The Port of Vancouver is the only homeport with both one-way and round-trip itineraries to Alaska through Canada's breathtaking Inside Passage—a coastal

cruise industry, we:

route that runs along the west coast of British Columbia. The port authority's cruise terminal at Canada Place serves 18 cruise lines. The Vancouver cruise industry is a key contributor to the local economy, stimulating \$3.17 million in direct economic activity for each ship call to Canada Place, and \$2.2 billion of total economic impact¹. To provide a positive experience for travellers, improve efficiency, and support the regional benefits provided by the

• Engage a third-party service provider to operate the Canada Place cruise terminal during the cruise season, including managing operations and access to the terminal

- Collaborate with cruise lines and key cruise stakeholders—including the City of Vancouver, Canada Border Services Agency, U.S. Customs and Border Protection, transportation providers, and other firms in the tourism industry—to improve terminal efficiency and passenger experience, find innovative
- solutions for passenger and baggage processing, and minimize impacts on surrounding communities • Work with other regional cruise hubs by evaluating harbour dues and promoting unique itinerary opportunities through Vancouver, which help to retain and increase business for the region
- Due to the COVID-19 pandemic, the federal government prohibited cruise ships from docking at Canadian ports throughout the 2020 and 2021 season. We are currently working with our destination partners—Tourism Vancouver, Destination British Columbia, the Vancouver Hotel Destination Association, and the Hotel Association of Vancouver—to develop a framework for a future, phased restart of the Vancouver-to-Alaska cruise season when conditions permit. This will include important COVID-19 protocols that will serve as a foundation for future operations.

Cruise Tourism report from December 2019. Performance

¹Economic activity generated by the Vancouver cruise industry was measured by the Business Research & Economic Advisors as part of the Economic Contribution of Vancouver

Terminals, rail, trucking, and ocean-going ships

125

100

14

12

70

65

20

%

Improving supply chain performance

The program is a multi-phase, multi-year initiative to develop and implement a series of operational planning and optimization tools tailored to participating industry members. The goal of this program is to increase capacity and operating efficiencies across the Western Canadian supply chain.

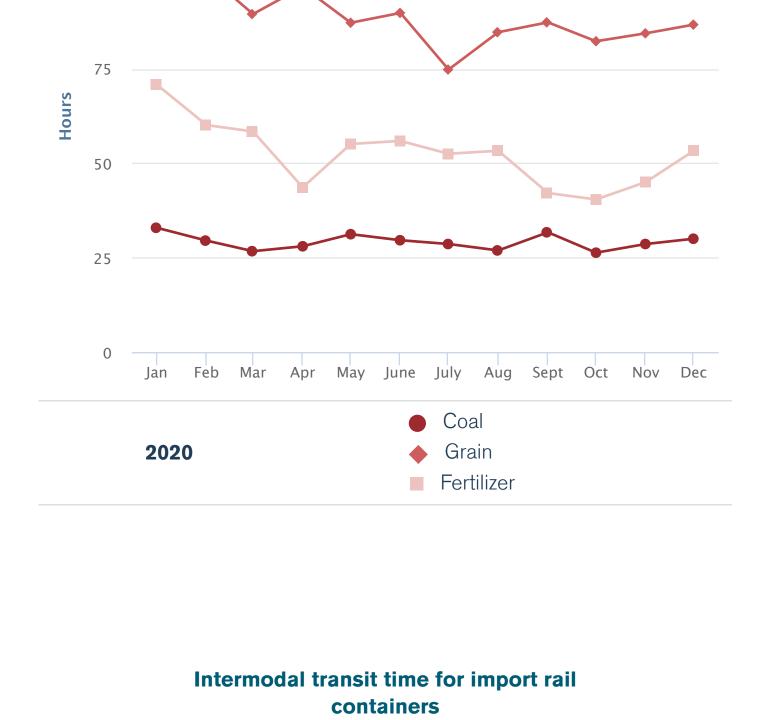
In partnership with Transport Canada and other West Coast Gateway partners, we began phase two of the West Coast Supply Chain Visibility

Program (formerly known as the Supply Chain Visibility Program) in 2020, adding the Prince Rupert Port Authority to the program.

The original Supply Chain Visibility Program began in early 2018 as a pilot project to develop a near real-time dashboard for grain, coal, and fertilizer handled through rail and bulk terminals. The success of the pilot led to the application and receipt of federal funding through the National Trade Corridors Fund in 2019.

Based on our learnings from the pilot program and with the support of this funding, we are developing the program to report on a minimum of 95% of all

goods moving through the port by the end of 2022. We are also exploring the integration of new technology that will help industry use the information provided by this project to move goods more efficiently. From there, we'll be able to determine how our learnings can continue to improve and enhance supply chain transparency and overall capacity.



Average gateway cycle time for bulk cargo

port. Once the rail blockades were resolved, gateway cycle times remained relatively consistent across bulk commodities, with only occasional short-term delays. Our target is for 75% of trips to be

Average gateway cycle time for bulk cargo

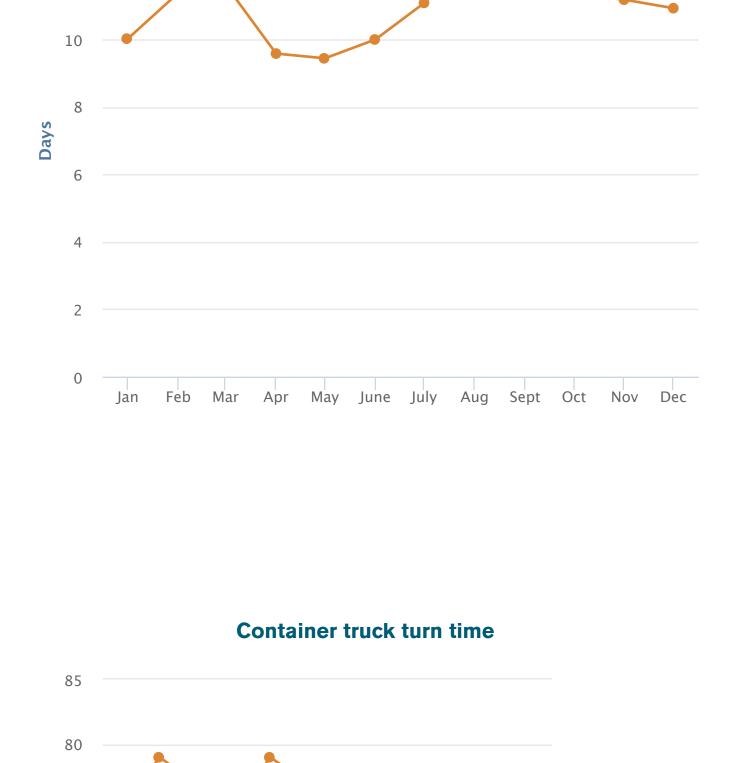
completed in less than 120 hours. In 2020, 92% of total trips were completed in less than 120 hours. The average gateway cycle time was 90 hours for grain, 53 hours for fertilizer and 29 hours for coal √. Measures the average time it takes for bulk railcars to travel from Boston Bar, B.C. to a terminal at the Port of Vancouver for unloading, and return empty to North Bend, B.C. This indicator is part of the Supply Chain Visibility Program, which helps the port authority understand how effectively bulk cargo is moving through the port. We acquire the data from a third party provider and employ a third party to manage and collate it.

Gateway cycle time measures the amount of time it takes for cargo to

port for processing. In early 2020, gateway cycle times were impacted

as a result of rail blockades that delayed railcars moving to and from the

travel round trip from a marshalling area outside of Vancouver to the



driven in part by increased demand, due to COVID-19, for consumer goods like essential household products and food. In addition, rail transit times remained relatively consistent throughout the year. In 2021, we

Intermodal transit time for import rail containers

In early 2020, total rail transit times were negatively impacted by rail

blockades across the country, which delayed the arrival of eastbound

due to lower-than-expected import volumes caused by the pandemic.

However, from June onward, transit times were negatively impacted by

high on-dock dwell—which is the time that a container remains on the

marine terminal dock before being moved to its next destination—that

was caused by a surge in imported containers from Asia. This surge was

and westbound trains. Performance improved from March to May, mainly

will continue to advance several infrastructure projects to increase container capacity, which are highlighted in the Infrastructure delivery <u>section</u> of the report. Measures the average time it takes an import rail container, after being unloaded from a vessel in Vancouver, to reach its destination of a rail yard in Toronto, Montreal, or Chicago.

Container truck turn times through four marine terminals—Centerm, DP

World Fraser Surrey, Deltaport, and Vanterm—remained consistent

throughout most of the year, except during the last three months in

Vanterm primarily due to higher-than-expected container volumes, a

highlighted in the <u>Infrastructure delivery</u> section of the report. Our target is for 75% of trips to be completed within 60 minutes or less. In 2020,

Measures the percentage of container truck trips completed within 60 minutes or

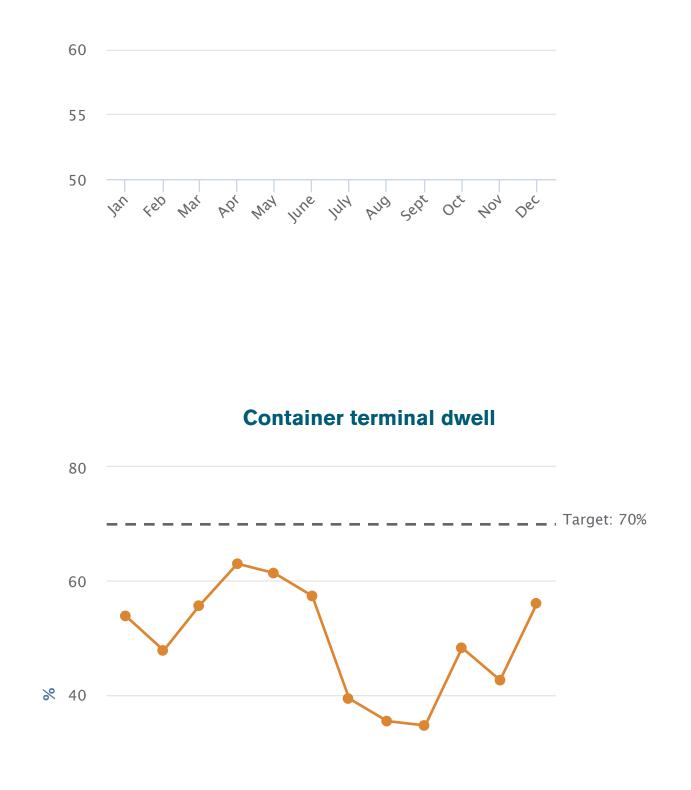
less. A truck trip is defined as the time spent picking up or dropping off a container

2020. We saw an increase in average turn time at Deltaport and

result of COVID-19. In 2021, we will continue to advance several

infrastructure projects to increase container capacity, which are

76% of trips were completed in 60 minutes or less √.



within a designated terminal area.

Container truck turn time

Container terminal dwell time In early 2020, the time a loaded container spent at a terminal prior to being loaded to a railcar was negatively impacted by rail blockades and winter weather conditions across the country, which delayed the arrival

onward, terminal dwell rose and was above the three-day industry target

due to an unprecedented surge in import cargo from June through to

due to COVID-19, for consumer goods like essential household

the end of the year. This surge was driven in part by increased demand,

products and food. Our target is for 70 per cent of import containers to

depart the terminal via rail within three days of being unloaded from a

vessel. In 2020, 50 per cent of import containers departed within three

Measures the percentage of import containers departing the terminal via rail within

three days of being unloaded from a vessel. We base this data on a representative monthly sample received from a third party data provider, collected at our four container terminals. We then cleanse the data and manually add missing data where publicly available.

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Northwest B.C. rail blockades at a glance

Cruise ships As a result of the COVID-19 pandemic, Transport Canada banned cruise vessels carrying more than 100 people from operating in Canadian waters starting on February 4, 2020.

• Redesigning ground transportation areas to increase vehicle capacity and improve safety for pedestrians

Customer and tenant engagement Users and operators of the port—terminals, tenants, shipping lines, and shippers—move goods through the port. We work with these stakeholders to enhance our understanding of what is required to keep the port competitive and goods moving efficiently. To accomplish this, we:

prevent blocking access to the port. The full effects of these rail blockades can be seen in our supply chain performance metrics.

Despite these restrictions, we continued to improve infrastructure and processes at Canada Place in 2020 in preparation for the future by:

• Installing additional Automated Passport Control kiosks with fingerprint technology to reduce passenger wait times through U.S. customs

Creating additional capacity for luggage and passenger processing to streamline passenger flow

- Conduct an annual survey to help assess engagement and service satisfaction, and to gather feedback regarding concerns, challenges, and areas of importance
- remained focused on engaging and building meaningful relationships with customers and tenants throughout the year. The results from our annual customer survey of our most strategic customers in 2020 underscored the importance of collaboration, transparency, straightforwardness, and engagement. Other results indicated:

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- Overall service satisfaction increased slightly, and positive changes to the permitting process on smaller and mid-sized projects were acknowledged; greater simplification of large project permitting remains an opportunity for improvement in the future • Key services that have grown in importance to many of our strategic customers include:
 - Infrastructure development and delivery Supply chain planning, analysis, and reporting

days √.

Protest activity related to a natural gas pipeline project in northwest B.C. temporarily blocked rail traffic and port access. While we respect the right to peaceful protest, this incident was intended to halt port operations, impacting the livelihoods of the truck drivers, stevedores, and other workers at the port, and as a result, caused the congestion and backlog of imported and exported goods during the month of February. As the port authority has a federal responsibility to ensure the safe and efficient movement of Canada's trade through the port, we obtained a court order issued by the Supreme Court of British Columbia to

• Conduct ongoing engagement with customers around the world, to maintain connections, provide port updates, and answer questions • Maintain a collaborative program with terminal operators, including working groups and a steering committee, to address matters of common interest • Maintain an office in Shanghai, China to conduct trade meetings with key customers, governments, and trade agencies in foreign markets

- COVID-19 changed how we engage with customers locally, nationally, and internationally, from in-person to online. Despite this challenge, the port authority

Effective workforce

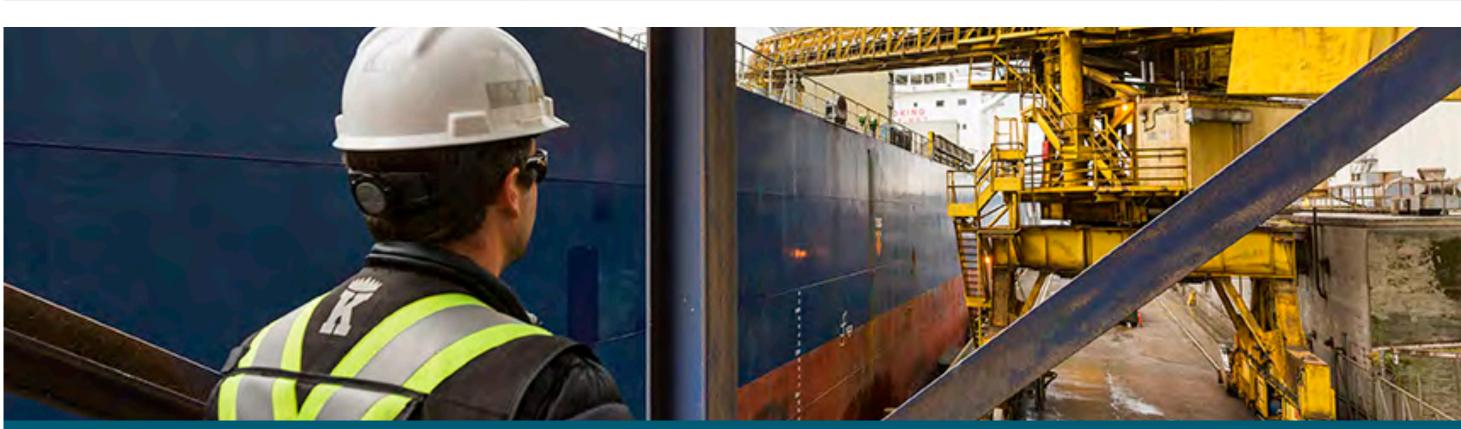
A skilled and productive workforce is critical to enabling the safe, efficient, and reliable movement of goods through the Port of Vancouver. This workforce, predominantly employed by other companies, undertakes a wide range of jobs, including piloting vessels, unloading and loading ocean carriers, operating cranes, driving trucks, and working in administration offices. Keeping workers safe and supporting their well-being are the foundations of a productive and effective workforce.

Ports are generally unionized work environments. Long-term collective agreements are critical to ensuring labour stability, preventing disruptions to port operations, and making the port more attractive to international trading partners.

Historically, the port workforce has had a low representation of women and other diverse groups. Creating an inclusive work environment and a diverse workforce, and bringing together a wide range of skills, experiences, and perspectives can enhance the port's overall performance and build stronger relationships with stakeholders.

About this focus area

Subtopics	Interested groups	What we've heard from stakeholders	Strategic priorities	Key risks
Labour force availability and stability Worker health, safety, and wellness Diversity and inclusion	Port authority employees Major shippers Service providers Terminal operators and tenants	Monitor stability of labour relationships to avoid supply chain disruption Support availability and diversity of labour to maintain supply chain efficiency and reliability Adopt supply chain innovation while minimizing impacts on existing workforce Provide training and education for skills upgrading Uphold safe working conditions for port labour	Build a more connected and engaged culture to drive operational excellence	Strike or similar disruptive action Large-scale health and safety incident Epidemic or pandemic event leading to operations and/or trade disruptions



Labour force availability and stability

Our approach

As a port authority, we do not control or dispatch labour at the Port of Vancouver, and we are not involved in the negotiation of long-term collective agreements for the general workforce that keeps goods moving through the port. We support an effective workforce by leading by example through strong collaboration between our management and the International Longshore and Warehouse Union Canada, who represents our unionized employees as well as workers across the port.

British Columbia Maritime Employers Association

The British Columbia Maritime Employers Association (BCMEA) represents shipowners and agents, stevedores, and terminal operators on Canada's west coast, and promotes the stability and reliability of the Port of Vancouver. The BCMEA oversees the recruitment, training, and daily dispatch to terminals of workers belonging to the International Longshore and Warehouse Union (ILWU). The association runs a facility to provide training in 36 waterfront job categories, and negotiates and administers two collective agreements between members and six union locals representing approximately 55 waterfront employers—and, by extension, the more than 6,000 men and women who work for them.

The BCMEA's Annual Report highlights labour diversity, training investments, and annual statistics.

Performance

COVID-19 placed unprecedented challenges on many of our supply chain partners due to new health and safety restrictions and impacts on their business revenues. While not a formal part of our mandate, we took a proactive approach to help our supply chain partners by:

- Researching, developing, and implementing a rent-relief strategy to help some of our tenants deal with the impacts on their business
- Offering the trucking community a free lunch program, as well as additional services and facilities, to support drivers and thank them for continuing their essential work
- Deferring a proposed infrastructure cost recovery fee until January 1, 2022 to provide some economic relief to all users of the port



Worker health, safety, and wellness

Our approach

Work at the port, by its nature, can expose workers to potential safety hazards. Various jobs require the use of heavy machinery or high-voltage electricity, working at extreme heights or in confined spaces, and other complex tasks. All port tenants are required to abide by applicable legislation and regulations, including having their own health and safety management systems.

While the majority of port workers are not employed or overseen by the port authority, we take steps to minimize and eliminate safety risks and health hazards for port authority employees. Our comprehensive health and safety program supports a safe work culture and identifies potential issues to prevent personal injury to, or illness of, port authority personnel and contractors. We also take steps to improve the safety performance of port authority-led infrastructure projects by:

- Including a safety pre-qualification process as a requirement of our procurement processes for contractors working on relevant projects led by the port authority • Hiring independent safety auditors for port authority-led projects throughout the region
- Monitoring incident reports to find opportunities to increase safety in and around infrastructure projects managed by the port authority
- Performance

Keeping our workforce safe has always been our first priority, but the COVID-19 pandemic created additional challenges. Our response was driven first and

foremost by a strong focus on ensuring the health and safety of all port authority employees, with an increased focus on mental well-being, and an individual approach to working with employees based on their personal circumstances during this time.

In 2020, we:

- Established a COVID-19 task force and dedicated internal communication channels to ensure all employees had access to critical information about our business as well as accurate updates about COVID-19 from the provincial health officer of B.C. • Developed a comprehensive safety plan that included a work-from-home program, technological support, and additional safety requirements for employees
- operationally required to work on-site • Created a COVID-19 resiliency team—which consisted of team members from human resources, marine operations, safety departments, and the

International Longshore and Warehouse Union—to manage safety and mental health support for workers, as well as the implementation of well-defined

protocols to rapidly, effectively, and confidentially deal with any event of a COVID-19 exposure on any of our sites Two COVID-19 cases were reported by port authority employees who had been required to work on-site, but no workplace transmissions occurred.

In 2020, the most common injuries for port authority employees and port-led infrastructure project contractors were the result of slips, trips, and falls. Health and safety data for port authority employees and contractors is located in the corporate performance data section of this report.



