

Economic Impact Study Greater Victoria Harbour Authority

August 2021



GREATER
VICTORIA
HARBOUR
AUTHORITY

Acknowledgments

The Greater Victoria Harbour Authority (GVHA) acknowledges that the Victoria Harbour is located in the Traditional Territory of the Lekwungen People, whose relationship to the land continues to this day. We are grateful for the participation of the Esquimalt Nation and Songhees Nation in the development of this Economic Impact Study (EIS) and will continue to work together in pursuit of Indigenous reconciliation.

This report was developed based on information and data collected from the *Economic Impact Study of the Victoria and Esquimalt Harbour*. We would like to acknowledge the participation and valuable input from the working harbour stakeholders and the work of the project partners who contributed to the broader study including the following organizations.

BC Ministry of Transportation and Infrastructure
Canadian Coast Guard
Canadian Forces Base Esquimalt
City of Victoria
Destination Greater Victoria
Esquimalt Nation
Greater Victoria Chamber of Commerce
Greater Victoria Harbour Authority
Public Services and Procurement Canada
Ralmax Group of Companies
Seaspan, Victoria Shipyards
Songhees Nation
South Island Prosperity Partnership
Township of Esquimalt
University of Victoria
Victoria Esquimalt Harbour Society

Prepared for:



The Greater Victoria Harbour Authority

100-1019 Wharf Street
Victoria, BC
V8W 2Y9

Prepared by:



HDR Corporation

655 Tyee Road
Victoria, BC
V9A 6X5

August 25, 2021

Table of Contents

Executive Summary	1
1. Introduction and Study Overview.....	5
1.1 Study Objectives	6
1.2 Report Structure.....	7
2. GVHA Profile.....	8
2.1 Introduction.....	9
2.2 Greater Victoria Harbour Authority.....	10
2.3 Harbour Businesses	14
3. Study Approach	17
3.1 Triple Bottom Line Framework.....	18
3.2 Stakeholder Survey and Interview Design and Implementation	22
3.3 Survey Response Rates and Interview Participation	23
4. Economic Impact Study Results	25
4.1 Economic Impacts	26
4.2 Social Impacts	30
4.3 Environmental Benefits	35
4.4 Conclusions.....	41
5. Sector-specific Impact Summaries	42
5.1 Government & Institutional Sector	43
5.2 Industrial Sector	44
5.3 Transportation Sector.....	45
5.4 Tourism Sector.....	46
5.5 Recreational Sector.....	47
6. Appendices.....	48
6.1 Appendix A – Stakeholder List.....	49
6.2 Appendix B – Detailed Economic Impact Results.....	50
6.3 Appendix C – Detailed Technical Methodology	57
6.4 Appendix D – Input-Output Multipliers	65
6.5 Appendix E – Stakeholder Survey	68

List of Tables

Table 1: Economic Impacts from All Business Activity	4
Table 2: Survey Responses by Sector	23
Table 3: Economic Impacts from All Business Activity	28
Table 4: Economic Impacts of the Government & Institutional Sector	43
Table 5: Economic Impacts of the Industrial Sector	44
Table 6: Economic Impacts of the Transportation Sector	45
Table 7: Economic Impacts of the Tourism Sector	46
Table 8: Economic Impacts of the Recreational Sector	47
Table 9: Economic Impacts from All Business Activity	50
Table 10: Economic Impacts from the Government & Institutional Sector	50
Table 11: Economic Impacts from the Industrial Sector	50
Table 12: Economic Impacts from the Transportation Sector	50
Table 13: Economic Impacts from the Tourism Sector	51
Table 14: Economic Impacts from the Recreational Sector	51
Table 15: Direct Impact on the Local Economy	52
Table 16: Indirect Impact on British Columbia's Economy	52
Table 17: Induced Impact on British Columbia's Economy	52
Table 18: Total Impact on British Columbia's Economy	52
Table 19: Indirect Impact on the Canadian Economy	53
Table 20: Induced Impact on the Canadian Economy	53
Table 21: Total Impact on the Canadian Economy	53
Table 22: Total Direct, Indirect, and Induced Economic Impacts	54
Table 23: Government & Institutional Sector Direct, Indirect, and Induced Economic Impacts	54
Table 24: Industrial Sector Direct, Indirect, and Induced Economic Impacts	55
Table 25: Transportation Sector Direct, Indirect, and Induced Economic Impacts	55
Table 26: Tourism Sector Direct, Indirect, and Induced Economic Impacts	55
Table 27: Recreational Sector Direct, Indirect, and Induced Economic Impacts	56
Table 28: Survey Industry Sectors and Harbour Sector Classification	60
Table 29: Tax Revenues as Percentage of GDP	64
Table 30: Input-Output Multipliers – Direct Multipliers	65
Table 31: Input-Output Multipliers – Indirect Multipliers	66
Table 32: Input-Output Multipliers – Induced Multipliers	67