Our approach

engagement with our employees. In 2020, we:

We have embarked on a journey to be a leader in diversity and inclusion, and are focused on creating an inclusive, diverse, and supportive work environment. We welcome a diversity of backgrounds, perspectives, and experiences within our teams, and are committed to providing all our workers with an environment where

everyone is treated with respect and dignity. Performance

While COVID-19 made the implementation of certain initiatives more challenging, we continued to advance our diversity and inclusion work through online

- Conducted focus groups and employee consultation with 28 employees to identify barriers to diversity and better understand individual perspectives • Implemented an education and awareness program with workshops focused on disability inclusion, Indigenous awareness, mental health and resilience, and respect in the workplace
- survey with questions designed to create a more complete understanding of our employees' individual situations We measure the percentage of women in our workforce as one of our sustainability performance indicators. In 2020, 53% of our employees were women.

• Surveyed all employees on workforce composition, launched a campaign to educate employees on disabilities, and rolled out a supplementary workforce

Further data on the diversity of the port authority's workforce can be found in the corporate performance data section of this report.

In 2021, we will develop:

- An updated three-year equity plan—required under the <u>Employment Equity Act</u>—that identifies areas of improvement within four designated groups: women, people with disabilities, Indigenous peoples, and visible minorities

• An accessibility plan—required under the Accessible Canada Act—to create a barrier-free environment for people with disabilities; while the federal

government has not yet released regulations for this plan, we are proactively developing our own plan as an appendix to the equity plan, which will advance our work in this area • A new diversity checklist for recruitment that will help measure progress made over the year while continuing to educate and work with our managers during

the hiring process

Leading for change In 2020, Robin Silvester, president and CEO of the Vancouver Fraser Port Authority, became co-chair of the Presidents Group—a British

on this advisory committee that champions for more accessible and inclusive workplaces throughout the province.

Columbia-based organization that creates employment opportunities for people with disabilities. Robin joins other change-driven business leaders

Strategic investment and asset management

As the world's population grows, trade will continue to increase, requiring ports and port regions to respond accordingly to keep goods moving. Trade through the Port of Vancouver is forecasted to grow at a rate of roughly 3.5% annually over the next four years, driven by a growing demand for grain, potash, and coal commodities, as well as growth in cargo moved in containers.

Preparing the port to handle growing trade contributes to the prosperity of the Canadian economy by providing Canadians and Canadian businesses with access to global markets. Our biggest challenge in the Metro Vancouver area is the limited supply of industrial land available to support all this growth. As a result, we continue to advocate for the protection of the remaining supply of trade-enabling industrial land in the Metro Vancouver region.

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About this tocus area					
Sub-topics	Interested groups	What we've heard from stakeholders	Strategic priorities	Key risks	
Land use	Indigenous groups	Increase transparency of, and consultation on,	Anticipate, deliver, and optimize land supply to	Suitable land not available to accommodate trade	
Infrastructure delivery	Communities	infrastructure and land management decisions	support sustainable gateway growth in key sectors	growth	
	Governments	Secure land and develop	Anticipate, select, and	Cost overruns on major projects	
	Non-governmental	infrastructure to meet long-	deliver new and repurposed		
	organizations	term demand for trade	capacity to meet new sector demand	Inability to conclude commercial agreements for	
	Service providers	Optimize use of existing land before acquiring new		major projects	
	Terminal operators and tenants	land		Ineffective project planning	
		Ensure port development			
		does not infringe upon agricultural lands			
		Balance economic,			
		environmental, and social			
		objectives in a transparent way			



The port authority manages the development of lands and waters in our jurisdiction through our land use plan, which sets out allowable and possible uses of

Our approach

port lands and waters, and guides our decision making. Metro Vancouver is one of the most competitive real estate markets in the world and the demand for industrial land outstrips supply. Our efforts to acquire industrial lands for trade-enabling use are therefore met with intense competition for scarce lands and rapidly escalating land values.

To address industrial land scarcity and optimize land use, we: • Work with terminal operators to develop strategies to intensify the use of current port lands

• Acquire land to accommodate future port-related activities, focusing on sites near water and truck and rail corridors

- Advocate with governments for the protection of industrial land parcels with good access to shipping channels, truck routes, or rail corridors, and in close proximity to existing port holdings
- Engage in multi-party discussion with key stakeholders on the management of lands in the region to protect the remaining stock of industrial and trade-
- enabling land
- Performance

trends critical to Canada's growing trade. The update involved a two-phase engagement process to hear from local municipalities, Indigenous groups,

Land use plan In 2020, we reviewed our existing land use plan, originally adopted in 2014, and updated it to reflect evolving policy directions and current and future market

topics. Updates to the land use plan include: Addition of seven policy directions • Changes to the land use designation of 21 land and water locations • Removal of 10 implementation measures that were delivered since 2014; these measures demonstrate the port authority's commitment to acting on the

government agencies, environmental organizations, businesses, industries, and members of the public—both in person and virtually—for their feedback on key

• Addition and integration of the port authority's Indigenous consultation principles, flood mitigation policies, and transportation infrastructure updates

directions established in the plan

- Addition of nine new implementation measures
- The updated land use plan was adopted by the Vancouver Fraser Port Authority Board of Directors on December 8, 2020. We anticipate the next substantial update to the land use plan will be in about five or six years. In the meantime, the port authority will continue to bring forward
- amendments to the land use plan on a periodic basis to account for any new land acquisitions or dispositions of existing lands. **Industrial land**

provide information on trade-enabling land availability, one of our sustainability performance indicators. Updates to the study, expected to be complete in 2021, will refresh the supply and demand analysis to identify what industrial land exists to support expected growth over the next decade while providing a greater understanding of trends and challenges. The results of the study will be used to continue advocating for the protection of industrial land and, more specifically, of trade-enabling industrial lands in the region.

In 2021, the port authority will also continue to work with representatives from the Industrial Lands Strategy Task Force—Metro Vancouver member jurisdictions,

the provincial government, TransLink, and the private sector—to advocate for implementation of the recommendations set out in the Regional Industrial Lands

In 2020, the port authority initiated an analysis of trade-enabling lands in the Metro Vancouver region to update a previous study completed in 2015 and to

Strategy. We will also work participate in related regional planning efforts such as Metro Vancouver's 2020 Industrial Lands Inventory and Metro 2050 Regional Growth strategy. **Land acquisition** Continued population and employment growth in the geographically constrained Metro Vancouver region made it challenging for the port authority to acquire

additional land in 2020. The supply of available industrial land for purchase was limited and competition for sites drove values higher, with market prices

increasing on a monthly basis. Despite these challenges, the port authority was able to secure conditional interest in 20 acres of industrial land in the region.

port.

Our efforts to acquire land in 2021 will continue with the identification and assessment of appropriate sites for trade-enabling use. Along with these efforts, we

will continue to undertake necessary preparation activities and work with others to enhance the use of our existing industrial lands to better support trade in the



Secure funding for projects from government • Conduct forecasts, feasibility, engineering, and environmental studies; submit permit applications; seek regulatory approvals; and build and deliver port

of goods and ease the impacts of growing trade on local communities

found here. Potential community impacts and our programs to manage these can be found here.

infrastructure to increase the capacity of the port • Work with terminal operators and tenants to optimize existing facilities, build new ones, and improve rail and truck corridors

• Collaborate with government, industry, and Indigenous groups to identify, prioritize, and deliver infrastructure projects beyond the port that improve the flow

- Proactively undertake projects to enhance habitat in the region as a means of offsetting effects from port infrastructure development, as part of our Habitat Enhancement Program Infrastructure development has impacts on both the environment and communities. Potential environmental impacts and our approach to managing them can be
 - Moving goods better, together: Gateway Transportation Collaboration Forum

The Gateway Transportation Collaboration Forum—established in 2014—is a collaborative effort to ensure the Vancouver gateway is ready to manage Canada's growing trade. Its members are the port authority, the B.C. Ministry of Transportation and Infrastructure, TransLink, Transport Canada, and the Greater Vancouver Gateway Council.

Performance

In 2020, \$241.3 million of port authority capital investment was put towards infrastructure projects, including the projects listed below. The following projects

bottlenecks impeding the growth of trade while addressing the community impacts of goods movement and population growth. This strategy consists of

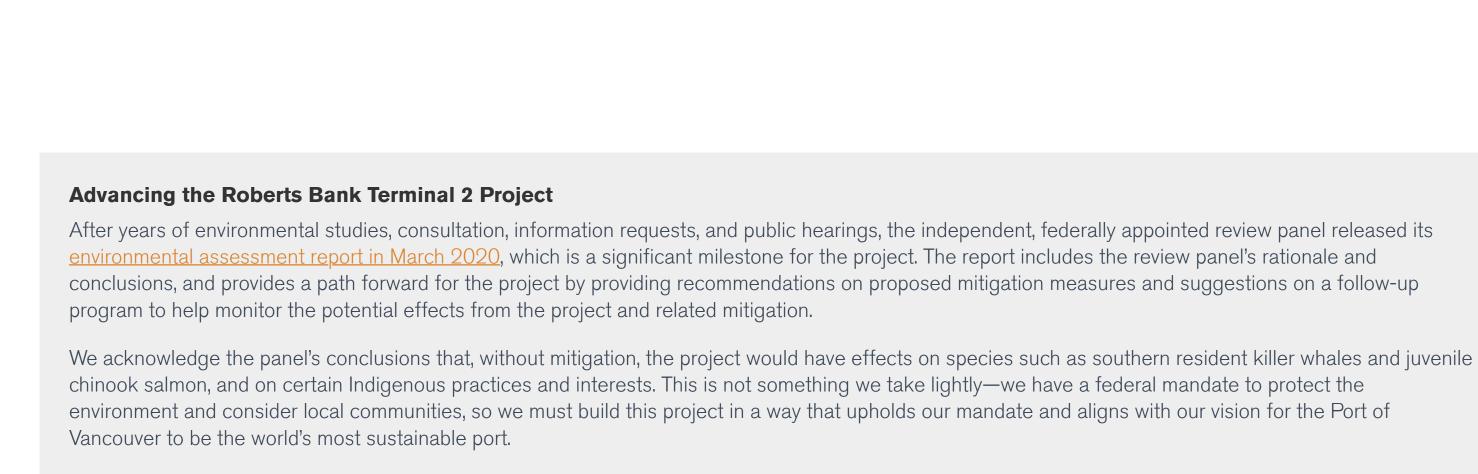
helping to advance and fund projects that help get Canadian goods to market, grow the economy, and protect safety and mobility within communities.

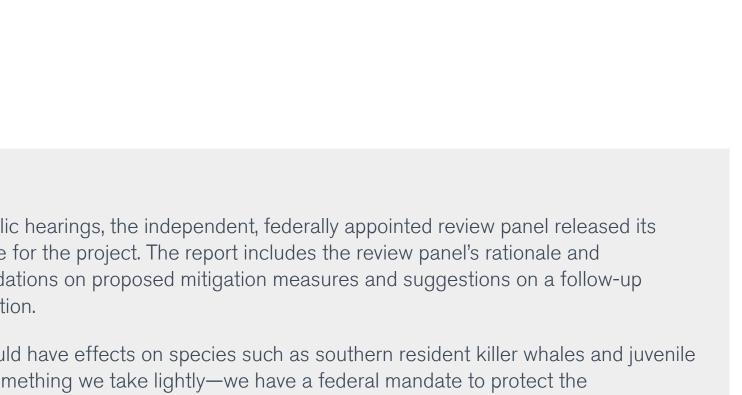
Greater Vancouver Gateway 2030 is the Gateway Transportation Collaboration Forum's strategy for smart infrastructure investment to remove

Centerm Expansion Project and South Shore Access Project

Terminal and facility projects

were ongoing or completed in 2020.





Roberts Bank Terminal 2 Project

The panel agreed with our assessment that the location of this project is the best possible option to meet the anticipated demand for trade with Asia, and that the purpose of the project is consistent with Canada's role as a trading nation. The panel agreed that the benefits of the project would extend to the City of Delta, Metro Vancouver, British Columbia, and Canada because of the employment, business opportunities, and economic development the project would generate.

Road and rail projects

Commissioner Street Road

and Rail Improvements

Portside/Blundell Road Improvements

If approved, the project would inject more than \$2 billion in capital investment to the economy and would create over 12,000 construction jobs and over 12,000 direct and indirect jobs supporting ongoing operations. Above all, Roberts Bank Terminal 2 will help play a critical role in meeting Canada's increasing demand for goods shipped in containers over the coming decades and help keep the Port of Vancouver competitive on the global stage.

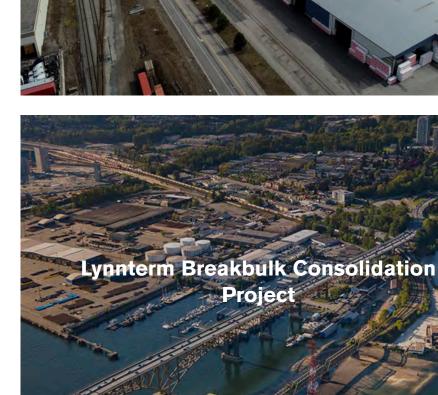
Following the release of the panel report, we are refining our mitigation measures and working with Indigenous groups and federal agencies to explore ways to

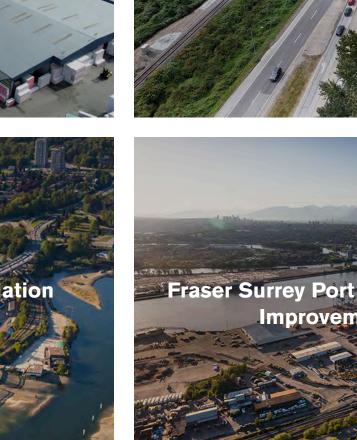
sandpipers, and explored additional offsetting projects with Indigenous groups. The port authority is confident that, with the recommendations of the review

reduce potential project-related effects. For example, in 2020 we continued important environmental studies on various species such as salmon and

panel and additional information being compiled to respond to the minister's information request, project-related effects can be mitigated.

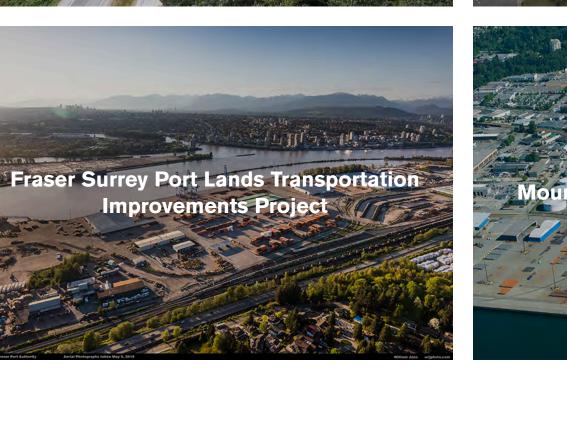
Coquitian Rail Corridor Improvements





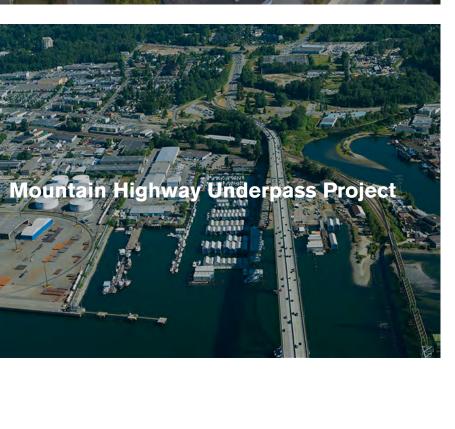
Deltaport Truck Staging

Facility



Pitt Meadows Road and Rail

Improvements Project



Burnaby Rail Corridor

Improvements Project

Westwood Street Rail Crossing **Improvements Project**

Habitat restoration projects

This includes:

Our Habitat Enhancement Program was developed as part of a broader strategy to manage growing trade, acknowledging that new or enhanced habitat may be needed to offset effects from port development. Enhancing fish and wildlife habitat also supports our approach to sustainability. As part of this program, we have an agreement with Fisheries and Oceans Canada that allows us to accumulate, or bank, credit for habitat that we have built in advance of future needs and that has been proven to function as intended. That habitat can then be used to offset the effects of port development, with approval from Fisheries and Oceans Canada, and in collaboration with Indigenous groups.

We conduct annual monitoring at all completed habitat project sites to ensure the ecological objectives are being met. Details of our major habitat enhancement

projects to date are in the table below. As of December 31, 2020, there were 13 sites in our habitat bank, and the value of habitat credits was 95,534 square metres.

Habitat bank balance Major habitat enhancement **Habitat type** Location Year of Habitat added or

• 76,171 m² marine habitat credits (increase from 3,307 in 2018)

• 14,701 m² of freshwater habitat credits (no change from 2018)

• 4,662 m² of brackish marsh habitat credits (no change from 2018)

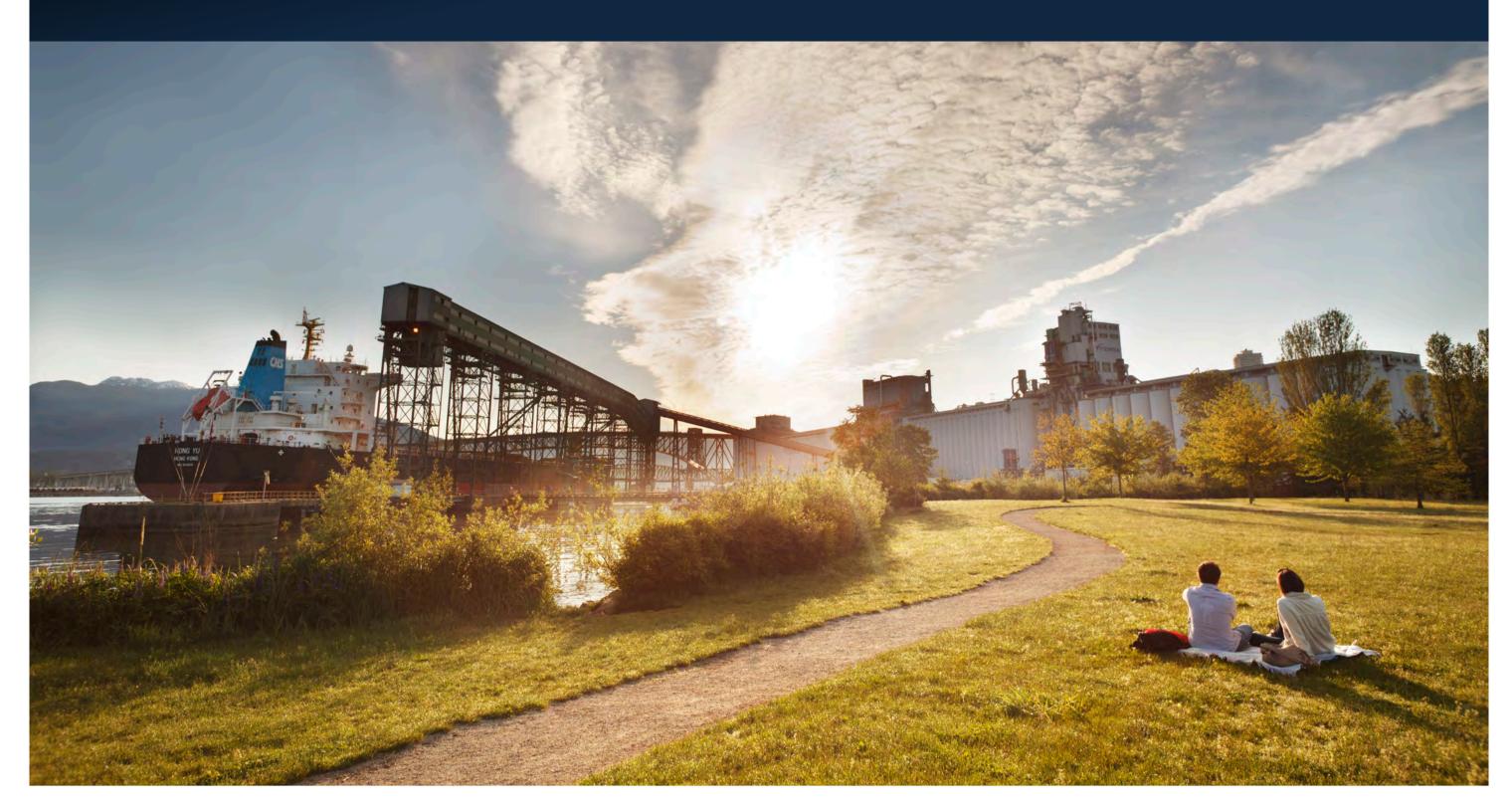
projects		completion		withdrawn (m 2)
Gladstone Park Tidal Marsh	Fraser River North Arm	1993	Brackish habitat, tidal marsh	+3,181
Riverfront Park Tidal Marsh	Fraser River North Arm	1993	Brackish habitat, tidal marsh	+1,481
Timberland Basin Habitat	Fraser River	1993	Freshwater habitat, tidal marsh, tidal mudflat	+3,923
Salt Marsh Restoration	Roberts Bank, Boundary Bank	2014	Marine habitat, salt marsh	+62,992
Glenrose Tidal Marsh Project	Fraser River	2014	Freshwater habitat, tidal marsh	+10,778
New Brighton Park Shoreline Habitat Restoration Project	Burrard Inlet, Vancouver	2017	Marine habitat, salt marsh, tidal channel, marine riparian	+9,872
Maplewood Marine Restoration Project	Burrard Inlet, North Vancouver	In progress	Marine habitat, rock reef	+3,307
The following habitat enhancement proje	cts were ongoing in 20)20.		





Healthy environment

A sustainable port maintains a healthy environment, focusing on healthy ecosystems, climate action, and responsible practices.



Strong participation from industry to better understand and reduce the cumulative effects of shipping activities on whales

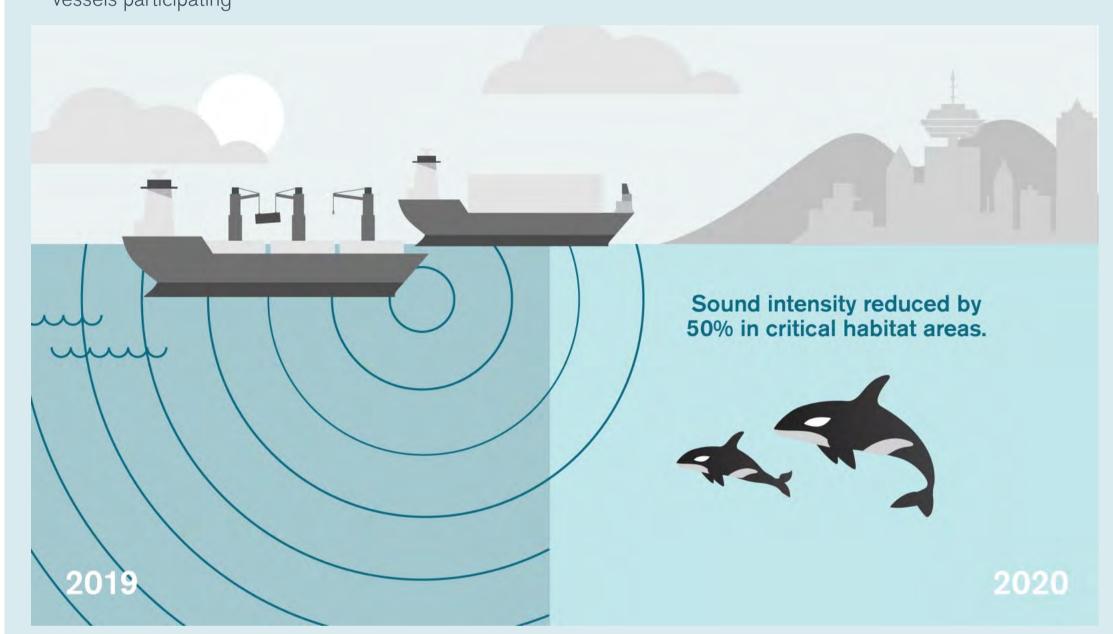
The iconic southern resident killer whale (SRKW), which is one of the endangered species within the port authority's jurisdiction, is of significant cultural importance to British Columbia and Indigenous populations. As commercial shipping lanes intersect with the critical habitat areas of these whales, their ability to hunt and communicate via echolocation can be compromised due to the underwater noise generated by vessels.

To better understand and reduce the effects of underwater noise on at-risk whales, the Vancouver Fraser Port Authority-led <u>Enhancing Cetacean Habitat and Observation (ECHO) Program</u> coordinates voluntary underwater noise mitigation initiatives in the Salish Sea in collaboration with the marine transportation industry, Indigenous communities, government agencies, environmental groups, and scientists.

In May 2019, the Vancouver Fraser Port Authority, Pacific Pilotage Authority, and five marine transportation industry partners entered into a *Species at Risk Act* conservation agreement with the Government of Canada to support the recovery of southern resident killer whales. 2020 marked the completion of the second year of the conservation agreement.

Highlights of the program's accomplishments in 2020 included:

- Achieving all-time-high participation rates in the Strait of Juan de Fuca voluntary lateral displacement (82%) and the Haro and Boundary Pass voluntary vessel slowdown (91%)
- Reducing sound intensity by nearly 50% during the slowdown in Haro Strait and Boundary Pass, and by up to 68% during the Strait of Juan de Fuca lateral displacement of tug traffic
- Coordinating a new voluntary slowdown trial in Swiftsure Bank, a known SRKW foraging area outside of piloted areas, with 861 (82%) large commercial vessels participating



Looking ahead, we will continue to work collaboratively with ECHO Program partners and advisors towards the program's long-term goal of implementing measures that result in a quantifiable reduction in threats to at-risk whales from commercial shipping activity.

Underwater noise reduction initiatives

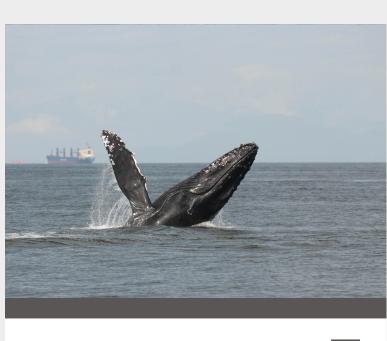
Initiative	Participa	tion rate	Reduction in ambient noise		
	2019	2020	2019	2020	
Voluntary vessel slowdown in Haro Strait and Boundary Pass	82%	91%	3.0 dB ¹	2.5 dB ¹	
Voluntary lateral displacement of tug traffic in Strait of Juan de Fuca	76%	82%	~4-7 dB ²	~5 dB ³	
Voluntary vessel slowdown in Swiftsure Bank trial	N/A	82%	N/A	~2 dB ⁴	

Note: Reduction in ambient noise is measured in decibels (dB), a logarithmic unit used to measure underwater sound.

- ¹ Median reduction in broadband ambient noise measured during slowdown trial at Lime Kiln hydrophone, Haro Strait.
- ² Reduction in ambient noise for each tugboat transit, measured during trial at Jordan River hydrophone, Strait of Juan de Fuca.

 ³ Reduction in ambient noise measured at Fisheries and Oceans Canada's Jordan River hydrophone, for each tug that alters its route by 1km or more away from the hydrophone
- ⁴ Median reduction in broadband ambient noise during the slowdown, compared to a baseline period immediately preceding the slowdown, as analyzed by Fisheries and Oceans Canada using a hydrophone positioned near the outbound shipping lane at Swiftsure Bank

Discover more



Healthy ecosystems

Water quality Biodiversity



Climate action

Air quality and greenhouse gas emissions Climate adaptation



Responsible practices

>

Sustainable infrastructure
Responsible supply chain practices

Healthy ecosystems

Healthy ecosystems provide essential ecological, economic, and cultural benefits, from providing clean air, land, and water to offering renewable resources and recreational experiences. Loss of biodiversity reduces the resilience of ecosystems, diminishes their productivity, and limits their ability to support diverse life forms.

Globally, biodiversity is threatened by habitat destruction and degradation, invasive species, deforestation, and climate change impacts such as rising sea levels, ocean acidification, increased air and water temperatures, and changes to seasonal precipitation. These threats have resulted in a rate of species loss that is 1,000 times greater than at any other time in recorded human history¹.

The Port of Vancouver operates in an ecologically rich region with one of the highest levels of biodiversity in North America². Within our jurisdiction are two national wildlife areas, five provincial wildlife management areas, three designated rockfish conservation areas, and designated critical habitat for southern resident killer whales. Port operations and infrastructure development can cause habitat loss and degradation, introduce invasive species, impact water quality, and increase noise and light, which can all affect ecosystem health and biodiversity.

Of particular concern are the over 30 federally listed at-risk species that are, or that are likely to be, present in Burrard Inlet, the Fraser River, or other areas within our jurisdiction, and species with the potential to be designated at risk, including the southern resident killer whale, great blue heron, and little brown bat. Under the federal Species at Risk Act, species identified as at risk are legally protected from disturbance on federal lands. The designation of critical habitat for these species or the listing of new species has the potential to create constraints on port operations.

¹ United Nations Environment Programme

https://www.unep.org/news-and-stories/story/2020-crunch-year-biodiversity-and-climate-emergencies

² Province of British Columbia, Protecting B.C.'s Biodiversity

https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/biodiversity

About this focus area

Subtopics	Interested groups	What we've heard from stakeholders	Strategic priorities	Key risks
Water quality	Indigenous groups	Minimize and mitigate impacts of port operations	Protect and enhance port environmental health	Spill in harbour or river
Biodiversity	Communities Governments	and development on aquatic and terrestrial species	CHARTEMENTAL	Impacts on environment from port operations and
	Non-governmental organizations	Provide greater transparency on port-related environmental impacts Address cumulative environmental and socio- economic impacts of port growth; consider cumulative impact analysis for new projects		Inadequate project and environmental permitting review process and/or decisions Loss of long-term relationships with community and Indigenous groups
		Minimize underwater noise Improve transparency and speed of project permitting and environmental review process		
		Consider the potential impacts of increased trade on water quality and marine		

Our approach

The Port authority leads, supports, and develops a wide range of programs to reduce and mitigate the impacts of port operations on the environment in and around the port. A full list of potential impacts of port activities across land and water, and our approach to managing these impacts, can be found here. Our efforts are directed toward the areas where we have either control or influence, starting within our jurisdiction. In particular, we focus on managing impacts on biodiversity and water quality, which are two key areas that contribute to the overall health of local ecosystems.

mammals

Project and Environmental Review process

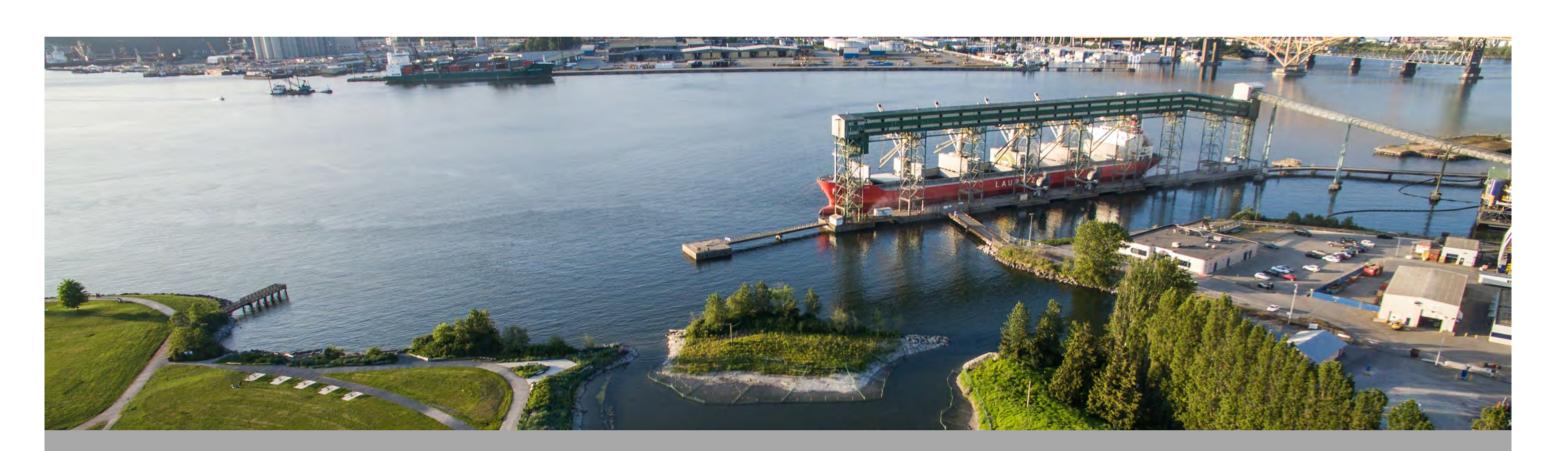
Our Project and Environmental Review (PER) process, which is one of the tools we use to fulfill our environmental stewardship obligations under the Canada Marine Act and Impact Assessment Act, is a key component of our management approach to healthy ecosystems.

Before conducting any physical works or activities on port authority-managed lands and waters, we require tenants to first obtain a permit. We review all project applications to determine the potential for environmental impacts, considering any residual adverse effects of a project in terms of magnitude, geographic extent, duration, frequency, and reversibility.

We will not authorize or allow a proposed project to proceed if it is likely to result in significant adverse environmental effects. If a project is approved, our permit will include conditions designed to avoid or mitigate potential impacts. Where necessary, we work closely with permit holders to resolve instances of non-compliance with project permit conditions.

In 2019, we updated our PER process to meet the requirements of the *Impact Assessment Act*. Throughout 2020, we:

- Completed 175 project and environmental reviews
- Conducted 14 preliminary project reviews, whereby applicants receive preliminary feedback from port authority staff to help them plan their project in a way that minimizes impacts
- Conducted 469 desktop compliance reviews of self-reports, environmental monitoring reports, and independent monitoring reports, as well as 15 compliancerelated site visits



Water quality

and creeks. These waters are subject to a wide range of impacts related to terminal operations, infrastructure development, and the shipping of goods through local waters, which can result in spills, discharges, and stormwater runoff, negatively affecting water quality and biodiversity.

Ecosystem health and water quality are closely interconnected. Our jurisdiction includes more than 16,000 hectares of water, from rivers and ocean to estuaries

Our approach

With many source points throughout our jurisdiction for pollutants and other contaminants to enter local waters, we focus our mitigation measures on ongoing monitoring and management of water quality. Our approach includes:

and spills • Reviewing proposed development and construction projects to assess potential impacts on water quality and applying permit conditions to mitigate impacts

• Following stormwater pollution prevention plans for port authority-managed facilities; these plans incorporate best practices for limiting stormwater pollution

• Conducting desktop compliance reviews and site visits during construction activities to ensure tenants are complying with water-related permit conditions Additional information on spill management can be found on our website.

Performance

In 2020 we: • Undertook conceptual design and development of the aquatic ecosystem health program for Burrard Inlet, with a goal to track Burrard Inlet's ecological

- health over time • Updated stormwater pollution prevention plans for our three port-operated facilities to ensure that best practices for limiting stormwater pollution are being
- followed

In 2020, we began work to develop an aquatic ecosystem health index to help the port authority better understand, monitor, and manage portrelated environmental effects in Burrard Inlet. As part of this work, we completed a ShoreZone foreshore habitat survey and mapping in Burrard

Aquatic Ecosystem Health Index

Inlet to assess the existing habitat and to establish a benchmark from which to measure and identify change in habitat over time. Due to challenges posed by the global pandemic, we postponed fieldwork and data collection efforts in 2020. In 2021, we hope to work with our partners and advance project development.



Infrastructure development and ongoing port operations can cause habitat loss and degradation, introduce invasive species, and harm at-risk species—all of which threaten overall biodiversity. Underwater noise from port-related sources, including ship movement, development on port lands, and in-water construction

can affect marine mammals. Invasive species, which can make their way into the Lower Mainland by any mode of transportation, are considered the biggest threat to native biodiversity after habitat loss. Our approach

We take steps to minimize and mitigate the negative impacts of port-related activities on biodiversity. We do this by:

• Helping to educate our tenants on our project and environmental permitting process to reduce impacts from construction and development projects on biodiversity

- enforcement program • Taking steps to reduce the negative impacts on marine mammals from port-related sources of underwater noise through our ECHO and
- **EcoAction** programs and **PER** process • Designating certain areas of our jurisdiction for habitat conservation, enhancement, and restoration in our land use plan

• Conducting desktop reviews and site visits to confirm compliance with environmental mitigation permit conditions through our compliance, monitoring, and

- Identifying and understanding critical habitat for the protection of federally listed at-risk species that are likely to be present within our jurisdiction, such as the southern resident killer whale, great blue heron, and little brown bat
- Minimizing the introduction and spread of invasive species throughout our jurisdiction, by collaboration with government, setting PER permit conditions, and
- conducting treatment programs for invasive plants
- Performance

and Environmental Review process

- In 2020 we: • Conducted a targeted treatment program for invasive plants on port lands, and managed and monitored the spread of invasive plants through our Project
- Monitored presence of the invasive European green crab in collaboration with Fisheries and Oceans Canada and the Friends of Semiahmoo Bay Society

In 2020, we again partnered with the Fraser River Sturgeon Conservation Society and the provincial Ministry of Forests, Lands, Natural Resource

White sturgeon habitat assessment

Operations and Rural Development to better understand the distribution and seasonal presence of white sturgeon in the lower Fraser River, and to identify locations and habitat attributes critical for their survival.

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While white sturgeon are currently not recognized as an endangered species under the federal Species at Risk Act, their numbers within the

Fraser River have been continuously declining. One of the threats facing their habitat is the port authority dredging, which has the potential to strike and harm adult and juvenile white sturgeon, as they reside predominantly on the river bottom. Over the next several years, we will continue to collect data on white sturgeon and their habitat in order to better understand and reduce the

impact of our operations on this species and to guide potential mitigation measures.

Climate action

The scientific consensus is clear: climate change caused by greenhouse gas emissions from human activities has caused a 1°C rise in temperatures over preindustrial levels¹. Physical impacts from climate change are already being experienced through rising sea levels and extreme weather events. Climate science indicates that global warming must be limited to 1.5°C above pre-industrial levels to avoid catastrophic effects on the environment, biodiversity, human health, and the economy.

Fossil fuels, in particular diesel and marine bunker fuel, currently provide most of the energy for the commercial transportation sector globally. Combustion of these fuels releases air pollutants that impact human health and greenhouse gas emissions that contribute to climate change. While maritime transportation is one of the most efficient means of moving goods, global shipping contributes almost 3% of global greenhouse gas emissions annually².

growth in Canadian trade. Air quality in the Georgia Basin-Puget Sound region is generally good, but higher concentrations of air pollutants can be found near emissions sources such as major transportation corridors. Research suggests that the health impacts and the associated economic costs of these pollutants are much higher than previously thought. A fundamental shift to low-carbon energy sources and the adoption of clean technologies is required to significantly reduce portrelated greenhouse gas emissions and air pollutants, and to help contribute to meeting Canada's climate commitments, which will reduce the severity of climate change impacts.

At the Port of Vancouver, greenhouse gas emissions per tonne of cargo have decreased, although total port-related greenhouse gas emissions are increasing due to

Climate change impacts, such as sea level rise and extreme weather, pose a threat to coastal cities and ports. Long-term sea level rise, in combination with extreme rainfall and storm surges, is expected to cause widespread flooding in the region; Vancouver is one of the most at-risk cities in the world. This presents a significant risk to port infrastructure and transportation corridors that are essential to enabling Canadian trade. Planning for and adapting to climate change impacts is critical to avoid disruptions to Canadian trade and to minimize impacts on coastal communities and marine ecosystems. ¹ Canada's Changing Climate Report, 2019

What we've heard from

stakeholders

Strategic priorities

Key risks

Interested groups

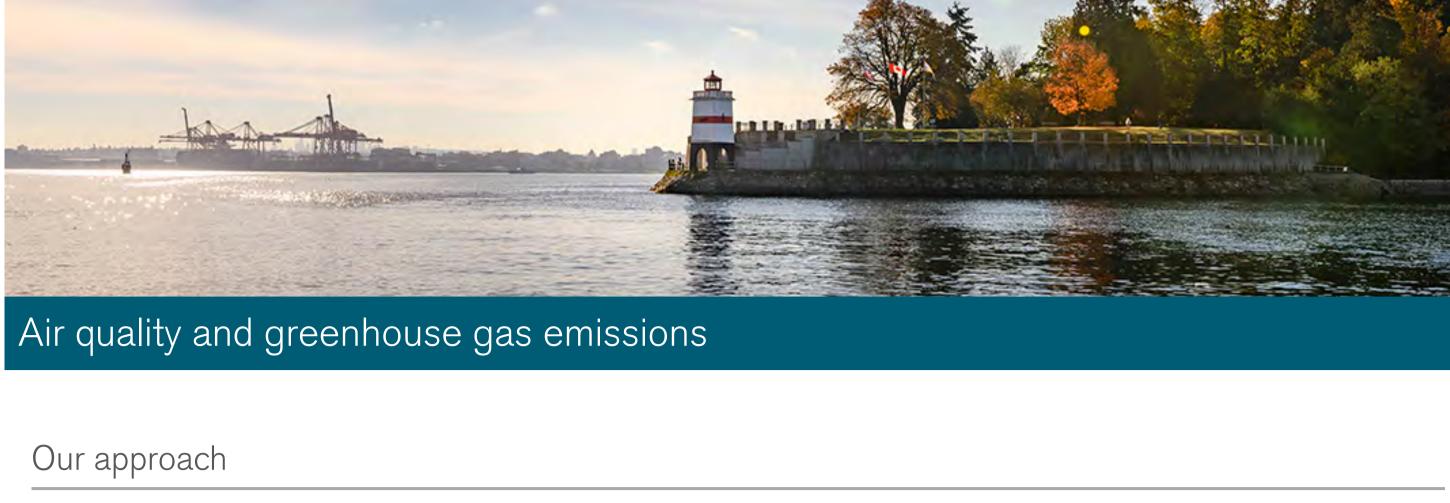
² Fourth IMO Greenhouse Gas Study, 2020 https://www.cdn.imo.org/localresources/en/OurWork/Environment/Documents/Fourth%20IMO%20GHG%20Study%202020%20Executive-Summary.pdf

https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/Climate-change/pdf/CCCR_FULLREPORT-EN-FINAL.pdf

About this focus area

Subtopics

Air quality and greenhouse gas emissions Climate adaptation	Indigenous groups Communities Governments Marine carriers Non-governmental organizations Service providers Terminal operators and tenants	Reduce port-related air emissions affecting air quality and contributing to climate change Integrate climate change adaptation and infrastructure resilience in port development and operational planning Accelerate the adoption of clean technology and alternative energy in port development and operations Incentivize green shipping and coordinate incentives with other global ports Set clear emission reduction targets	Protect and enhance port environmental health	Impact of port-related air emissions on human health and climate change Climate change impacts on port operations, including flooding from sea level rise and extreme weather events Loss of long-term relationships with community and Indigenous groups