List of Figures

Figure 1: 2019 Economic Impact of GVHA and Harbour Businesses (Greater Victoria Impacts Only)	3
Figure 2: Harbour Businesses Contribution by Geography	3
Figure 3: Greater Victoria Harbour Authority	9
Figure 4: Harbour Businesses – Inner Harbour	11
Figure 5: Harbour Businesses – Fisherman's Wharf	12
Figure 6: Harbour Businesses – Ogden Point	13
Figure 7: Categorization of Harbour Businesses by Sector	14
Figure 8: Scope of Economic Impact Estimates	20
Figure 9: Measures of Economic Activity	20
Figure 10: Contribution of Harbour Businesses to the Regional and Provincial GDP by Sector	26
Figure 11: Contribution of harbour businesses to the Canadian GDP by Sector	28
Figure 12: Estimation of Direct Output, Direct GDP, and Employment Income	61
Figure 13: Estimation of Indirect and Induced Impacts in British Columbia	62
Figure 14: Estimation of Direct and Indirect Impacts of Capital Expenditures	63

Executive Summary

Introduction and Study Purpose

Located at the southern tip of Vancouver Island, the Victoria Harbour lies south of the 49th parallel, a common reference to the Canada-United States border in Western Canada and provides convenient access to Vancouver, BC and Seattle, Washington. The Victoria Harbour lies on the Traditional Territory of the Lekwungen People. With long family traditions, rich cultural activities, and strong connections to the lands and waters, the Lekwungen People are stewards of the harbours and contribute to the social, environmental, and economic well-being of the neighbouring communities.

These lands serve as a gateway for tourism as well as industrial and commercial activity across Vancouver Island, making them an important source of economic activity in the Greater Victoria region. An active commitment by the local working harbour businesses to the economic, social, and environmental vitality of the region creates benefits that impact not only Greater Victoria, but also ripple out across British Columbia and other Canadian provinces.

The study is intended to establish a baseline of the economic impact of the Greater Victoria Harbour Authority (GVHA) and the various harbour businesses that operate on its properties. The study was developed using 2019 data collected from the *Economic Impact Study of the Victoria and Esquimalt Harbours*. The study uses a triple bottom line approach and attempts to quantify all economic activity spurred by harbour businesses as well as their social and environmental contributions. It also provides sector-specific highlights and discussion on the importance of the harbour to First Nations.

The study establishes a framework that can be repeated in future years to measure trends and to assess future developments and economic growth against the 2019 baseline. The quantified economic impacts can assist in regional and local planning, facilitate financial forecasting, and support major investment initiatives by harbour businesses.

Methodology

Triple Bottom Line Framework

To understand the economic, social, and environmental contributions of the organizations operating in the working harbour and to convey the overall societal significance of the harbour businesses to the public and all harbour stakeholders, this study used an approach referred to as a triple bottom line (TBL) evaluation framework. The TBL is an economic evaluation framework that incorporates three dimensions of performance: (1) economic and financial, (2) social, and (3) environmental.