The Northwest Ports Clean Air Strategy guides our management approach to climate action, which we advance through environmental programs and initiatives, outlined in the table below, and through collaborations with other ports, industry groups, and government. Realization of this vision will require unprecedented levels of collaboration with government and industry. We have identified three areas where this collaboration

temperature rise to 1.5°C.

reduce air pollutants by up to 90%

facilities to enable the use of natural gas or hydrogen

is needed: • Continually increase equipment efficiency and diesel engine age, and transition to lower-carbon interim fuels • Implement or expand initiatives that promote a transition to the most efficient and modern diesel engines with advanced emission controls that can

In 2020, we finalized the new Northwest Ports Clean Air Strategy with the ports of Seattle and Tacoma and the Northwest Seaport Alliance. The strategy's bold

vision is to phase out port-related emissions by 2050 to support cleaner air for local communities and to fulfill our shared responsibility to help limit global

• Promote the use of lower-carbon fuels such as renewable diesel, biodiesel, and liquefied natural gas Facilitate delivery of the infrastructure needed to support zero-emissions technology · Work with regional electric and gas utility companies alongside industry to plan for the infrastructure and fuels needed for lower-carbon and zero-

emissions technology, such as increasing electrical capacity to enable heavy-duty charging facilities and expansion of shore power, or introducing

- Promote early adoption of zero-emissions technology through testing and demonstrations, and through programs that reduce risk and costs • Advocate for government support to facilitate testing and demonstration of zero-emissions technologies and programs that support broader adoption of these technologies
- We lead by example through our own practices, and have committed to reduce our corporate greenhouse gas emissions by 40% by 2030, from a 2010 baseline, and achieve net-zero emissions by 2050. Since 2010, we have purchased carbon offsets to maintain the carbon neutrality of port authority operations. In 2018, we began including greenhouse gas emissions from our subsidiary, Canada Place Corporation (CPC), within our corporate emissions inventory, and

continued to invest in carbon offsets to maintain carbon neutrality of port authority operations, however not for CPC operations. We are re-evaluating our

approach to carbon offsets as we develop a strategy for reducing corporate emissions. More information about our corporate emissions is provided in the corporate performance data section of this report. Performance

In 2020 we advanced a suite of environmental programs and initiatives, which are outlined together with 2020 progress and 2021 planned actions in the table below: **Climate action initiatives** 2021 planned actions 2020 progress To improve tracking of greenhouse gas trends, we have **Port emissions inventory** Engage tenants and port users to obtain We prepare a detailed inventory of port-related air started to produce an annual snapshot of port-related and compile activity data to produce the greenhouse gas emissions to supplement the 2020 emission inventory, which will be emissions every five years to identify trends and prioritize actions. This inventory covers the primary comprehensive inventory conducted every five years completed in 2022

on-road vehicles, non-road equipment, and administrative operations

sources of air emissions at the port: marine, rail,

administrative operations		
Air quality monitoring We collaborate with regional government (Metro Vancouver) and other partners to monitor and continually improve understanding of the impact of port activities on local air quality	We continued to contribute financially to maintain an air monitoring station maintained by Metro Vancouver as part of the regional air monitoring network	Initiate a collaborative air quality study for the south shore of Burrard Inlet Launch a new air monitoring station in Vancouver's MacLean Park (partially funded by the port authority and managed by Metro Vancouver)
Climate Smart We partner with Climate Smart to create port- specific training, peer networking, and a reporting program for tenants that offers certification of their greenhouse gas measurement and reductions	We provided 14 tenants with funding to participate in the Climate Smart Initiative and facilitated continuation of the peer network to reduce greenhouse gas emissions	Continue to provide funding for our tenants to attain Climate Smart certification
Energy action In partnership with the regional electricity company, BC Hydro, we help port tenants access financial incentives to advance energy conservation measures and study the electrification potential of diesel-powered equipment	We continued to work with BC Hydro to conduct studies of constraints on future electrification of port activities on Burrard Inlet's south shore	Continue to assess the impact of electrification of port activities on the electrical grid and work with BC Hydro to plan upgrades needed to enable adoption of battery electric technologies in heavyduty transportation
EcoAction Program We offer the operators of the cleanest and quietest ships up to a 47% discount on port fees for meeting environmental best practices	We continued to increase the eligibility criteria to keep the program current with best practices; the number of eligible ships participating in our EcoAction Program decreased from 39% to 31.5%, in part due to the COVID-19 pandemic and the suspension of the cruise season	Adjust the program to better incent connection to shore power facilities and the use of alternative low-carbon fuels in support of the early achievement of International Maritime Organization greenhouse gas reduction targets
International Collaboration on Ship Emission Reductions We are leading a collaborative initiative with other port authorities, government agencies and non-governmental organizations to make it easier for marine carriers to access environmental ship incentive programs and infrastructure worldwide	We worked with industry partners to explore the potential for creating a dedicated global web platform for ship incentive programs and environmental infrastructure	We continue to explore partnership opportunities to advance the objectives of the International Collaboration on Ship Emission Reductions Initiative which include improving the environmental performance of maritime transport
Shore power We offer shore power connections at the Canada Place cruise terminal and the Centerm and Deltaport container terminals, which reduces emissions by allowing ships to connect to the hydroelectric grid while at berth	Due to COVID-19, we had no cruise ship calls and, therefore, no cruise shore power connections; only eight container vessels connected to shore power in 2020, which is likely due in part to COVID-19 safety protocols that limit the ability of engineers to board vessels	Continue developing plans for expansion of shore power facilities for other container and cruise berths, with the goal of having all applicable container and cruise berths equipped with shore power by 2030
LNG bunkering initiative We are working to facilitate the use of alternative marine fuels such as liquefied natural gas (LNG) to reduce air emissions from ships	We conducted a technical risk assessment of LNG bunkering for container vessels in the Port of Vancouver We studied the environmental performance of vessels and carbon intensity of fuel choices We updated the Port Information Guide and LNG Bunker Checklist to reflect industry best practices We participated in industry studies to improve understanding of future marine fuels such as hydrogen	Participate in development of international best practices for safety, and implement these practices or protocols in the port Undertake technical studies of LNG bunkering procedures for various ship types and locations throughout our jurisdiction Participate in industry studies to improve understanding of the environmental performance of LNG, bioLNG, synthetic LNG, and hydrogen as marine fuels
Truck Licensing System (TLS) We maintain minimum environmental performance requirements for container trucks accessing the port	Implemented new requirements for the 1,800 trucks licensed to access the port As of August 2019, all additions, replacements, and returning trucks in any TLS fleet must meet the new minimum requirement of a truck model year no older than 2014, with emissions controls equipment operating in compliance with federal emissions standards	Implement maximum truck-age restriction to further emissions reductions
Non-Road Diesel Emission Program We promote the phase-out of old diesel equipment in favour of new diesel equipment through a combination of fees and rebates that can reduce air pollutants by up to 90%	Conducted three rounds of consultation with government and industry on proposed changes to the program for 2021 through 2030, which include expanding fees to support achievement of the air strategy target of 80% of port equipment meeting Tier 4 emissions standards by 2020 (currently at only ~50%)	Continue consultation on the proposed program changes for 2022 through 2030 and begin implementing these changes
Clean technology initiative We are developing a new initiative in partnership with the Government of British Columbia to facilitate testing and demonstration of clean technologies in port-related activities	We worked with our partners to develop a plan for deploying several clean technology pilot projects that will test and demonstrate technologies such as alternative marine fuels and battery-electric Class 8 trucks	Initiate a series of clean technology demonstration projects for marine, terminal equipment, and on-road truck activities (some technologies to be delivered in 2022)
Collaboration		

The International Association of Ports and Harbours' Climate and Energy Committee We are an active participant on the International Association of Ports and Harbours' Climate and Energy Committee, one of three strategic committees established by this association to address global issues facing ports.

Yokohama.

Activities to date include:

anchorage

World Ports Climate Action Program

reduce the emissions of port operations

strategy and marine litter policy

Greenhouse gas emissions

by source and intensity

10,000

8000

6000

4000

2000

gCO₂e/tonne

commodity throughput

The committee is focused on advancing the clean energy transition and providing input to the global maritime policymaking body, the International Maritime Organization. Among the key initiatives that the committee worked on in 2020 and will continue to advance in 2021 are: • Partnering with the International Maritime Organization to develop and deliver workshops on shore power and other sustainable port best practices • Providing counsel to the International Maritime Organization's Marine Environment Protection Committee on the development of a greenhouse gas reduction

Collaboration is essential to making progress on climate action. In addition to advancing our own environmental programs and initiatives, we collaborate with

The World Ports Climate Action Program is a collaboration of 12 global ports working to accelerate the decarbonization of ports and shipping. Participating ports

The collaboration's efforts are advanced through five working groups focused on policy, the efficiency of the ship/port interface, power to ships at berth (shore

• Developing an interactive map outlining shore power accessibility at ports across the world, to encourage the use of electric power by ships at berth or at

• Creating an online index of emission-reduction strategies for cargo-handling equipment projects to educate port operators and authorities on how they can

• Streamlining port incentive programs to make it easier for ship operators to access incentives for reducing greenhouse gas emissions

include Antwerp, Barcelona, Gothenburg, Hamburg, Le Havre, Long Beach, Los Angeles, New York, New Jersey, Rotterdam, Valencia, Vancouver, and

other ports, government, and industry to reduce greenhouse gas and air quality emissions. These collaborations include:

power), sustainable low-carbon marine fuels, and decarbonizing cargo-handling facilities.

Examples of our collaborations to reduce greenhouse gas and air quality can be found here.

Port-related air emissions Greenhouse gas emissions, including carbon dioxide, methane, and nitrous oxide measured as carbon dioxide equivalent (CO2e), are increasing with growth in trade through the port. However, the intensity of port-related greenhouse gas emissions—measured as tonnes of CO2e per tonne of cargo—has decreased since 2010 and is expected to further decline, due to improvements in engine and equipment efficiency.

backcast emissions to 2010, and forecast emissions to 2030. An updated port emissions inventory for 2020 will be completed in 2022.

25,000,000

20,000,000

15,000,000

10,000,000

5,000,000

G

Energy usage by fuel type and

intensity

0.125

0.1

0.075

0.05

0.025

2025

2020

Gasoline

Propane

Natural gas

Marine gas oil

Electricity

Diesel

Measures port-related energy usage by fuel type and

intensity (per tonne of commodity throughput). Data is

taken from the 2015 Port Emissions Inventory,

Intensity

GJ/tonne of commodity throughput

The graphs below are produced using data from the 2015 port emissions inventory. The inventory uses detailed 2015 activity data to estimate 2015 emissions,

2020 2025

Marine sources

On-road sources

Non-road sources

Admin sources

Intensity

Measures port-related greenhouse gas emissions by

source and intensity (per tonne of commodity

Port Emissions Inventory, and includes emissions

associated with fuel and electricity used by marine and

throughput). Data is taken from the 2015

Rail sources

1,500,000

1,200,000

900,000

600,000

300,000

 tCO_2e

rail sectors, on-road vehicles, non-road equipment, and administrative operations. The emissions inventory uses detailed 2015 activity data to estimate 2015 emissions, backcast emission estimates to 2010, and forecast to 2030. The geographic boundary of the inventory captures port-related activities in the region, both within and beyond the jurisdiction of the port authority, as shown on page 10 of the 2015 Port Emissions In<u>ventory</u>. **Blue Circle Awards** Our Blue Circle Awards recognize shipping lines with the greatest fleet-wide participation in our EcoAction Program, and terminal operators and other tenants participating in our Energy Action initiative. Our 2020 Blue Circle Award winners were: **EcoAction** MSC Mediterranean Shipping Company **BC** Ferries (Canada) Inc. North Arm Transportation **COSCO** Shipping ONE - Ocean Network Express Evergreen Line

Saam Smit Towage

Westwood Shipping Lines

SM Line

Yang Ming

and includes fuel and electricity used by marine and rail sectors, on-road vehicles, non-road equipment, and administrative operations. The emissions inventory uses detailed 2015 activity data to estimate 2015 emissions, backcast emission estimates to 2010, and forecast to 2030. The geographic boundary of the inventory captures port-related activities in the region, both within and beyond the jurisdiction of the port authority, as shown on page 10 of the 2015 Port Emissions Inventory. **Energy Action** Cascadia Port Management Corporation Viterra Pacific Elevators Pacific Basin Shipping (Canada) Ltd.

road equipment, and administrative operations. The emissions inventory uses detailed 2015 activity data to estimate 2015 emissions, backcast emission estimates to 2010, and forecast to 2030. The geographic boundary of the inventory captures port-related activities in the region, both within and beyond the jurisdiction of the port authority, as shown on page 10 of the 2015 Port Emissions Inventory

Air pollutants by source and intensity (SO_x, NO_x, VOC,

PM2.5)

2020

Marine sources

On-road sources

Non-road sources

Admin sources

Intensity

Measures port-related air pollutants by source and

taken from the 2015 Port Emissions Inventory, and

intensity (per tonne of commodity throughput). Data is

includes emissions associated with fuel and electricity

used by marine and rail sectors, on-road vehicles, non-

Rail sources

200

160 **g/tonne**

120

80

40

of commodity throughput

25,000

20,000

15,000

10,000

5000

tonnes



projections.

Climate adaptation

minimize impacts on coastal communities and marine ecosystems.

Fednav

G2 Ocean

Hapag-Lloyd

Marine

"K" Line

Seaspan ULC

Hyundai Merchant

Our approach To better understand climate risks and prepare for climate change impacts, we are working to develop the competency and tools required to identify, assess, and manage climate risk and vulnerabilities related to the Port of Vancouver. Key components of our management approach include: • Creating adaptation plans and integrating them into business planning and operations • Growing awareness of climate risk and promoting collaboration on adaptation planning with government, local municipalities, Indigenous groups, industry, and non-government organizations • Engaging tenants and port users to increase awareness of climate risks and encourage climate action and adaptation planning

Collaboration is key to building resiliency across the port and the region, so we are also working with regional and local governments and Indigenous groups to

The Lower Mainland has started to experience the impacts of climate change, such as sea level rise, increased wildfires, king tide storm surge flooding, and drought. Climate science indicates that by 2050, the region will experience increasingly hotter, drier summers and warmer, wetter winters. Sea level rise is projected to reach 0.5 metres by 2050 and 1 metre by 21001; as a result, flooding events present a significant risk to port infrastructure and transportation

corridors that are essential for enabling Canadian trade. We must plan for and adapt to climate change impacts in order to avoid trade disruptions and to

known as Representative Concentration Pathway 8.5 (RCP8.5). The IPCC's next assessment report, due to be released in 2022, may require updates to current models and

¹ Current flood models and sea level rise projections for the Lower Mainland are built on 2011 Guidelines for Management of Coastal Flood Hazard Land Use developed by Ausenco

Sandwell for the province of B.C. Warming predictions are based on the Intergovernmental Panel on Climate Change (IPCC) "business as usual" greenhouse gas emissions scenario,

We have identified flooding from sea level rise, storm surge, and extreme precipitation events as the most significant direct climate-related risk to port included:

Performance

communities.

infrastructure, operations, and transport corridors. In 2020, we focused on building our understanding of flood risks to port lands and infrastructure. This Progressing flood mapping across our jurisdiction • Developing a tool to help model and quantify flood risks to port lands, infrastructure, and natural assets

• Continuing our collaboration with the District of North Vancouver, City of North Vancouver, District of West Vancouver, and the Squamish First Nation to

• Participating in the Fraser Basin Council's Flood Management Strategy, which is convening key stakeholders and decision-makers to create a regional

consensus on a flood management strategy for the Lower Mainland We also took steps to formalize our approach to climate adaptation, forming an internal cross-functional team to develop a preliminary climate adaptation strategy, with the goal of enhancing climate resilience at the Port of Vancouver, including port operations and infrastructure, coastal ecosystems, and

undertake studies to better understand, assess, and respond to the risks posed by climate change.

- In 2021, we will continue our work to enhance climate resilience at the Port of Vancouver by:
- Engaging tenants, government and supply chain partners to improve understanding of climate risk and coordination of adaptation planning

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conduct a coordinated sea level rise risk study for Burrard Inlet's North Shore and to identify climate adaptation opportunities

Responsible practices

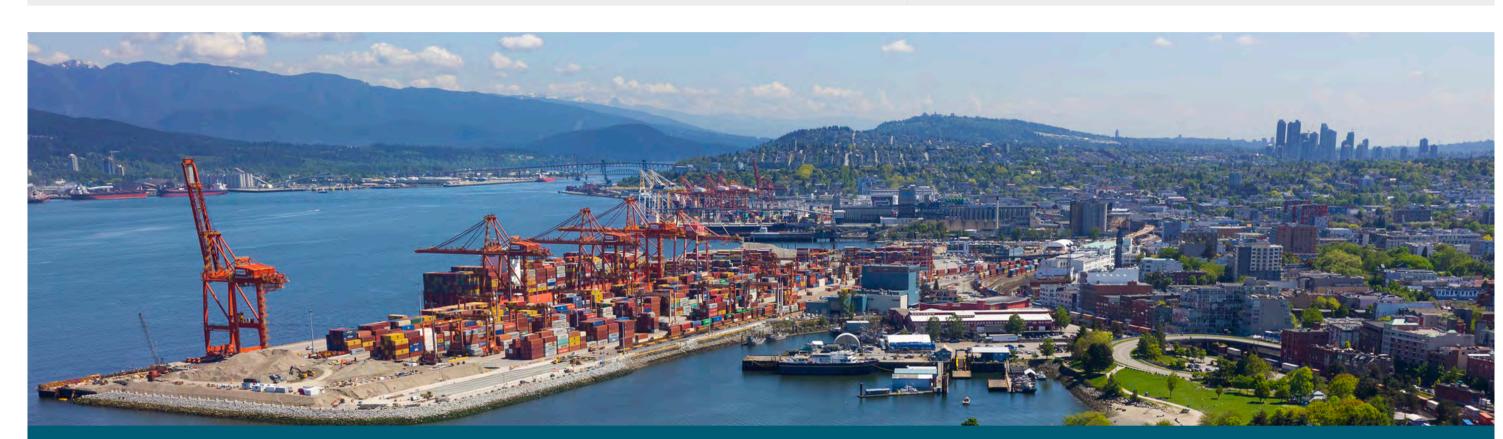
Our vision for the Port of Vancouver to be the world's most sustainable port requires us to lead by example through our own practices, and to work with organizations locally, regionally, and globally to promote responsible practices that advance sustainability throughout the port, the maritime industry, and the global supply chain.

Integrating sustainable design and construction practices into the planning and delivery of infrastructure projects helps minimize negative environmental and social impacts of port development, and enables the port to facilitate trade while maintaining a healthy environment and enabling thriving communities.

Stakeholders such as local governments and environmental organizations have raised concerns about the social and environmental impacts of some products traded through the port. In particular, stakeholders are concerned about the global climate impacts of coal and oil products shipped through the port, as well as possible local impacts such as airborne coal dust and potential oil spills. We recognize the importance of these issues and encourage open and respectful dialogue, but do not have the legal authority to determine which resources are developed and traded in Canada. Learn more about who decides what moves through the Port of Vancouver here.

About this focus area

Subtopics	Interested groups	What we've heard from stakeholders	Strategic priorities	Key risks
Sustainable infrastructure Responsible supply chain practices	Indigenous groups Communities Governments Non-governmental organizations Terminal operators and tenants	Minimize the impacts of port infrastructure on the environment and local communities Consider the environmental life cycle impacts of products shipped through the port Don't ship coal and oil, which could harm the environment and local communities Contribute to initiatives to enhance safety and environmental performance	Protect and enhance port environmental health Achieve broad public trust and support	Impacts on environment and communities from port development and operation New infrastructure that is not climate resilient, resulting in future trade disruptions Loss of long-term relationships with community and Indigenous groups



Sustainable infrastructure

Our approach

We integrate sustainable design and construction practices into the planning, design, and delivery of port authority-led infrastructure projects to enable Canada's growing trade while minimizing the environmental and social impacts of port development. Our internal green infrastructure guidelines, derived from the internationally recognized Envision sustainable infrastructure framework and rating system (Envision) and Leadership in Energy and Environmental Design (LEED) rating system, as well as best practices from other ports and local agencies, help inform project decisions for port authority-led infrastructure projects over \$500,000 in value. We track the implementation of these guidelines, with a target to implement at least 50% of applicable guidelines on each project.

For most large port authority-led infrastructure projects, we use Envision to inform planning, design, and construction. We pursue third-party verification where appropriate; for example, on the Centerm Expansion Project, we have committed to achieve Envision Gold verification for improvements to the container terminal and port roads, and LEED Gold certification for the new operations and administration building.

We continue to work to strengthen our sustainable infrastructure practices and lead by example through our own projects while encouraging port tenants to adopt sustainable infrastructure practices on tenant-led projects within the wider port.

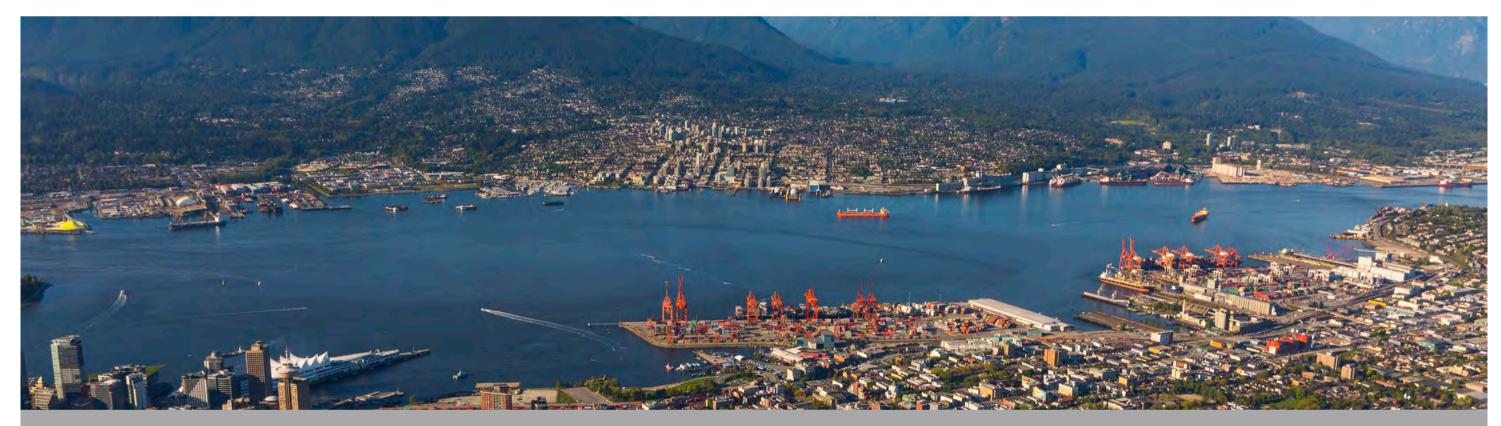
Performance

In 2020, we completed six infrastructure projects over \$500,000 in value and implemented 69% of applicable green infrastructure guidelines, above our target of 50%. Information on our performance in previous years can be found in corporate performance data

Port authority-led projects currently using Envision to inform project planning and design include the Roberts Bank Terminal 2 Project, the Pitt Meadows Road and Rail Improvements Project, the Portside/Blundell Road Improvements Project, and the Burnaby Rail Corridor Improvements Project/Holdom Overpass. In addition, the Centerm Expansion Project and South Shore Access Project continues to use Envision and LEED to inform project decisions and is on track to meet its commitment to achieve a gold level of performance.

In 2021 we will:

- Create a sustainable infrastructure road map, identifying steps to strengthen and standardize our approach to sustainable infrastructure development, support our broader sustainability goals, and share learning across project teams
- Track the use of sustainability rating systems (Envision and LEED) by port tenants for large infrastructure projects through our Project and Environmental Review process
- Participate in the newly-formed West Coast Maritime Envision working group, with five other port authorities, the Northwest Seaport Alliance, Washington State Ferries, and Institute for Sustainable Infrastructure to share best practices and inform our sustainable infrastructure practices going forward



Responsible supply chain practices

Our approach

We work to advance sustainability both at the Port of Vancouver and throughout the global supply chain by:

- Working with industry and ports around the world to identify and respond to global sustainability issues where international collaboration is necessary, such as addressing the contribution of ports and shipping to climate change in the World Ports Climate Action Program and the International Collaboration on **Ship Emission Reductions**
- Sharing best practices with other port authorities working to drive performance on similar issues, for example, the newly formed West Coast Maritime Envision working group, which is composed of five port authorities, the Northwest Seaport Alliance, Washington State Ferries, and the Institute for Sustainable Infrastructure, and is focused on driving sustainable infrastructure practices in port development
- Collaborating with the ports of Seattle and Tacoma and the Northwest Seaport Alliance on the Northwest Ports Clean Air Strategy, with the vision to phase out emissions from port activities in the Georgia Basin-Puget Sound airshed by 2050
- Collaborating regionally with government agencies, the marine transportation industry, Indigenous advisors, and environmental groups to better understand and manage the cumulative effects of shipping on at-risk whales throughout the southern coast of British Columbia through the ECHO Program
- Working with port tenants to promote sustainable practices, such as facilitating training for measuring and reducing carbon through the <u>Climate Smart</u> initiative, and supporting participation in Green Marine, an environmental certification program for the North American marine industry

Performance

We partner with Climate Smart, a Vancouver-based social enterprise, to provide training for port tenants to help them measure and reduce greenhouse gas

- emissions. In 2020, the following port tenants participated in this training: Alliance Grain Terminal
 - Coast 2000 Terminals • Fraser River Pile and Dredge
 - G3 • Global Container Terminals
- Harbour Air Western Stevedoring
- Interfor Corporation JJM Construction Neptune Terminals
- Pacific Coast Terminals SAAM SMIT Canada
- Schnitzer Steel Canada Vancouver Pile Driving

Green Marine



Green Marine is an environmental certification program designed to promote environmental best practices across the North American marine industry. Green Marine sets benchmarks for performance across 14 indicators, including greenhouse gas emissions, community impacts, waste management, and underwater noise, and offers educational programs to help companies reduce their environmental footprint.

To receive certification, participants benchmark their annual environmental performance through the self-evaluation guide, and have their results verified by an accredited external verifier. We participate on the West Coast Advisory

Committee and on various working groups to develop new indicators. As of 2020, 38% of major terminals at the Port of Vancouver (11 of 29) have joined Green Marine, including GCT Deltaport, GCT Vanterm, Westridge Terminal, Neptune Bulk Terminals, Pacific Coast Terminals, Seaspan (shipyard),

Place Cruise Terminal. Shipowner participants include North Arm Transportation, Saam Towage, and Seaspan ULC.

West Coast Reduction, Western Stevedoring (Lynnterm), Westshore Terminals, G3, and the CERES-managed Canada

Thriving Communities

A sustainable port contributes to thriving communities by working proactively to be a good neighbour, inspiring community connections, fostering Indigenous relationships, and upholding safety and security.



Adjusting our approach to engagement with port communities during the COVID-19 pandemic

On March 11, 2020, the World Health Organization declared COVID-19 a global pandemic, which began to have a profound and widespread impact on communities regionally, provincially, and nationally.

The pandemic placed livelihoods at risk, particularly for people within low-income communities or who were working in small businesses and in the tourism and service sectors. It also significantly impacted the quality of life of many Canadians as they grappled with new ways of living—limited in-person interactions, suspension of community programs, and cancellation of major events—affecting their overall physical and mental health.

The Vancouver Fraser Port Authority felt these impacts, especially when it came to hosting important in-person engagement sessions, which are an important method of connecting with the community and getting feedback on upcoming infrastructure projects.

Within days of being faced with these new restrictions, the port authority looked for alternative ways of hosting upcoming engagement sessions in the weeks ahead. Almost immediately, a new online format for engagement was designed, and implemented for the first phase of public engagement for the Holdom Avenue overpass, part of the <u>Burnaby Rail Corridor Improvements Project</u>.

In lieu of in-person engagement options regarding the Holdom Avenue overpass, and to ensure we reached as many people as possible, we:

- Promoted the engagement for two weeks prior to the online engagement session, including a postcard drop to approximately 20,000 properties, newspaper and digital ads, and paid social media
- Created a video about the project for the community to learn more
- Developed an online discussion guide and mailed out hard copies to those who requested one
- Provided various ways for people to provide feedback, including an online questionnaire, by email, and by phone

The <u>response</u> received from this engagement session was exceptional. Overall, the online format generated stronger engagement rates than the traditional inperson format, with over 4,200 project video views and 466 completed questionnaires by community members. In being able to better reach community members through this new format, we were able to more effectively gather the feedback and support needed to proceed with this project.

While this engagement format looked different due to the pandemic, we were able to connect with the community more effectively, allowing us to continue delivering on our commitment to enable thriving communities. Advancing this project, despite these unique challenges, also allowed us to continue preparing the Port of Vancouver for Canada's growing trade.

Discover more



Good neighbour

>

Proactive and ongoing engagement Responding to concerns



Community connections

Local and national economic activity

Community investment



Opportunities for Indigenous people

Indigenous relationships

Indigenous engagement

Safety and security

Good neighbour

To keep Canadian consumers and businesses connected with the global marketplace, the Port of Vancouver operates 24 hours a day, seven days a week in the densely populated metropolitan area of Greater Vancouver.

Port operations are industrial by nature and can create noise, dust, odour, light, and other annoyances. These impacts can be a nuisance for local communities, even causing health concerns for some residents. As the port continues to grow as a result of increasing trade and the population of Metro Vancouver continues to rise, these issues will only intensify.

Public trust and support for port operations and growth are dependent on strong relationships with local communities, which are gained by providing transparency, engagement activities, and mitigating impacts of port activities on surrounding communities.

About this focus area

Subtopics	Interested groups	What we've heard from stakeholders	Strategic priorities	Key risks		
Proactive and ongoing	Indigenous groups	Minimize and mitigate	Achieve broad public trust	Loss of long-term		
engagement	Communities	negative impacts (noise, air emissions, dust, light, traffic	and support	·	st Loss of long-term relationships with community and Indigenou groups	
Responding to concerns	Governments	congestion, road safety, and loss of enjoyment) from port		groups		
	Service providers	operations and development				
	Non-governmental organizations	Consult on major developments, and consider community and municipal				
	Terminal operators and tenants	values and priorities in decision-making processes				
		Provide more information about port impacts on communities				
		Address cumulative environmental and socioeconomic impacts of port growth				
	Improve transparency of project permitting and environmental review process, and create opportunities for meaningful consultation					
		Create opportunities for joint planning with communities and local governments in areas of mutual interest and concern (transportation, land use, emergency planning, community health, etc.)				
		Expand the range of issues considered in the process of conducting environmental reviews and issuing permits				
		Consider the socio- economic impacts of port				



authority actions on near-

port communities

Proactive and ongoing engagement

Our approach

We are committed to fostering positive and mutually beneficial partnerships with our stakeholders and to being an active member of the 16 communities in which the port operates. Our approach to being a good neighbour starts with our proactive community outreach, which includes:

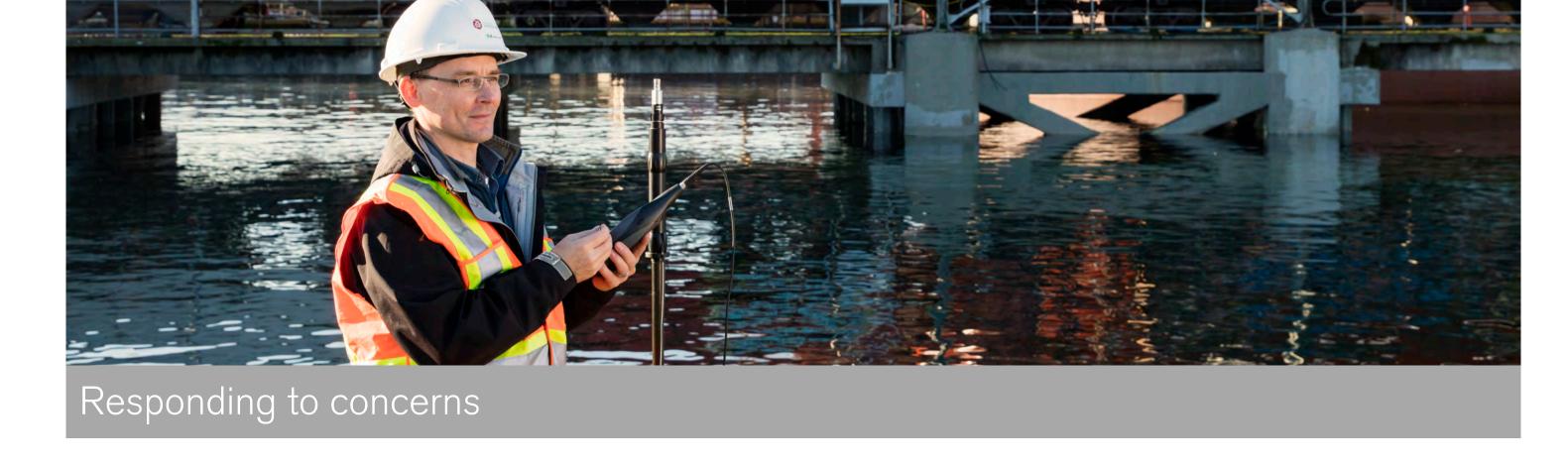
- Maintaining four community liaison committees across the Lower Mainland, and a community office in Delta, B.C. to facilitate discussion, exchange ideas, share information, and provide updates related to port operations and development within communities
- Hosting education events to increase awareness around the port and the port authority • Engaging municipal governments regularly to strengthen communications, build productive working relationships, and find opportunities for collaboration

Click here to see a table showing the potential impacts and effects of port activities on the surrounding community, and the port authority's approach to mitigating and managing those effects

Performance

In response to COVID-19, many of our traditional outreach methods changed due to restrictions imposed by B.C.'s provincial health officer. For example, we temporarily closed our Delta Community Office, and we adjusted many of our events and initiatives from in person to online. Despite these challenges in 2020,

- Conducted key outreach activities for the community, such as meetings held throughout the year, to better understand the public's perspective and to gather important insights
- Promoted community awareness through presentations on initiatives like noise management, project updates, and emergency response at the Port of Vancouver, as highlighted in annual reports for each liaison committee
- Hosted a variety of educational events on topics of community interest, such as the Roberts Bank Terminal 2 Project, marine navigation in the Fraser River, tugboats, and more



Our approach While we are not involved in operations at port terminals, we work with tenants and port users to mitigate the impacts of port activities on surrounding

communities. We also work with communities to seek input on port-related projects. To do this, we: • Gather community feedback through a dedicated phone line, email, online feedback forms, and annual surveys, and then work with port users to minimize the impacts of port activities on surrounding communities

- Monitor noise in and around the port using a network of stations that actively track and report noise trends, and then work with port users to minimize these disturbances
- Performance

through the feedback line, ranging from positive comments and general information requests to concerns and complaints relating to noise from vessels, rail operations, and terminals. This represents a significant

Community feedback

increase in community inquiries and complaints over previous years. A large portion of these were regarding vessels anchored in British Columbia's southern Gulf Islands and a tent encampment on port lands. Outside of these issues, the majority of inquiries and complaints received related to noise.

In 2020, we received 2,608 comments, inquiries, and complaints

Southern B.C. anchorages We received over 800 concerns and complaints pertaining to light and noise related to vessels anchored in British Columbia's southern Gulf Islands. While waterways beyond our jurisdiction, including those around the southern Gulf Islands, are considered a federal responsibility as

opposed to a port responsibility, the port authority is authorized to assign southern B.C. anchorages around the Gulf Islands under Transport Canada's Interim Protocol for the Use of Southern B.C. Anchorages. Members of the public who have concerns pertaining to light and noise related to a specific vessel anchored in the Gulf Islands can contact us. When a complaint about a specific ship's operations is received, we contact the ship's agent and request corrective action. We also log the complaint and advise Transport Canada through monthly reports.

Tent encampment on port lands In May and June of 2020, we received close to 1,000 complaints regarding our management of a tent encampment that was set up, without permission, on Lot 5, a component of our property adjacent to

the Vancouver Fraser Port Authority's main office at Canada Place. We also received close to 70 complaints about the encampment related to

noise and safety. As a port authority, our mandate is to enable Canada's trade through the Port of Vancouver, ensuring goods are moved safely and efficiently, while protecting the environment and considering local communities. While housing is not a part of our mandate, we acknowledge and understand the complex social and public health issues involved with the tent encampment, and therefore deferred to other authorities, agencies, and the courts on how best to manage these matters. We worked closely with both provincial and municipal authorities and sought a court order for the removal of the tent encampment in order to return Lot 5 to its intended port-related use. **Noise monitoring** Our <u>noise monitoring program</u> includes a network of permanent noise monitoring stations located throughout our jurisdiction. We use the data from the noise monitoring stations to produce annual noise reports that identify trends and noise issues. We can also deploy

mobile noise monitoring stations to enable more detailed monitoring in response to community concerns. The information gained from noise monitoring and reporting is used in forming policies, planning

projects, and undertaking environmental assessments. The noise monitoring program also improves our ability to identify and respond

- to noise concerns raised by community members. In 2020, we: Transitioned to a new noise monitoring technology partner and launched a new web portal that provides information from the noise monitoring stations to assist community members in identifying noise concerns
- or excessive noise picked up by the monitoring stations, enhancing our ability to identify problematic noise sources • Concluded Project NEPTUNES (Noise Exploration Program to Understand Noise Emitted by Seagoing Ships)—an international consortium of 11 ports in Europe, Australia, and

Continued to refine noise alerts that will help identify unusual

- Canada—that developed a framework for evaluating terrestrial ship noise. To promote quieter ships, we updated our EcoAction Program to reward ships having an Environmental Ship Index noise score. Met with community members to learn about noise concerns
- As a result of feedback from community members, in 2021 we will be deploying mobile noise monitoring stations to better understand the source of noise and inform our mitigation strategies.

Our annual noise monitoring reports are located online.

Annual survey

good neighbour.

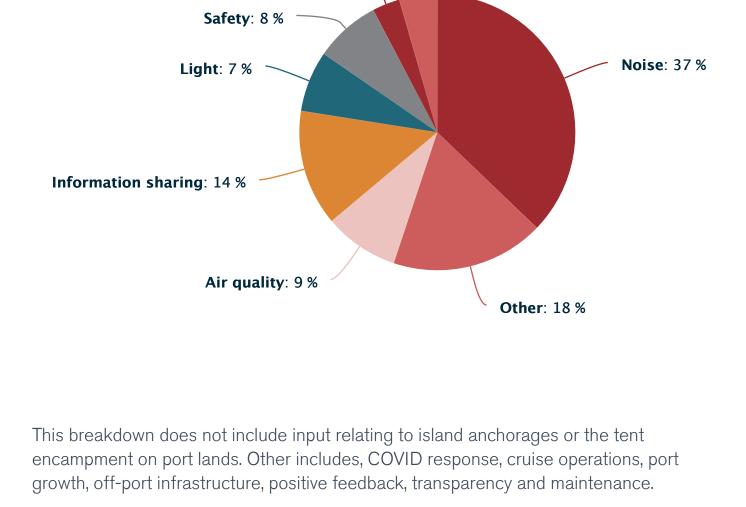
We conduct an annual survey to assess the public's opinion of the port as a

Water quality: 4 %

Truck traffic: 3 %

Inquiries and complaints received through

community feedback line (2020)



Noise-related complaints (2020)

of complaints

169

94

% of total complaints

22.78%

12.67%

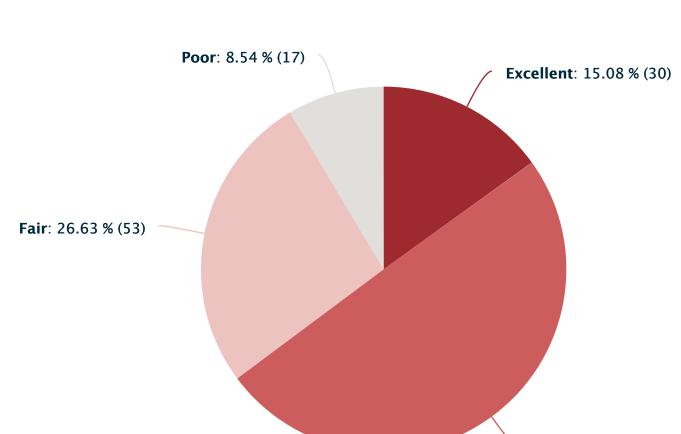
Good: 49.75 % (99)

Ship

Noise source

Terminal/tenant

Rail	13		1.75%
Public opi	nion of the port as a	good neighbour	



Results are based on the 2020 online survey of approximately 1,400 residents of our neighbouring 16 communities in Metro Vancouver. Results are based on the responses to two questions: how do you rate the port on identifying and responding to community interests and issues, and how do you rate the port on proactively considering the effects

on communities in planning and managing operations. The survey was conducted by an

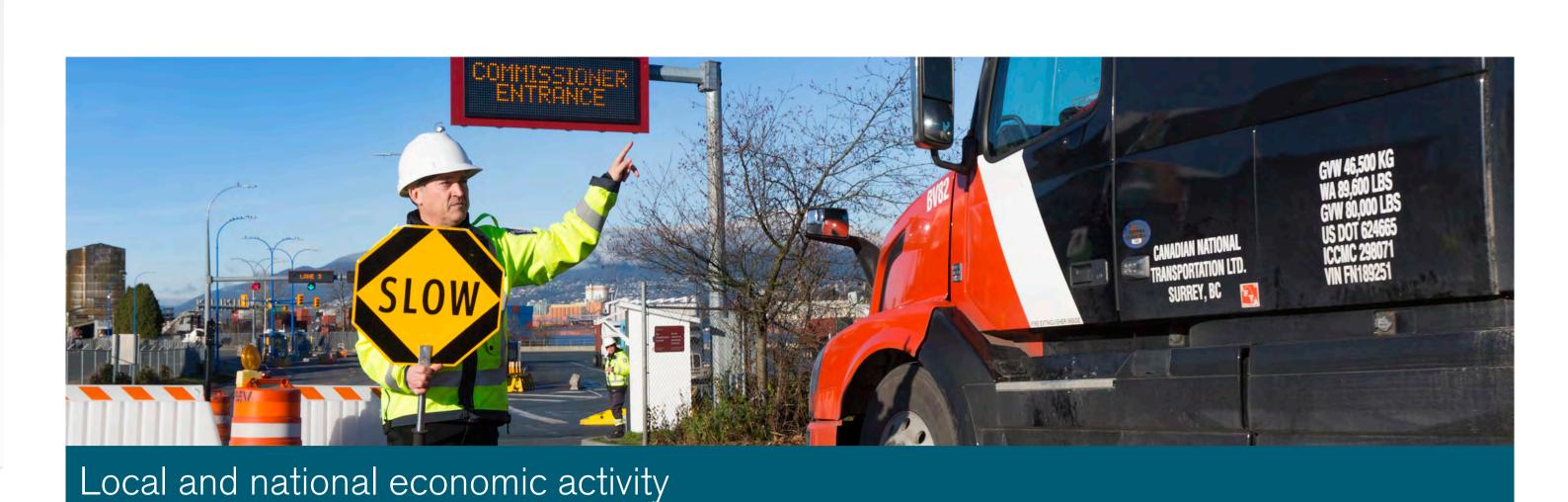
independent firm on behalf of the Vancouver Fraser Port Authority.