The TBL framework is related to sustainability and social responsibility, which imply responsible use of natural, social, and economic resources, as well as commitment to social equity, inclusion, diversity, and acting in a manner that generally benefits society. It was originally developed to assess corporate performance more broadly by considering the full costs of doing business. Expanding the TBL framework from a company-level to a community-level scope, this study relied on traditional economic impact modeling techniques to quantify jobs and other measures of economic activity generated by users of the harbours, while accounting for their social and environmental initiatives in order to reflect the full range of socio-economic impacts.

Economic, Social, and Environmental Impacts

Impacts were estimated based on information extracted from the *Economic Impact Study of the Victoria and Esquimalt Harbour*. Only businesses located on the properties managed by GVHA with a direct link to the Victoria harbour were included in the study.

Economic impacts were estimated at the regional level for Greater Victoria, at the provincial level for British Columbia, and at the national level for all of Canada using economic input-output multipliers derived from Statistics Canada's input-output Interprovincial Model¹. The scope of the economic impact analysis captured what are called direct, indirect, and induced impacts of harbour businesses.

Cruise and passenger ferry services are principal activities of the Victoria harbour. However, for the purposes of this study which focused on the working harbour and the expenditures of the working harbour, passenger spending was not included. As such, spending directly related to the visitor economy at restaurants, retail, and tour excursions taking place outside of the Victoria harbour is not included.





While significant efforts were made to collect the necessary information from harbour businesses to estimate the social and environmental impacts, ultimately a limited data was available in relation to the social and environmental contributions. As such, social and environmental initiatives were discussed qualitatively, highlighting their purpose, impacts, and the expenditure amounts where available.

Results

GVHA and the harbour businesses operating on its properties are a significant contributor to economic development in the region. Harbour businesses generated \$196 million in output across Greater Victoria in 2019, contributed \$108 million to local GDP, supported 1,048 local jobs, paid \$53 million in employment income, and generated \$33 million in total tax revenues including \$2.7 million in local municipal taxes.

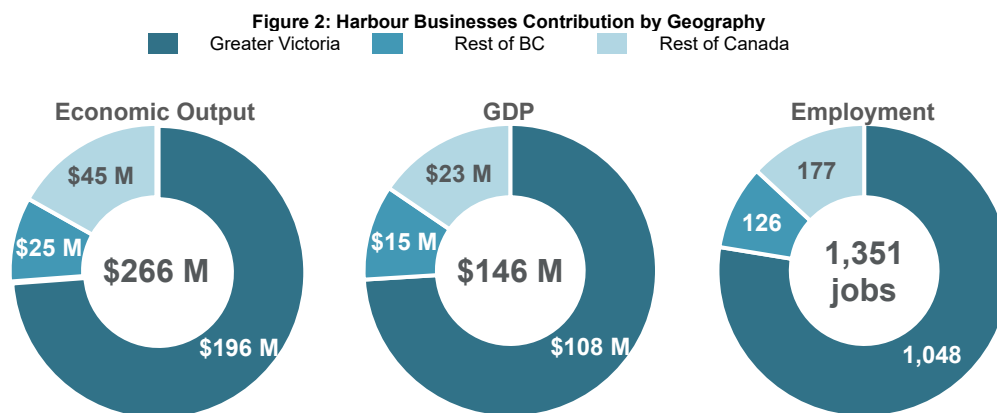
¹ Detailed descriptions of the methodology and technical terminology are presented in Appendix D, while the multipliers used in the economic analysis are presented in the Appendix E.