Community connections

As a Canada Port Authority, our activities provide economic value to communities and governments at the national, regional, and local levels. Based on 2016 research, activities at the Port of Vancouver enable the trade of approximately \$240 billion in goods to and from Canada annually, and connect Canadian businesses and consumers with around 170 countries around the world. Trade also generates tax revenues and creates over 115,300 direct, indirect, and induced jobs in Canada. This research also indicates that direct jobs across Canada related to the port paid an average of \$67,900 per year, well above the average annual Canadian wage of \$49,740.

About this focus area

Subtopics	Interested groups	What we've heard from stakeholders	Strategic priorities	Key risks
Local and national economic	Communities	Increase investment in	Achieve broad public trust	Loss of long-term
activity		communities most affected	and support	relationships with
	Governments	by port operations and		community and Indigenous
Community investment		development		groups
		Continue to create and		
		maintain jobs		



Our approach

Ongoing operations at the Port of Vancouver, which include the daily work of terminals, supply chain operators, and other tenants to move goods, contribute to government revenues by providing tax dollars to all levels of government that help support critical community services. Additionally, the port authority provides an annual stipend to the federal government.

To continue delivering economic benefits to communities, businesses, and government, both locally and nationally, we:

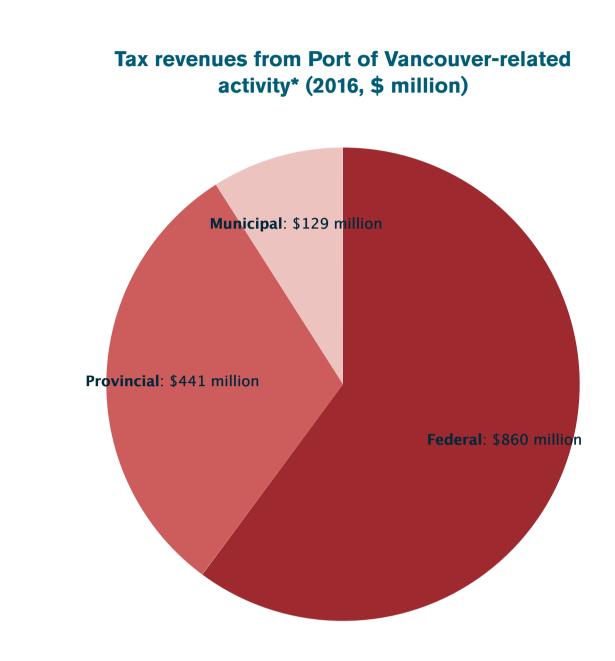
- Work with government, industry, and supply chain stakeholders throughout Canada to understand their needs regarding goods moving through the Port of Vancouver
- Undertake market and commodity research and make the results available to help communities and businesses plan for the future
- Study and track the national and local economic impact of Port of Vancouver-related activities and make this information publicly available
- Provide payments to local governments on port property not currently leased in lieu of taxes

Performance

Port operations provide significant contributions to government revenues, as well as jobs locally and nationally. Our contributions to municipalities support critical community services, and contribute to high-paying jobs.



*From 2016 Port of Vancouver Economic Impact Study



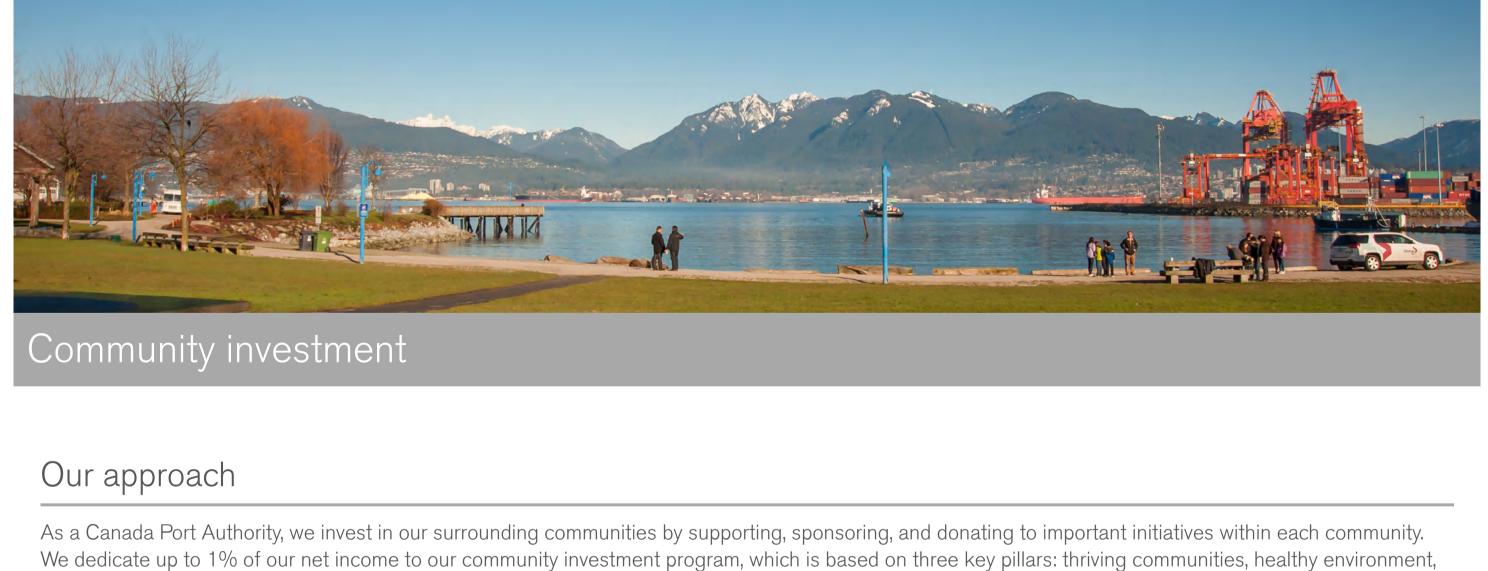
Jobs and property taxes per community



■ Total 2020 municipal, regional, and provincial property taxes paid by the port authority and our tenants. Note: this does not include tax contributions from other Port of Vancouver-related businesses and activities.

■ Direct jobs from Port of Vancouver-related business by municipality from the 2016 Port of Vancouver Economic Impact Study.

Tax contributions are estimates based on available tax rate and associated information at time of publishing. There are no port authority-managed lands in the City of Langley; therefore, there are no direct tax contributions from the port authority or tenants.



and education.

Performance

3,500,000

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investment program. This included our one-time COVID-19 relief fund, which provided \$100,000 to the Greater Vancouver Food Bank, \$25,000 to the KidSafe Project Society, and \$20,000 to the Community First Foundation

Community investment

Outside of our community investment program, we provided additional funding to the following initiatives: Centerm Community Fund: We hosted the second intake period for the Centerm Community Fund—a \$500,000

In 2020, we funded 39 community organizations, events, and

institutions with a total of \$713,511 through our community

fund created to benefit organizations near the project area of the Centerm Expansion Project in Vancouver—and

- funded 11 organizations for a total of \$134,900 in 2020. The funding, which comes from the Vancouver Fraser Port Authority in collaboration with the Centerm container terminal operator DP World, is being distributed over three years and three intake periods. • Other community contributions: Throughout the year, we also contributed \$125,000 to Ray-Cam Community Centre, \$125,000 to the Strathcona Community Centre, \$1 million towards improvements to Crab Park in Vancouver, and \$250,000 towards First Nation initiatives,
- as part of the Centerm Expansion Project

Local channel dredging Dredging is the removal of sediment to create deep-water ship berths and to maintain navigation and safety. The port authority regularly dredges the main channel of the Fraser River for commercial shipping. While dredging of smaller, secondary channels is not a formal responsibility of the port authority, we

created the one-time Local Channel Dredging Contribution Program in 2009 as a community effort to help meet the needs

report.

 The entrance to Gunderson Slough in North Delta • Sea Reach and Deas Slough in Ladner

of local recreational boaters, fishers, and residents.

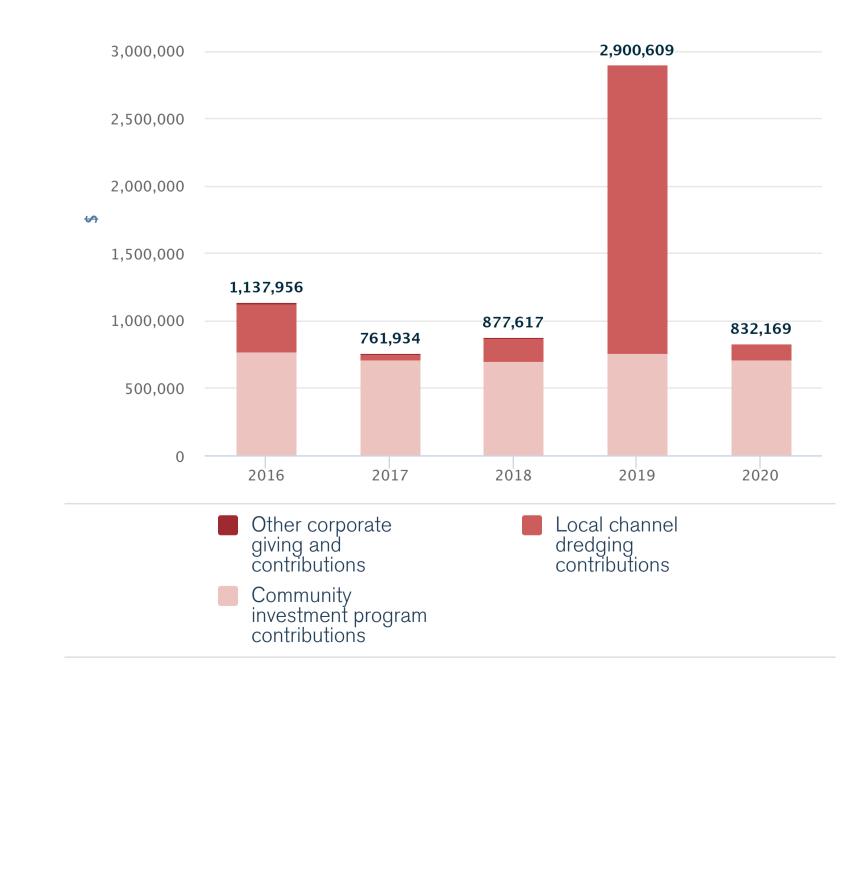
In 2020, local channel dredging was completed at:

In 2021, we will enter the final year of our Local Channel Dredging Contribution Program, with \$1.9 million set aside to

support dredging of the Morey Channel area in Richmond, the Douglas North and Chatham areas in Port Coquitlam, and the Fox Reach area in Pitt Meadows.

Data related to the economic value we create and distribute

can be found in the <u>corporate performance data</u> section of this



Community investment

Indigenous relationships

Indigenous peoples have unique histories, languages, and cultural practices, as well as an inherent connection to the land. They also have unique rights that are enshrined in Canada's constitution. For thousands of years, the Coast Salish peoples lived and prospered in the area, with complex systems for trade and commerce in the Salish Sea, Burrard Inlet, and Fraser River, long before settlers arrived and recognized this area as an ideal trading region.

Indigenous groups today continue to live on these lands, maintaining their spiritual, cultural, and economic connection to the area, and have a sacred obligation, or snæwayə4, to care for the lands and waters of their territories. Because of our shared interest in protecting these natural spaces, the port authority works with local Indigenous communities to help build and maintain a healthy environment.

The port authority also manages the lands and waters that intersect the territories and treaty lands of several First Nations. To maintain operations and to be able to continue to grow in response to increasing trade, it is essential that we nurture and respect the relationships we have with neighbouring Indigenous groups.

About this focus area

Subtopics	Interested groups	What we've heard from Indigenous groups	Strategic priorities	Key risks
Indigenous engagement Opportunities for Indigenous people	Indigenous groups Governments Service providers Terminal operators and tenants	Understand and address the social and environmental impacts, and cumulative impacts of port activities on Indigenous rights Understand and address cumulative environmental and socio-economic impacts of port growth and development Provide training and employment opportunities, and support business opportunities for Indigenous peoples	Achieve broad public trust and support Protect and enhance port environmental health	Loss of long-term relationships with community and Indigenous groups Impact on environment due to port operations and development Spills in the harbour or river



Indigenous engagement and opportunities

Our approach

Respecting Indigenous culture and history and looking for opportunities to work with and support Indigenous peoples are essential to building strong and productive relationships and mitigating any negative effects that port-related activities have on Indigenous groups.

We conduct Indigenous consultation, on behalf of Transport Canada, when operations or developments have the potential to adversely impact asserted or established Indigenous or treaty rights. Consultation is also a component of our <u>Project and Environmental Review process</u> that allows us to identify and address any concerns.

To do this, we:

- Focus our Indigenous relations work on consultation and community engagement practices specific to Indigenous interests
- Base our consultation approach upon Canada's <u>Aboriginal Consultation and Accommodation: Guidelines for Federal Officials to Fulfill the Duty to Consult
 </u>
- Provide opportunities for Indigenous groups to contribute to project planning, such as monitoring, environmental assessment, consultation, and receiving benefits—employment, training, procurement, and other opportunities for participation—from developments
- Work to consider, mitigate, and address areas of importance raised through consultation with Indigenous groups, which may include input into assessment, project planning, design, and approach

Indigenous consultation

Under the <u>Canada Marine Act</u>, we have been delegated the authority to manage federal lands. Therefore, we conduct Indigenous consultation on behalf of <u>Transport Canada</u> when operations or developments have the potential to adversely impact asserted or established Indigenous or treaty rights. This means we must meet both the legal requirements for Indigenous consultation and our social responsibility to consider input from neighbouring communities. Our consultation approach is based on <u>Canada's Aboriginal Consultation and Accommodation: Guidelines for Federal Officials to Fulfill the Duty to Consult.</u>

Performance

Indigenous engagement

In 2020, we maintained a clear focus on deepening our relationships with Indigenous groups throughout the Lower Mainland, taking steps that go beyond our duty to consult by:

- Further working to develop mutually respectful and meaningful relationships with Indigenous groups that will advance and align Indigenous groups' aspirations and interests to protect and enhance Canada's competitiveness as a trading nation
- Updated our <u>guiding principles for consultation</u>—to better reflect the port authority's approach to working with Indigenous groups
- Addressing capacity issues due to COVID-19 by extending response timelines, converting to an online meeting format, and streamlining administrative processes with Indigenous groups

Opportunities for Indigenous people

In 2020, the port authority worked with various Indigenous groups on several environmental and economic initiatives. The following programs and initiatives helped to build and strengthen our relationships with Indigenous groups:

- <u>Maplewood Marine Restoration Project</u>: Representatives from <u>Squamish Nation</u>, <u>Tsleil-Waututh Nation</u>, and <u>Tsawwassen First Nation</u> had the opportunity to participate as part of the shore crew throughout the project and hand-prepared harvested eelgrass shoots for transplanting in the Maplewood Basin
- Roberts Bank Terminal 2 Project: Work included Indigenous advisory forums, virtual workshops, participation in fieldwork, and procurement opportunities. As a result, the port authority:
 - Entered into mutual benefit agreements with Indigenous groups to share benefits of the project, and continued discussion of opportunities and benefits with other groups
 - Consulted with 46 Indigenous groups, in accordance with direction from the <u>Impact Assessment Agency of Canada</u>, which will continue throughout the federal review and permitting of the project and, should the project proceed, into construction and operation
 - Integrated feedback from Indigenous groups into project design, mitigation measures, offsetting plans, environmental management plans, and follow-up program elements

In 2021, we will continue to work to develop mutually respectful and meaningful relationships with Indigenous groups, identify aligned aspirations and interests, and advance priority areas where mutually beneficial opportunities exist.

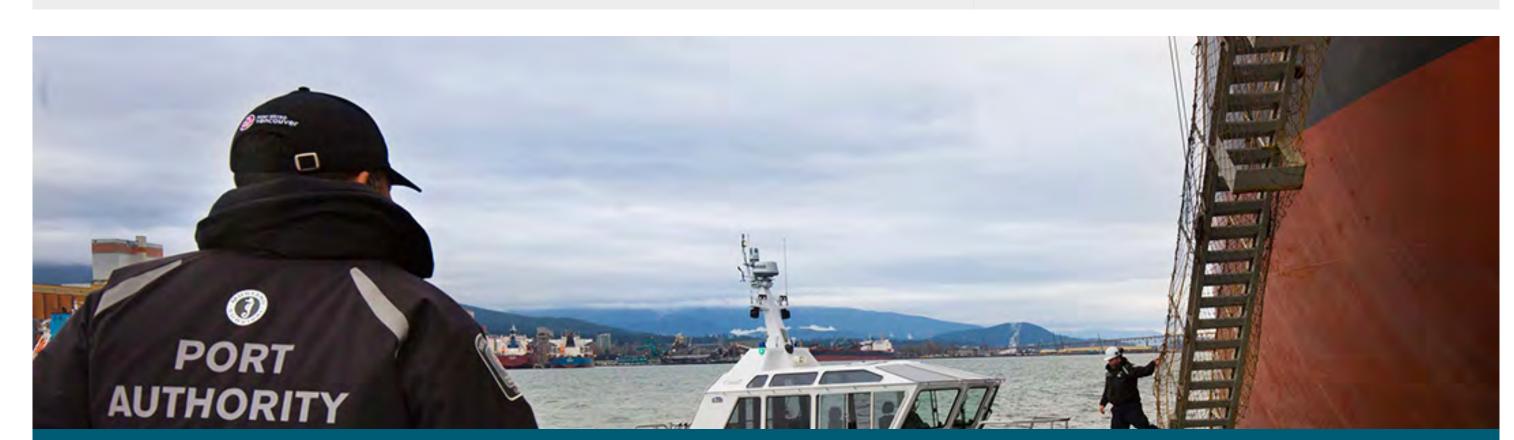
Safety and security

Threats to the safety and security of ports can disrupt the flow of trade and potentially harm workers and port users, along with surrounding communities. These threats include navigational hazards, accidental or intentional damage to port infrastructure, cyberattacks, extreme weather events, major spills, crime, trade in illegal goods, and the improper handling, storage, or transportation of hazardous substances. Supply chain disruptions can have far-reaching impacts, affecting producers, consumers, shippers, tenants, and other ports.

With one-third of the value of Canada's trade flowing through a densely populated metropolitan area, it is critical that Port of Vancouver activity is safe and secure. As a port authority, we take the necessary steps to maintain the safety and security of port operations, the environment, and surrounding communities.

About this focus area

Subtopics	Interested groups	What we've heard from stakeholders	Strategic priorities	Key risks
Safety and security of public, vessels, and infrastructure Emergency preparedness	Indigenous groups Communities Governments Labour Non-governmental organizations Service providers Terminal operators and tenants	Ensure cargo ships, especially tankers carrying crude oil, travel safely through the port Ensure collaboration, coordination, training, and information-sharing among responsible parties to ensure an effective response to spills and emergencies Ensure port activities don't impact the safety and security of neighbouring communities Manage hazardous materials stored in and moved through the port	Protect and enhance port environmental health Achieve broad public trust and support Increase supply chain efficiency and transparency, and optimize operational capacity to deliver enhanced customer and stakeholder value	Spill in the harbour or river Impact on environment due to port operations and development Large-scale health and safety incident Public liability (injury of death to members of public) Epidemic or pandemic event leading to operations and/or trade disruptions
				Impact of natural disaster on port assets



Safety and security of public, vessels, and infrastructure

Our approach

Terminals, rail, trucking, and ocean-going ships

The port authority's safety practices and procedures, per <u>Section 56 of the Canada Marine Act</u>, are designed to promote the safe and efficient movement of goods and to alleviate supply chain disruptions.