Figure 1: 2019 Economic Impact of GVHA and Harbour Businesses (Greater Victoria Impacts Only)

				
Impact	Output (\$ Millions)	GDP (\$ Millions)	Employment (jobs)	Wages (\$ Millions)
Direct	\$127.2 M	\$65.8 M	694	\$33.3 M
Indirect	\$42.3 M	\$22.7 M	216	\$13.0 M
Induced	\$26.5 M	\$19.3 M	138	\$6.9 M
Total	\$196.0 M	\$107.9 M	1,048	\$53.2 M

More broadly, harbour businesses generated \$221 million in output across British Columbia, contributed \$123 million to provincial GDP, supported 1,174 jobs across the province with \$60 million in employment income, and generated \$37 million in total tax revenues including \$15 million in provincial taxes for BC.

Finally, harbour businesses generated \$266 million in output across all of Canada, contributed \$146 million to Canadian GDP, supported 1,351 jobs with \$72 million in employment income, and generated \$44 million in total tax revenues.



Harbour businesses also contributed more than \$560,000 to social programs in 2019 and supported numerous local community initiatives and programs which provided significant social value to the region.

Finally, harbour businesses reported spending more than \$275,000 in 2019 on environmental initiatives such as efforts to reduce their overall environmental footprint, promote sustainable practices, and help improve the local wildlife habitats.

Table 1: Economic Impacts from All Business Activity²

	Greater Victoria	British Columbia	Canada
Economic Output (millions)	\$196.0	\$220.8	\$265.5
GDP (millions)	\$107.9	\$123.2	\$145.8
Jobs (FTEs)	1,048	1,174	1,351
Employment Income (millions)	\$53.2	\$60.3	\$72.0
Tax Revenue (millions)¹	\$32.8	\$37.5	\$44.3

(1) Government revenues capture revenues generated from all forms of taxation (income, property, sales, etc.) and collected by all three levels of government (municipal, provincial, and federal).

² Results reflect the total economic impact (i.e. the sum of direct, indirect, and induced impacts).



1. Introduction and Study Overview

Disclaimer

In conducting this study, HDR relied on data collected from the *Economic Impact Study of the Victoria and Esquimalt Harbour*. This study included stakeholder surveys and interviews and relied on other relevant reports and studies from publicly available sources that were not audited or otherwise verified independently by HDR. All economic results are aggregated to a regional or sector level to preserve the confidentiality of individual stakeholder data and may be rounded values. In consultation with the EIS Steering Committee, HDR used what was deemed the best available data at the time of analysis and makes no warranties as to the accuracy of this information or completeness of the analysis.

The study is based on 2019 data, which does not capture the impact of the global COVID-19 pandemic on the regional economy. Although this omits the impacts of government-mandated lockdowns and reduced tourism activity on local businesses, 2019 results provide a more stable benchmark for assessing and comparing future economic impacts during normal economic conditions.

1.1 Study Objectives

The study is intended to establish a baseline of the economic, social, and environmental impact of the Greater Victoria Harbour Authority (GVHA) and the harbour businesses that operate on their properties. The study was developed using 2019 data as a baseline collected directly from harbour businesses, while also leveraging existing local and regional studies and planning strategies where possible. The study attempts to quantify all economic activity spurred by harbour businesses, and provides discussion on the economic, social, and environmental contributions of the harbour including sector-specific highlights and discussion on the importance of the harbour to First Nations.

The study establishes a framework that can be repeated in future years to measure trends and to assess future developments and economic growth against the 2019 baseline. The quantified economic impacts can assist in regional and local planning, facilitate financial forecasting, and support major investment initiatives by harbour businesses. HDR has summarized its findings for GVHA in this report.

1.2 Report Structure

This EIS was developed using input from 49 harbour businesses³ operating out of the properties managed by GVHA and leveraged industry-leading economic impact and triple bottom line analysis frameworks. While these frameworks are inherently technical in nature, the main body of this report is intended to be understood by readers without in-depth technical knowledge. The appendices present the detailed results and technical methodology for full transparency in the approach. The study report is structured as follows:

- **Section 1** introduces the report and outlines the study objectives;
- **Section 2** provides a profile of GVHA, their properties, and the organizations operating on those properties;
- **Section 3** outlines the study approach, including the economic impact and triple bottom line frameworks and stakeholder outreach activities;
- **Section 4** presents study results and conclusions including key findings from stakeholder surveys and interviews;
- **Section 5** presents the summarized study results by sector;
- **Appendix A** presents a list of all organizations incorporated within the analysis;
- **Appendix B** presents the detailed economic impact results;
- **Appendix C** presents the detailed technical methodology of the EIS;
- **Appendix D** presents the multipliers used to estimate the economic impact; and
- **Appendix E** presents the stakeholder survey and interview guide template.

Throughout the report, the term ‘harbour businesses’ is used to refer to the GVHA and the various harbour businesses operating on their properties.

³ The identified 49 organizations are a subset of a larger analysis consisting of 100 organizations that have a direct link to the working harbours in Victoria and Esquimalt (i.e. Victoria and Esquimalt harbours).



2. GVHA Profile

2.1 Introduction

Located at the southern tip of Vancouver Island, the Victoria Harbour lies south of the 49th parallel, a common reference to the Canada-United States border in Western Canada and provides convenient access to Vancouver, BC and Seattle, Washington. The Victoria Harbour lies on the Traditional Territory of the Lekwungen People. With long family traditions, rich cultural activities, and strong connections to the lands and waters, the Lekwungen People are stewards of the harbours and contribute to the social, environmental, and economic well-being of the neighboring communities.

These lands serve as a gateway for tourism as well as industrial and commercial activity across Vancouver Island making them an important source of economic activity in the Greater Victoria region. Active commitment to the economic, social, and environmental vitality of the region by the local working harbour businesses creates benefits that impact not only Greater Victoria, but also ripple out across British Columbia and other Canadian provinces.

Figure 3: Greater Victoria Harbour Authority



2.2 Greater Victoria Harbour Authority

The Greater Victoria Harbour Authority (GVHA) is a not-for-profit organization that is committed to the stewardship and sustainable growth of Victoria's dynamic working harbour.

Since its creation in 2002, the organization manages 110 acres of harbour land and marine assets divested from the Government of Canada. GVHA is a self-funded organization that contributes municipal tax base.

GVHA owns and operates several high-profile community amenities including the Ogden Point Breakwater, Inner Harbour lower causeway, Ship Point, the public boat launch at the Breakwater District, and the customs dock at Raymur Point.

Within their commercial and marine industrial holdings are the deep-water terminal at The Breakwater District at Ogden Point, Fisherman's Wharf, four Inner Harbour marinas, and the management of the historic Steamship Terminal.

The lands managed by GVHA are home to dozens of harbour businesses that rely on the water for their operations. GVHA supports the working harbour and aims to be an effective marine asset manager and trusted partner that works for the common good of the harbour and the region.