As a result, we take a proactive approach to safety and security by:

- Following the Incident Command System and the <u>British Columbia Emergency Management System</u>, which provide a framework for emergency response and recovery activities
- Playing a situational awareness role and, where appropriate, a coordinating role within our jurisdiction for emergency response, which requires collaboration with multiple first responders, communities, and industry stakeholders
- Maintaining procedures and having equipment and personnel in place to address a variety of emergencies on land and water
- Working with our tenants to develop and implement emergency response procedures
- Maintaining close ties to <u>Public Safety Canada</u>, <u>Transport Canada</u>, and other federal departments and agencies to share information and resources to
- respond and recover in a collaborative manner

 Designing and conducting security exercises that test elements of coordination, resource availability, response protocols, and communication procedures
- Participating in exercises led by external agencies, organizations, and terminals

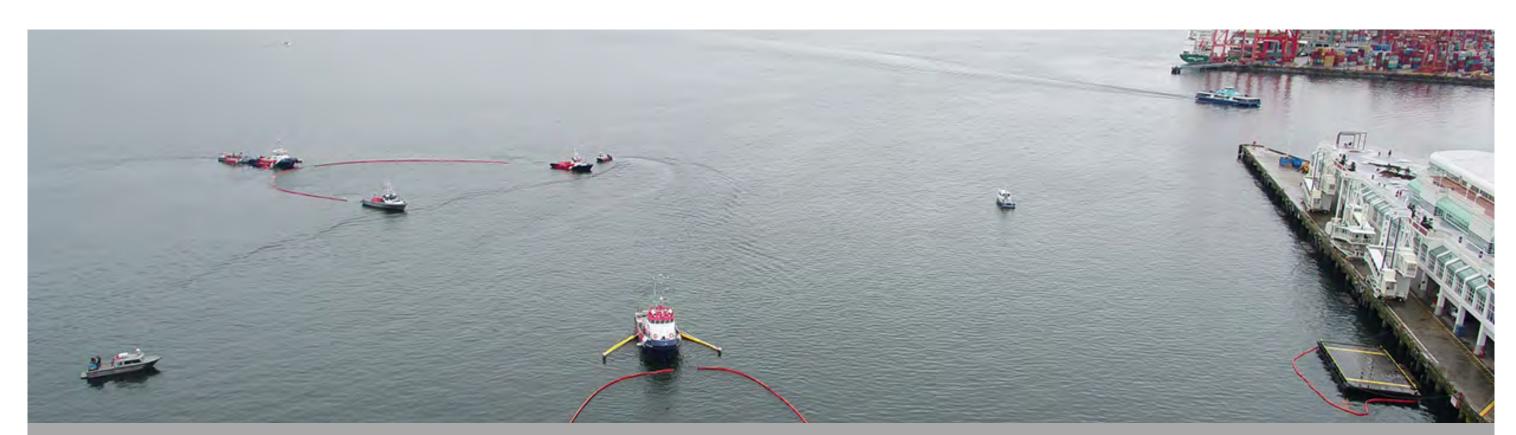
Performance

Traffic control zones

Traffic control zones are designated areas of water within the port where specific or unique navigational safety procedures are in place. The current control zone procedures are documented in our <u>Port Information Guide</u>.

In 2020, we coordinated and funded \$700,000 to install navigation lights on the Lions Gate Bridge to assist and accommodate larger vessels transiting in the First Narrows Traffic Control Zone (TCZ-1), and updated speed restrictions in the TCZ-1 by increasing limits for specific types of vessels.

In 2021, we plan to install a tidal current sensor and a new sector light to allow ships greater fluidity, efficiency, and safety when navigating through various areas of the port. We are also planning to establish a new traffic control zone called the Eastern Burrard Inlet Traffic Control Zone 3 (TCZ-3).



Emergency preparedness

Our approach

Although the port authority is not a first responder, our objective is to assist and re-establish safe and efficient operations as quickly as possible following an emergency or a business interruption. We define an emergency as present or imminent events that require prompt coordination of actions to protect the health or welfare of people and limit damage to the environment. These types of events range from fires to collisions between recreational boaters and commercial ships.

We also consider oil and fuel spills in the Port of Vancouver an emergency. In the case of an oil or fuel spill, Canada operates under the <u>National Spill Response Protocol</u>, which specifies that the <u>Canadian Coast Guard</u> is responsible for ensuring the cleanup of ship-sourced spills of oil and other pollutants. The Canadian Coast Guard can call on the port authority to conduct an initial inspection if a spill is reported in our jurisdiction. In this case, we will provide any information gathered through our 24/7 operations centre, security cameras, or our patrol boats. Additional information about spill response at the Port of Vancouver can be found on our <u>website</u>.

Performance

COVID-19 provided limited opportunities to engage with external stakeholders and execute emergency response exercises. Despite these challenges in 2020, we:

- Executed a remote tabletop security exercise—otherwise known as a security incident preparedness activity using simulated scenarios—to test various security response plans and identify areas of improvements
- Provided input into the <u>Greater Vancouver Integrated Response Plan</u>—a coordinated oil spill response plan owned by the Canadian Coast Guard—as processes and procedures were refined and lessons were learned from responses to incidents throughout the year

In 2021, we plan to:

- Conduct internal workshops, exercises, and drills, as well as participate in ongoing regional exercises and planning workshops in preparation for the broader 2022 Exercise Coastal Response exercise led by Emergency Management BC; the exercise will test various response and recovery plans related to decision-making, logistics, mass care, strategic communications, and critical infrastructure
 Update and validate the Marine Commerce Resumption Plan, a plan that addresses business resumption based on risk assessment and identifying threats,
- impacts, and hazards
 Progress our initiatives from 2020 to meet our security mandate under the *Canada Marine Act* and Port Authorities Operations Regulations
- 2020 safety and security incidents

In 2020, we assisted with a number of safety and security incidents that occurred within our jurisdiction. Two of these incidents had the potential to impact the

port's ability to facilitate Canada's trade objectives and required the activation of an emergency operations centre, which included coordination between multiple jurisdictions and stakeholders.

Incidents	Environmental Impact	Lead agency coordinating response	Port authority role	Port authority emergency response tactics
Coastal GasLink Pipeline protests blocking various port vehicle access points	None	Vancouver Fraser Port Authority and Vancouver Police Department	Ensure safe and efficient access to and from port properties	Coordinated the movement of personnel, vehicles, and first responders into and out of port access points
Lot #5 tent encampment	None	Vancouver Fraser Port Authority and Vancouver Police Department	Ensure safe and efficient use of trade-enabling lands	Monitored the situation and reported unsafe activities to appropriate authorities
				More details on how we approached the Lot 5 tent encampment can be found here

Report details

Reporting period	January 1 to December 31, 2020
Reporting cycle	Biennial
Year of last report	2018
Reporting framework	This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option. √ All disclosures align with the 2016 GRI Standards, with the exception of safety, which is reported in accordance with GRI 403: Occupational Health and Safety 2018.
	The GRI content index can be found here.
Report scope and boundary	This report covers the Port of Vancouver's greatest impacts, and reports progress on the Vancouver Fraser Port Authority's initiatives designed to address these impacts. When possible, initiatives and progress of port tenants and terminals are also discussed. When relevant, information about Canada Place Corporation, a subsidiary of the Vancouver Fraser Port Authority, is included. The port authority's four other subsidiaries are not included due to their limited social and environmental impacts, with the exception of corporate financial data, which is based on consolidated financial statements. Unless otherwise specified, the boundary for the topics reported is port-wide, encompassing port authority-managed federal lands and navigational jurisdiction.
Materiality process	Our process to identify and report on material topics is informed by the GRI Standards' Principles for Defining Report Content. Our material topics can be found here. Identification of material topics To identify material topics we engaged stakeholders to: Envision the future of the port through key strategic initiatives: Port 2050 scenario planning process Development of our sustainable port definition Help us understand their interests through: Community liaison committees Delta Community Office Community Gedback line Online consultation tool Municipal engagement program Annual customer satisfaction survey Project and Environmental Review process Public engagement Identify additional issues and trends through: Port authority business plan Supplemental research Media scans Industry reports Analysis and prioritization In 2020, we built on feedback from our previous stakeholder sustainability report review panels and engaged eight external sustainability and reporting leaders to help us improve our reporting and prioritize the topics to be covered in this report. The recommendations from this outreach inform our report content. The 2018 panel report and our response can be found at: portvancover.com/reporting Validation Our sustainability reporting learm and report steering committee, consisting of senior management, validate and refine the priority topics.
Changes in reporting	There are no significant changes in material topics from the 2018 report. We have made minor updates to certain subtopics in response to feedback from stakeholders. We have updated the topic boundary for port authority corporate energy use and greenhouse gas emissions. This is due to a reassessment of our organizational boundary and the inclusion of Canada Place Corporation within our operational control for the purposes of reporting.
Restatements of information	Any restatements of information from previous reports is noted as a footnote in relation to specific datasets.
Data	Data contained in this report relating to port-wide performance is outside of the direct operational control of the Vancouver Fraser Port Authority. We do not currently collect data from port tenants, except to report on port-wide energy and emissions every five years. Data relating to topics within the port authority's direct operational control is located in the corporate performace data section. Data is reported in metric system units and Canadian dollars.
Assurance	The Vancouver Fraser Port Authority engaged KPMG LLP to provide independent, external, limited assurance on select performance indicators and assertions contained within this report. These indicators, contained within the report and referenced in the GRI index, are denoted by the symbol √. Port authority senior management approved the assurance engagement. KPMG's assurance statement can be found here .
Contact	We welcome your feedback on this report. Please send your comments or questions to info@portvancouver.com.

Ownership and legal form 102-5 About the Vancouver Fraser Port Authority 102-6 Markets served About the Port of Vancouver Scale of the organization About the Port of Vancouver 102-7 <u>Corporate performance data – Employee</u> information Vancouver Fraser Port Authority's Financial Report <u>Corporate performance data – Employee</u> Information on employees and other 102-8 workers <u>intormation</u> 102-9 Supply chain About the Port of Vancouver Collaboration 102-10 Significant changes to the organization There were no significant changes to the port authority or in its supply chain in 2018. and its supply chain The precautionary principle is incorporated into 102-11 Precautionary principle or approach our Permit and Environmental Review process. We will not allow a proposed project to proceed if it is likely to result in significant adverse environmental effects. <u>Corporate performance data – External</u> 102-12 External initiatives <u>initiatives</u> Membership of associations <u>Corporate performance data – Membership of</u> 102-13 <u>associations</u> Strategy 102-14 Statement from senior decision maker Overview - Message from the President and <u>CEO</u> About the Vancouver Fraser Port Authority – 102-15 Key impacts, risks and opportunities Strategic planning Competitive business Effective workforce Strategic investment and asset management Healthy ecosystems Climate action Responsible practices Good neighbour Community connections <u>Indigenous relationships</u> Safety and security Ethics and integrity About the Vancouver Fraser Port Authority 102-16 Values, principles, standards, and norms of behaviour Corporate performance data – External

<u>initiatives</u>

<u>associations</u>

Governance

Collaboration

information

Collaboration

Collaboration

<u>Corporate performance data – Membership of</u>

About the Vancouver Fraser Port Authority –

About this report – Report details

About this report – Report details

About this report – Report details

Strategic investment and asset management

<u>Corporate performance data – Economic value</u>

Vancouver Fraser Port Authority's Financial

About this report – Report details

<u>About this report – GRI index</u>

About this report – Assurance

Competitive business

and reliability

information

information

<u>wellness</u>

<u>incidents</u>

<u>incidents</u>

<u>Competitive busines – Supply chain efficiency</u>

Effective workforce - Diversity and inclusion

<u>Corporate performance data – Employee</u>

<u>Corporate performance data – Employee</u>

Effective workforce - Worker health, safety, and

Corporate performance data - Employee safety

Corporate performance data - Contractor safety

Strategic investment and asset management

Strategic investment and asset management -

Strategic investment and asset management -

<u>Strategic investment and asset management –</u>

Strategic investment and asset management -

<u>Climate action – Air quality and greenhouse gas</u>

<u>Corporate performance data – Energy use</u>

<u>Corporate performance data – Energy use</u>

Climate action - Air quality and greenhouse gas

<u>Corporate performance data – Greenhouse gas</u>

Climate action – Air quality and greenhouse gas

Corporate performance data - Office waste

<u>Corporate performance data – Sustainable</u>

Infrastructure delivery

Infrastructure delivery

<u>Infrastructure delivery</u>

Healthy ecosystems

Infrastructure delivery

Healthy ecosystems

Climate action

Climate action

<u>emissions</u>

<u>emissions</u>

<u>emissions</u>

<u>emissions</u>

<u>emissions</u>

<u>emissions</u>

<u>communiting</u>

<u>infrastructure</u>

<u>infrastructure</u>

Healthy ecosystems

Climate action

Good neighbour

Land use

Community connections

Infrastructure delivery

Infrastructure delivery

Community connections

Community connections

generated and distributed

Indigenous relationships

Safety and security

throughout 2020

*The column lists elements of required GRI disclosures that we are unable to report and the reason this information is not reported.

<u>Safety and security – Incidents reported</u>

© 2021 Vancouver Fraser Port Authority

investment

<u>Community connections – Community</u>

<u>Corporate performance data – Economic value</u>

We have not included an indicator for Indigenous

relationships. We are currently in the process of developing an indicator as part of our initiative to

progress towards our vision.

create a suite of sustainability indicators to measure

Good neighbour

Good neighbour

investment

Responsible practices

Responsible practices – Sustainable

<u>Corporate performance data – Sustainable</u>

Strategic investment and asset management

<u>Strategic investment and asset management –</u>

Strategic investment and asset management -

<u>Strategic investment and asset management –</u>

<u>Good neighbour – Responding to concerns</u>

<u>Community connections – Community</u>

<u>emissions</u>

Climate action

Any restatements of data or information from prior

We have revised the boundary for our energy and

GHG emissions reporting. Additional details are provided in the footnotes of the Energy Use and

Corporate Performance section of this report.

We do not report employee age groups by percentage

To maintain confidentiality, age group and other

diversity indicators are not disclosed for the board of

We report number and rate of work-related injuries for:

Port authority contractors and subcontractors on

asset management projects and port authority-led

We do not report injury number or rates for contractors

Project and Environmental Review permit conditions

list potential impacts on species or habitat, as well as

duration and reversibility of impacts.

• Port authority employees

infrastructure projects

working in the port authority's office.

or according to employment category.

directors.

reports are noted in data table footnotes.

Greenhouse Gas Emissions tables in the

<u>Overview – Report topics</u>

Competitive business

Effective workforce

Healthy ecosystems

Responsible practices

Community connections

Indigenous relationships

generated and distributed

Overview - Report topics

Report

Safety and security

Climate action

Good neighbour

<u>Corporate performance data – Employee</u>

This report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option. The GRI Index below links to report content relevant to

About the Vancouver Fraser Port Authority

About the Vancouver Fraser Port Authority

About the Port of Vancouver

About the Port of Vancouver

Contact us

Omissions*

Link/direct response

Governance 102-18

Governance structure

List of stakeholder groups

Collective bargaining agreements

Identifying and selecting stakeholders

Approach to stakeholder engagement

Key topics and concerns raised

Entities included in the consolidated

Defining report content and topic

financial statements

List of material topics

Changes in reporting

Reporting period

Reporting cycle

GRI Standards

GRI content index

External assurance

report

Topic-specific standards

Competitive business

Economic prosperity through trade

Date of most recent report

Contact point for questions regarding the

Claims of reporting in accordance with the

Management approach disclosures

Average gateway cycle time for bulk

cargo to travel round trip from a

being unloaded from a vessel.

the port for processing.

minutes or less.

employees

Occupational health and safety

Effective workforce

DMA

405-1√

Port

authority-

specific

DMA

403-9 √

DMA

203-1

Port

authority-

specific

cargo: The average amount of time for

marshaling area outside of Vancouver to

Container terminal dwell time (rail): The

the terminal via rail within three days of

percentage of import containers departing

Container truck turn time: The percentage of container truck trips (time spent within

a designated terminal area to pick up or

Management approach disclosures

Diversity of governance bodies and

Training spend per employee

Management approach disclosures

Work-related injuries

Strategic investment and asset management

Management approach disclosures

Infrastructure investments and services

The number of habitat credits deposited less the

number of habitat credits withdrawn from the

approved by DFO and represent the area (m2)

habitat bank. (Habitat credits have been

Management approach disclosures

Significant impacts of activities, products

Management approach disclosures

Energy consumption within the

Management approach disclosures

Direct (Scope 1) GHG emissions

Energy indirect (Scope 2) GHG emissions

Other indirect (Scope 3) GHG emissions

Port-related air emissions (GHGs, NO_x,

organization

and services on biodiversity

Indirect economic impact

Healthy environment

Healthy ecosystems

Biodiversity

DMA

304-2 √

Climate action

Energy

DMA

302-1

DMA

305-1 √

305-2 √

305-3 √

authority-

authority-

authority-

Responsible practices

Thriving communities

Good neighbour

Local communities

specific

DMA

Port

authority-

specific

DMA

413-1

413-2 √

Port

authority-

Specific

DMA

DMA

411-1

DMA

Port

authority-

specific

201-1 √

specific

specific

SO_x, PM_{2.5})

Employee commuting

than \$500,000

Management approach disclosures

Implementation rate of applicable green

infrastructure guidelines across all port

Management approach disclosures

Operations with local community

development programs

engagement, impact assessments, and

Operations with significant actual and

potential negative impacts on local

Public opinion of the port as a good

Management approach disclosures

Direct economic value generated and

Management approach disclosures

Management approach disclosures

Number of safety and security incidents

Port authority-specific: These indicators are specific to the Vancouver Fraser Port Authority.

Indigenous peoples

Incidents of violations involving rights of

communities

neighbour

distributed

Community connections

Economic performance

Indigenous relationships

Safety and security

√ Independently assured indicators.

DMA: Disclosure on management approach

Rights of Indigenous peoples

authority-led projects with values greater

Waste

Port

Port

Port

Emissions

supported

Habitat bank balance:

of habitat enhanced.)

drop off a container) completed within 60

Restatements of information

boundaries

Stakeholder engagement

102-40

102-41

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102-44

Reporting practice

102-45

102-46

102-47

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102-49

102-50

102-51

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102-54

102-55

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DMA

Port

authority-

specific √

Global Reporting Initiative index

Indicator name

Name of the organization

Location of headquarters

Location of operations

Activities, brands, products and services

Indicator

General disclosures

Organizational profile

number

102-1

102-2

102-3

102-4

each GRI indicator and each port authority-specific indicator.



Independent Limited Assurance Report

To the Management of Vancouver Fraser Port Authority:

We have been engaged by the management of Vancouver Fraser Port Authority (the 'Port of Vancouver') to undertake a limited assurance engagement on selected information disclosed in the Sustainability Report 2020 ('the Report'), for the year ended December 31, 2020, as described below.

Subject matter and applicable criteria

The scope of our limited assurance engagement, as agreed with management, comprises the following performance information (the 'Subject Matter Information'):

D	Annii ashis Cuitania	A C4a JaJ
 Performance information Direct (Scope 1) greenhouse gas ('GHG') emissions Energy indirect (Scope 2) GHG emissions Selected Scope 3 GHG emissions, related to employeecommuting and business travel (excludes waste andpaper) 	Applicable Criteria Global Reporting Initiative's Sustainability Reporting Standards ("GRI Standards"): 305-1 305-2 305-3	Assurance Standard ISO 14064-3: 2006
Direct economic value generated and distributed	GRI Standard 201-1	ISAE 3000
Significant impacts of activities, products, and services on biodiversity	GRI Standard 304-2	ISAE 3000
Work-related injuries	GRI Standard 403-9	ISAE 3000
Operations with significant actual and potential negative impacts on local communities	GRI Standard 413-2	ISAE 3000
Diversity of governance bodies and employees	GRI Standard 405-1	ISAE 3000
 Average gateway cycle time for grain (in hours) Average gateway cycle time for fertilizer (in hours) Average gateway cycle time for coal (in hours) Container terminal dwell time (% within three days) Truck turn time (% in less than 60 minutes) 	Entity's own internal guidelines and definitions for sustainability reporting	ISAE 3000
The Port of Vancouver's assertion that the Report is in accordance with the GRI Standards: Core option.	GRI Standards	ISAE 3000

The Subject Matter Information, contained within the Report and referenced in the GRI content index, are denoted by the symbol $\sqrt{\ }$, have been determined by management on the basis of the Port of Vancouver's assessment of the material issues contributing to the Port of Vancouver's sustainability performance and most relevant to its stakeholders.

There are no mandatory requirements for the preparation, publication or review of sustainability performance information. As such, the Port of Vancouver applies the GRI Standards and its own internal reporting guidelines and definitions for sustainability reporting which can be found in the "About this report" section of their Sustainability Reporting website, footnotes and descriptions contained within the Report, together the 'applicable criteria' as at the date of the report.

Port of Vancouver's responsibilities

Management is responsible for the preparation and presentation of the Subject Matter Information in accordance with the applicable criteria, current as at the date of our report. Management is also responsible for determining the Port of Vancouver's objectives in respect of sustainability performance and reporting, including the identification of stakeholders and material issues, and for establishing and maintaining appropriate performance management and internal control systems from which the reported performance information is derived.

Our responsibility and professional requirements

Our responsibility in relation to the Subject Matter Information is to perform a limited assurance engagement and to express a conclusion based on the work performed. We conducted our engagement in accordance with International Standard on Assurance Engagements ('ISAE') 3000 (Revised) Assurance Engagements other than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board and ISO 14064-3:2006 Specification with guidance for the validation and verification of greenhouse gas assertions, issued by the International Organization for Standardization. Both ISAE 3000 and ISO 14064-3:2006 require that we plan and perform this engagement to obtain the stated level of assurance, in accordance with the applicable criteria.

Our conclusion does not cover any periods prior to the year ended December 31, 2020.