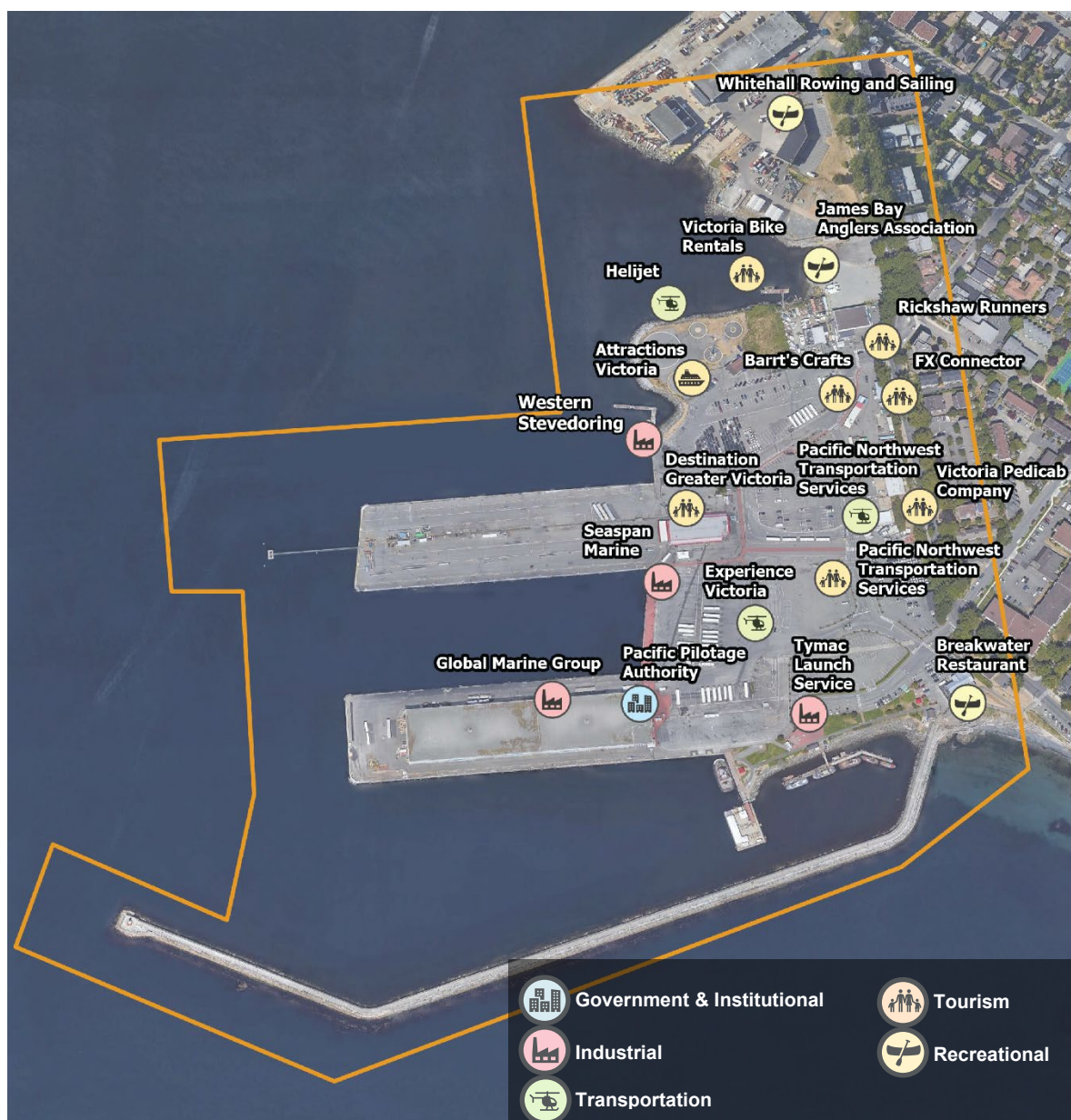
Figure 4: Harbour Businesses – Inner Harbour



Figure 5: Harbour Businesses – Fisherman's Wharf



Figure 6: Harbour Businesses – Ogden Point



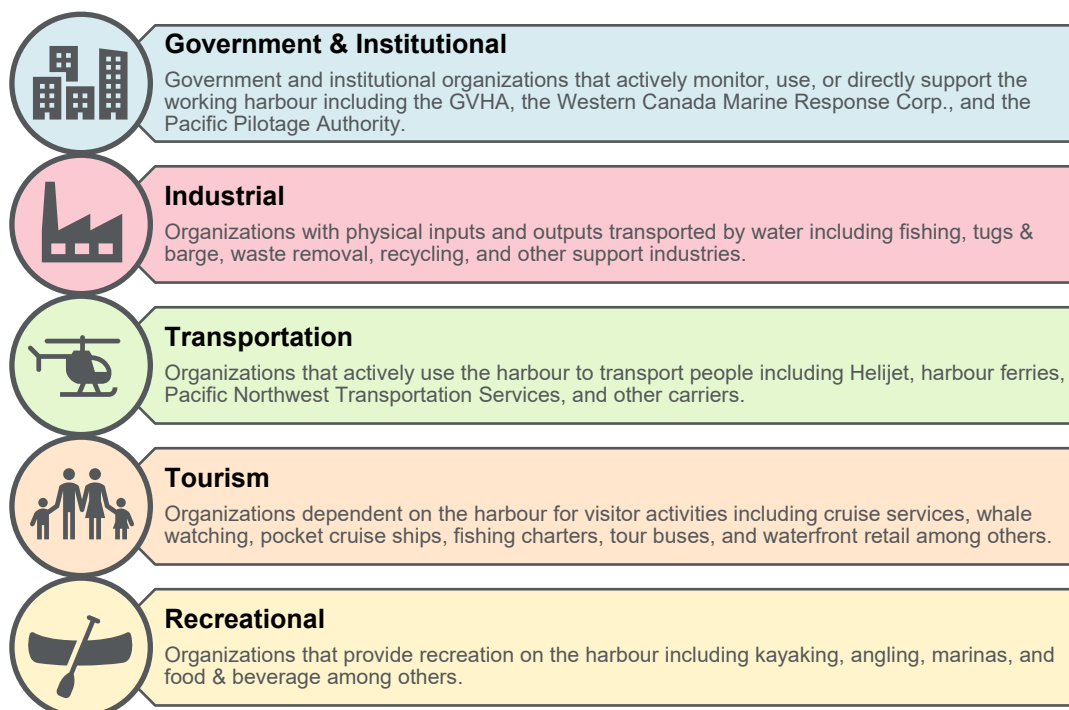
2.3 Harbour Businesses

The Victoria harbour is an active working harbour with dozens of harbour businesses relying on the water to transport good and services, to move passengers, and to provide recreational activities for visitors and locals alike.

Working closely with GVHA, HDR identified 49 distinct harbour businesses⁴ for which a direct link could be made to harbour activity and are located on GVHA properties.⁵ These harbour businesses vary widely in size, ranging from one employee to almost 270 employees. A list of the harbour businesses that were contacted for this EIS is presented in Appendix A.

For a better understanding and comparison purposes, each harbour business was categorized into one of five sectors as shown in Figure 7 below.

Figure 7: Categorization of Harbour Businesses by Sector



In general, of the harbour businesses contacted, the transportation sector businesses were the largest employers, but all sectors play a vital role facilitating tourism and economic activity and

⁴ The identified 49 harbour businesses are a subset of a larger analysis consisting of 101 organizations that have a direct link to the working harbours in Victoria and Esquimalt (i.e. Victoria and Esquimalt harbours).

⁵ The definition of a direct link to the harbour is somewhat subjective but generally refers to an organization's activity being dependent on water transport within the harbour. As a result, businesses such as real estate development and hotel accommodation adjacent to the harbours are not considered in the study. However, retail businesses with waterfront or foreshore leases directly on the harbour are included in the study scope.

generating social and environmental benefits to the region. A brief overview of some of the harbour businesses by sector is summarized below.

The **government and institutional sector** organizations include GVHA, Transport Canada (Harbour Master), Western Canada Marine Response, and the Pacific Pilotage Authority. GVHA owns and operates several high-profile community amenities in Victoria Harbour including the Ogden Point Breakwater and public boat launch, Inner Harbour lower causeway, Ship Point, and the customs dock at Raymur Point. Within its commercial and industrial holdings are The Breakwater District at Ogden Point, Fisherman's Wharf, four Inner Harbour marinas, and the historic Steamship Terminal. GVHA also manages the Victoria Cruise Terminal at The Breakwater District.⁶