Assurance approach

We planned and performed our work to obtain all of the evidence, information and explanations we considered necessary in order to form our conclusion as set out below. A limited assurance engagement consists of making inquiries, primarily of persons responsible for the preparation of the Subject Matter Information, and applying analytical and other evidence gathering procedures, as appropriate. Our procedures included:

- Inquiries of management to gain an understanding of the Port of Vancouver's processes fordetermining the material issues for its key stakeholder groups;
- Inquiries with relevant staff at the corporate level as well as third-party service providers tounderstand the data collection and reporting processes for the Subject Matter Information,
- Where relevant, performing walkthroughs to test the design of internal controls relating todata collection and reporting of the Subject Matter Information;
- Comparing the reported data for the Subject Matter Information to underlying data sources on sample basis;

• Inquiries regarding key assumptions and the re-performance of calculations on a samplebasis;

- Reviewing the Report, the GRI Index and reported indicators to assess the Port of Vancouver's assertion that the Report has been prepared in accordance with the GRIStandards Core option; and,
- Reviewing the presentation of the Subject Matter Information in the Report to determine whether the information presented is consistent with our overall knowledge of, and experience with, the sustainability performance of the Port of Vancouver.

Due to restrictions resulting from COVID-19, no in-person site visit was conducted. KPMG performed alternative procedures remotely to achieve our assurance objectives. Our procedures involved the use of information and communication technology such as video and screen share to complete discussions with site personnel to confirm our understanding of measuring processes and review relevant records. The remote procedures were effective in allowing us to obtain sufficient and appropriate assurance evidence.

The extent of evidence gathering procedures performed in a limited assurance engagement is less than that for a reasonable assurance engagement, and therefore a lower level of assurance is obtained.

Independence, quality control and competence

We have complied with the relevant rules of professional conduct/code of ethics applicable to the practice of public accounting and related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

The engagement was conducted with a multidisciplinary team, which included professionals with suitable experience in both assurance and in the applicable subject matter, including environmental performance and GHG accounting.

Inherent limitations

Non-financial information, such as that included in the Report, is subject to more inherent limitations than financial information, given the characteristics of the subject matter and the availability and relative precision of methods used for determining both qualitative and quantitative information. The absence of a significant body of established practice on which to draw allows for the selection of different, but acceptable, measurement techniques which can result in materially different measurements and can impact comparability.

The nature and methods used to determine such information, as described in management's internally developed criteria and approach to reporting, may change over time, and it is important to read the Port of Vancouver's reporting methodology included in the "About this report" section of their Sustainability Reporting website, footnotes and descriptions contained within the Report.

Our conclusion

Based on the procedures performed, nothing has come to our attention that causes us to believe that for the year ended December 31, 2020, the Subject Matter Information, as described above and disclosed in the Sustainability Report, has not been prepared and presented, in all material respects, in accordance with the applicable criteria, current as at the date of our report.

KPMG LLP

Chartered Professional Accountants

May 31, 2021 Vancouver, Canada

Employee information

The Vancouver Fraser Port Authority employs 411 people full-time: 408 based in Vancouver, B.C.; two at our local community office in Delta, B.C.; and one in our office in Shanghai, China. Tracking voluntary employee turnover is one way we assess our performance as an employer. It also helps us anticipate our human resource needs. In 2020 our rate

of voluntary turnover was 2%, well below the national average of 7%.

Under 30

50+

30-50

Total

2020

Under 30

% of VFPA employees

53%

31%

5%

2%

30-50

Female

Male

2019

Female

Male

Total

Number of employees	375	184	191	25	245	105	411	195	216	23	282	106
Permanent employees	339	172	167	16	221	102	384	185	199	18	263	103
Term employees	36	12	24	9	24	3	27	10	17	5	19	3
Full-time	359	183	176	25	232	102	397	194	203	23	269	105
Part-time	16	1	15	0	13	3	14	1	13	0	13	1
New hires	52	24	28	11	37	4	61	23	38	11	42	8
Permanent employees	38	20	18	8	27	3	43	16	27	6	32	5
Term employees	14	4	10	3	10	1	18	7	11	5	10	3
New employee hire rate	14%	13%	15%	44%	15%	4%	15%	12%	18%	48%	15%	8%
Turnover (voluntary, involuntary, retirees)	30	7	23	6	15	9	24	12	12	1	17	6
Permanent employees	17	4	13	0	10	7	13	8	5	0	9	4
Term employees	13	3	10	6	5	2	11	4	7	1	8	2
Turnover rate	8%	4%	12%	24%	6%	9%	6%	6%	6%	4%	6%	6%
Voluntary turnover	12	4	8	0	9	3	9	4	5	0	7	2
Voluntary turnover rate	4%	2%	5%	0%	4%	3%	2%	2%	3%	0%	3%	2%
Employees covered by collective bargaining agreements	73%	-	-	-	-	-	72 %	-	-	-	-	-
Training spend per employee	\$1,992	-	-	-	-	-	\$1,851	-	-	-	-	-
√ Independent assurance obtained for 2020 number of employees reported by age group.												
Employee diversity												
To meet our obligations under Canada's Emploand Indigenous peoples.	yment Equi	ty Progra	am, we trac	k and report (our progre	ess in e	employing v	women, v	visible mino	rities, people	with disal	oilities,

Indigenous persons Not disclosed⁴ ¹ Data is based on voluntary self-disclosure in our annual workforce composition survey.

³ Management includes managers, directors, and executive-level employees.

⁴ To maintain confidentiality, results of less than 5% are not disclosed.

Non-management²

55%

33%

5%

² Non-management includes union employees and exempt positions that are not managers, directors, or executives.

Board of directors by indicator of diversity¹

Employees by indicators of

diversity¹

Women

Visible minority

Persons with a disability

√ Independent assurance obtained for all data.

Management³

44%

27%

5%

Not disclosed⁴

Women	27%	
Men	73%	
¹ To maintain confidentiality, age group and other diversity indicators are not disclosed. √ Independent assurance obtained for all data.		
Employee safety incidents		
Every port authority employee is required to exercise personal responsibility and commit to safe working practices. Our Occupational Health and Safety program is designed to:		
Comply with all applicable laws and regulations		

We conduct regular inspections to mitigate incidents, and we conduct investigations following incidents in order to implement corrective actions, with a focus on continuously improvement and streamlining our procedures

Number of high-consequence work-related injuries (excluding fatalities)²

Recordable work-related injury rate (disabling + minor injuries)8

Office (includes reports by office staff off-site)

• Provide employees with the resources and the training to enable them to perform their jobs in a healthy and safe manner

Encourage reporting of hazards, safety concerns, and near-miss incidents

• Prevent accidents, incidents, and occupational health hazards

• Motivate employees to work responsibly and support each other

Demonstrate commitment from leadership

Number of minor injuries⁴

Number of near misses

Lost time injury rate⁷

Maintenance

Marine operations

CPC work locations

Contractor safety incidents¹

led infrastructure projects by:

Incidents by type²

Number of disabling injuries⁴

Number of minor injuries⁵

Number of minor incidents⁷

Number of near misses

Number of other hazardous occurrences⁶

Number of disabling injuries³

Incidents by type¹

Number of fatalities

Number of other hazardous occurrences⁵ 0 0 0 0 7 Number of minor incidents⁶ 9 3 11 10

2016

0

0

0

0.4

0.4

0

0

2017

0

0

4

2.6

4.1

2

2017

0

0

0

3

30

146,197

2018

2

2

0

9

84,227

2019

0

0

5

2

5

26

220,768

2020

0

0

13

628,945

0.32

2016

0

0

3

9

5

38,532

2018

0

0

2

40

0.7

1.1

7

0

0

540,060

2019

0

0

2

30

0.4

1.1

6

2

5

561,939

2020

0

0

3

0

0.0

0.9

2

6

651,329

Total number of hours worked 536,239 536,083 **Incidents by location**

³ A disabling injury is an employment injury or occupational disease that involves loss of work on the subsequent day after the injury. ⁴ A minor injury is an employment injury or occupational disease for which medical treatment is provided; excludes a disabling injury.

⁸ Recordable work-related injury rate is calculated as follows: (disabling injury + minor injury) * 200,000 / total # of employee hours worked.

• Monitoring incidents to find opportunities to increase safety in and around port-led infrastructure projects

⁶ Minor incidents include first aid, ergonomic assessment, or short disruption of work, but no loss of work time.

• Evaluating a proponent's safety performance during the procurement phase of projects

• Including safety reporting and performance requirements in contract agreements

Auditing and monitoring safety performance during the project phase

⁷ Lost-time injury rate is calculated as follows: disabling injury * 200,000 / total # of employee hours worked.

All injuries and incidents are self-reported to a first aid attendant or manager and shared with our workplace safety committees. The data is reported annually to Employment and Social Development Canada and the Vancouver Fraser Port Authority Board of Directors, through the Human Resources Compensation and Safety Committee. Data does not include incidents for contractors working in the port authority office.

⁵ Other hazardous occurrences are incidents that involve events such as explosion, fire, revival emergency procedures, loss of consciousness, and malfunctioning of an elevating device.

² A high-consequence work-related injury is an injury that results in a fatality or an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within six months.

√Independent assurance obtained for the number of fatalities, high-consequence work-related injuries, minor injuries, recordable work-related injury rate, and the total number of hours worked for 2020.

We do not manage or regulate health and safety beyond the port authority's own operations. We do have safety oversight for the safety performance of port authority-

- Number of fatalities 0 Number of high-consequence work-related injuries (excluding fatalities)³ 0 0 0
- Recordable work-related injury rate (disabling + minor injuries) 5.19 1.37 7.12 5.44

¹ Contractors are defined as individuals working on port authority-led major construction projects (over \$100,000 contract value) during the active construction period of a project. Consultants are excluded.

Compensation and Safety Committee.

Healthy environment

Direct energy use (GJ)¹

Indirect energy use (GJ)²

Scope 1 - direct (tCO,e)

Scope 2 - indirect (tCO,e)

Scope 3 - other indirect (tCO₃e)

Greenhouse gas emissions offset (%)

include employee commuting, business travel, waste and paper usage.

Sustainable commuting

Employees commuting sustainably (%)¹²³

counts. Previous calculations were based on self-reporting.

Sustainable infrastructure

Year

2018

2019

2020

of port authority-led

Infrastructure projects

completed (>\$500,000)

*This indicator was not measured in 2018.

Thriving communities

Value generated (thousands)

Value distributed (thousands)

Community investments¹²

√ Independent assurance obtained for all data

We follow select sustainability best practice standards:

External initiatives

Operating costs

2 emissions related to HVAC services provided to CPC tenants and common areas were excluded.

Grand total

together.

Energy use

tenants.

⁷ Minor incidents include first aid, ergonomic assessment, or short disruption of work, but no loss of work time.

⁸ Recordable work-related injury rate is calculated as follows: (disabling injury + minor injury) * 200,000 / total # of contractor hours worked.

Diesel

Gasoline

Propane

Electricity

Natural Gas

Fleet vehicles

Buildings

Services

Scope 1 - direct total²

Scope 2 - indirect total

Employee commuting³

Scope 3 - other indirect total

Our corporate greenhouse gas emissions are calculated in accordance with GRI 305-1, 305-2, and 305-3, which are based on the GHG Protocol developed by the World Resource Institute and the World

business travel, employee commuting, paper usage, and waste. Emission factors were referenced from: 2018 B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions, B.C. Ministry of

(BioCO₂) is included in gasoline and diesel consumed, which represents about 2% of total emissions. We have restated our 2018 data to align with our current approach to calculating and reporting energy

purchase of carbon offsets from Taking Root. In 2020 we offset 779 tonnes of greenhouse gas emissions. Scope 1 emissions include fuel consumption for marine vessels and fleet vehicles and natural gas

consumption for the Vancouver Fraser Port Authority (the port authority) office, the CPC boiler and maintenance buildings. Fuel consumption for marine vessels and fleet vehicles, is estimated using total fuel

emissions excludes natural gas usage by CPC's tenants, which are separately sub metered and recovered. Scope 2 emissions include electricity used at the port authority office, CPC facilities, maintenance

invoices. Scope 2 excludes electricity consumption by CPC's tenants, these are separately sub metered and recovered. Our corporate greenhouse gas emissions also include select Scope 3 emissions that

² The significant increase in Scope 1 emissions in 2018 and decrease in Scope 2 emissions are the result of a reassessment of our organizational boundary and the inclusion of CPC within our operational

control. We now classify emissions from the CPC-operated boiler, which provides heat to all CPC tenants, as Scope 1 emissions, and emissions from the electricity used for common-area lighting and air-

³ Employee commuting data is estimated by counting the number of cars in the port authority head office parking lot and averaging the counts to determine the number of employees driving. The mode of

to employees' postal codes. As of March 2020, the majority of port authority employees transitioned to working from home due to COVID-19; therefore commuting is based on the time period Jauary 2 –

March 13, 2020. Prior to 2019, an assumption was made that all survey non-respondents drove to work. In 2019, we changed our methodology to collect physical counts of cars in parking lots.

⁴ Annual business travel activity has been captured through the use of direct invoice data, internal data tracking, and human resources information.

√ Independent assurance was obtained for Scope 1,2 and Scope 3 emissions associated with employee commuting and business travel only.

¹ Sustainable commuting includes all trips to the port authority head office made by modes of transportation other than private vehicle.

transportation for those employees not driving is estimated based on results of an employee survey. Commuting distance is determined by calculating the average distance from the port authority head office

2016

35%

2017

31%

conditioning services as Scope 2 emissions. Prior to 2018, natural gas used for heat provided to the port authority by CPC-operated boilers was classified as Scope 2 emissions, and a portion of Scope 1 and

Environment; Environment Canada's National Inventory Report 1990–2016: Greenhouse Gas Sources and Sinks in Canada. Greenhouse gas emissions are expressed in tonnes of carbon dioxide equivalent

Business Council on Sustainable Development. We apply the operational control approach for establishing organizational boundaries and reports on Scope 1, Scope 2, and Scope 3 emissions related to

(CO₂e), with carbon dioxide, methane, and nitrous oxide included in the calculation. To account for B.C.'s Renewable and Low Carbon Fuel Requirements Regulation, a biogenic emission component

use data. Port authority operations, excluding CPC, are carbon neutral through the purchase of carbon offsets. Our 2020 corporate GHG emissions, excluding CPC emissions, were offset through the

purchases divided by an average fuel price for the year. Natural gas consumption used in the CPC boiler and for heating the port authority office is based on utility invoices. Natural gas consumption for

buildings, and for services, such as lighting and pumps. It includes electricity consumed to provide HVAC services to CPC tenants. Scope 2 emissions are calculated based on consumption per utility

maintenance buildings, is estimated using one month's invoice per building to calculate the price per GJ. The factor is applied to the cost associated with each building to estimate consumption. Scope 1

Business travel⁴

Paper usage

Waste

Total

Total

Natural Gas

months.

Total number of exposure hours

⁴ A disabling injury is an employment injury or occupational disease that involves loss of work on the subsequent day after the injury. ⁵ A minor injury is an employment injury or occupational disease for which medical treatment is provided; excludes a disabling injury. ⁶ Other hazardous occurrences are incidents that involve events such as explosion, fire, revival emergency procedures, loss of consciousness, and malfunctioning of an elevating device.

√Independent assurance obtained for the number of fatalities, high-consequence work-related injuries, minor injuries, recordable work-related injury rate, and the total number of hours worked for 2020.

We have a number of initiatives designed to reduce corporate greenhouse gas (GHG) emissions. These include our Sort Smart waste management system, employee

organizational boundary to include Canada Place Corporation (CPC) emissions within our operational control. CPC provides heating and cooling services to all CPC

2016

3,846.43

723.99

898.32

97.61

5,566.35

11,278.88

4,627.00

15,905.88

¹ Direct energy use includes non-renewable sources. We have restated our 2018 data to align with our current approach to calculating and reporting energy use data. Direct energy use includes natural gas

² Indirect energy use includes non-renewable and renewable sources. We have restated our 2018 data to align with our current approach to calculating and reporting energy use data. Indirect energy use

includes electricity. Prior to 2018, it also included heat (from natural gas) provided to the port authority by the CPC-operated boiler. Starting in 2018, we reclassified this energy from indirect energy use to

and light fuel oil used to heat buildings and diesel, gasoline, and propane used to fuel port authority-owned marine vessels, fleet vehicles, and non-road equipment. Light fuel oil and diesel have been reported

2017

3,685.18

623.40

1,122.43

176.07

5,607.08

12,408.35

5,270.30

17,678.65

60.1

401.1

257.3

263.9

431.2

177.2

14.4

6.1

628.9

1,293.9

100%

6.6

51.5

396.8

292.3

298.7

492.4

157.0

11.0

9.0

669.4

1,364.8

100%

6.4

50.1

59.7

5.7

65.4

534.9

198.0

10.2

6.3

749.4

6,105.9

24%

5,291.1

2018

4,736.03

662.64

72.77

97,849.11

103,320.55

23,111.82

23,111.82

0.00

2019

8,041.18

639.74

149.47

92,919.26

101,749.65

23,034.45

23,034.45

0.00

2020

4,171.15

450.37

75,757.00

80,439.16

18,363.09

18,363.09

0.00

37.4

44.9

6.3

51.2

97.2

33.6

0.4

1.5

132.7

4,289.6

18%

4,105.7

43.5

79.6

6.1

85.7

402.9

163.0

9.2

7.4

582.5

5,924.0

20%

2019

2018

31%

2020

Waste diversion

rate

85.57%

83.65%

85.99%

85.13%

86.52%

5,255.8

60.64

sustainable commuting initiatives, and lighting and temperature controls. The significant increase in direct energy use in 2018 reflects a reassessment of our

² All injuries and incidents are reported to the port authority by project contractors. Data is reported annually to the Vancouver Fraser Port Authority Board of Directors, through the Human Resources

³ A high-consequence work-related injury is an injury that results in a fatality or in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within six

direct energy use.							
Greenhouse gas emissions ¹							
We have a number of initiatives designed to reduce our corporate GHG emissions. These include lighting and temperature controls in our offices, our Sort Smart waste management system, and sustainable commuting initiatives. The significant increase in Scope 1 greenhouse gas emissions in 2018 reflects a reassessment of our organizational boundary to include CPC emissions within our operational control. CPC provides heating and cooling services to all CPC tenants.							
		2016	2017	2018	2019	2020	
	Buildings	50.8	66.0	4,966.1	4,948.0	3,781.3	
	Marine vessels	290.2	279.3	275.0	264.3	287.0	

Office waste

We use our Green Infrastructure Guidelines to inform port-authority-led infrastructure projects over \$500,000 in value and to track the implementation of these

N/A*

4

6

% of applicable Green

implemented

235,163

133,921

74,935

6,516

1,138

706

101,242

Infrastructure Guidelines

65%

57%

69%

2018

274,453

149,348

85,254

44,375

7,477

5,194

5,944

878

226

125,105

253,478

104,226

80,526

5,871

762

-38,509

149,252

2019

301,318

50,462

92,174

45,492

8,039

5,354

6,904

2,901

-110,402

250,856

2020

274,082

155,133

88,880

50,870

7,504

2,347

5,836

832

-1,136

118,949

² In 2019 we revised our data collection process. We now estimate the numbers of employees commuting sustainably by counting the number of cars in the head office parking lot daily and averaging the

Economic value generated and distributed 2016 2017

As a port authority, we generate and distribute economic value to communities and government, both locally and nationally.

Other expenses (income) **Value retained (thousands)**

² The large increase in the 2019 value retained is due to accruals in the local channel dredging program.

Payments to government – payments in lieu of taxes

We participate in a range of port-related sustainability initiatives intended to further leading practices in our industry. A list of key collaborations can be found here. **Memberships** president of infras

Association of Canadian Port Authorities

- Business Council of British Columbia Canada West Foundation
- Vancouver Maritime Museum • The Worldwide Association of Port Cities

Canadian Chamber of Commerce Canadian Council for Aboriginal Business Chamber of Shipping of British Columbia • Cruise Industry Association of B.C.

• International Association for Public Participation

Composted Recycled plastics, **Recycled paper Recycled paper** Landfill Year **Total** glass and metals confidential waste other 8,590.00 12,284.39 5,923.42 4,760.00 32,995.52 2016 1,437.71 7,840.00 2,663.49 12,333.35 4,636.74 5,370.00 32,843.58 2017 12,383.09 7,864.00 4,057.06 5,659.83 4,880.00 34,843.98 2018 1,618.00 29,851.00 7,611.00 12,433.00 3,749.00 4,440.00 2019 1,940.00 3,133.00 6,823.00 2020 567.00 263.00 920.00 Data includes waste generated in the port authority head office and maintenance offices.

of projects with over 50% of

applicable guidelines

implemented

guidelines, with a target to implement at least 50% of applicable guidelines on each project.

4

6

³2020 data covers three months of commuting data. As of March 2020, the majority of port authority employees transitioned to working from home, due to COVID-19.

Employee wages and benefits 38,690 43,364 Payments to government – stipend 6,711 6,931 Payments to providers of capital 5,225 5,281

¹ Community investment totals include community investment program contributions, local channel dredging contributions, and other corporate giving and contributions.

• International Association for Public Participation (IAP2) core values and principles guide our engagements with communities

• Our participation in Green Marine environmental certification helps us align our practices with marine industry best practices

• We follow ISO 14064 specification and guidance for quantification and reporting of our greenhouse gas emissions

• The GRI Standards Sustainability Reporting Principles help define our report content and quality

We support and participate in industry-related organizations, and our executive leadership team play a significant role. Robin Silvester, our president and CEO, is a vice president representing North America at the International Association of Ports and Harbors and is also co-chair of the Presidents Group. Cliff Stewart, our vice president of infrastructure, sits on the board of directors for Green Marine.
Our key memberships are listed below:
American Association of Port Authorities

Greater Vancouver Board of Trade Industry Council for Aboriginal Business