The **industrial sector** harbour businesses include organizations like Western Stevedoring and Tymac Launch Service. Western Stevedoring is one of the largest stevedoring companies in British Columbia with operations dating back to 1948.⁷ In Victoria, they operate the Victoria Cruise & Deep-Water Terminal, where the business manages all cruise services for GVHA as well as provides additional services such as supervisory personnel services and dock security.⁸ Tymac Launch Service, founded in 1929, is a BC company with operations in Vancouver Harbour, Indian Arm, Howe Sound, Fraser River, and the Southern Gulf of Georgia Strait, which includes Victoria.⁹ Tymac provides the shipping and cruise industry with a variety of services including marine transport, tug and barge services, and waste removal.¹⁰

The top **transportation sector** harbour businesses include Helijet, Pacific Northwest Transportation Services (PNWTS), and Wilson's Group of Companies. Helijet is an organization that provides scheduled helicopter service with operations in Richmond, Vancouver, Victoria, Nanaimo, Prince Rupert, and Haida Gwaii. On average, Helijet flies eight times a day between downtown Vancouver and downtown Victoria alone.¹¹ PNWTS is an organization that provides shuttle bus services between the Victoria Cruise Terminal and downtown Victoria. The organization also offers shore excursion tours and dispatch services on the terminal.¹² Wilson's Group of Companies is a local, family-owned, and operated charter bus company based in Victoria and operating since 1962. The company actively participates in the community and supports various organizations, schools, charities, and sport teams.¹³

Major **tourism sector** harbour businesses include Eagle Wing Whale & Wildlife Tours, Prince of Whales Adventures, and Destination Greater Victoria. Eagle Wing and Prince of Whales are two of several whale and wildlife eco-adventure companies operating out of Victoria Harbour. Destination Greater Victoria is a not-for-profit organization representing businesses that are

⁶ GVHA Corporate Overview & History <https://gvha.ca/about-gvha/corporate/>

⁷ Western Stevedoring. Overview. <https://www.westeve.com/our-company/overview>

⁸ Western Stevedoring. Ogden Point Terminal. <http://www.westeve.com/services/terminal-operations/ogden-point-terminal>

⁹ The Chamber of Greater Victoria. Tymac Launch Service. <https://web.victoriachamber.ca/Marine-Shipping-and-Cargo-Handling/Tymac-Launch-Service-6289>

¹⁰ Ibid.

¹¹ Helijet <https://helijet.com/home/about-helijet/>

¹² Tourism Victoria. Pacific Northwest Transportation Services. <https://www.tourismvictoria.com/pacific-northwest-transportation-services>

¹³ Wilson's Transportation <https://wilsonstransportation.com/about/>

either tourism-focused or support tourism activities in the region. Other notable tourism businesses include various fishing charters, carriage tour services, and others.

Recreational sector harbour businesses include recreational harbour businesses including kayak rental facilities, angling clubs and marina. Other notable businesses include the food and beverage establishments, including the establishments at Fisherman's Wharf, such as Puerto Vallarta Amigos, Barb's Fish and Chips, and Fisherman's Wharf Sweets.



3. Study Approach

3.1 Triple Bottom Line Framework

To understand the economic, social, and environmental contributions of the organizations operating in the working harbour and to convey the overall societal significance of harbour businesses to the public and all harbour stakeholders, this study used an approach referred to as a triple bottom line (TBL) evaluation framework.

A foundational understanding of how an organization impacts the public and society is becoming increasingly important across all industries, and TBL is an economic evaluation framework that incorporates three dimensions of performance: (1) economic and financial, (2) social, and (3) environmental – sometimes also referred to as three P's: People, Profit, and Planet.¹⁴

The TBL framework is related to sustainability and social responsibility which imply responsible use of natural, social, and economic resources, as well as commitment to social equity, inclusion, diversity, and acting in a manner that generally benefits society. It was originally developed to assess corporate performance more broadly by considering the full costs of doing business. Businesses and organizations that score highly from a TBL perspective are typically concerned about the physical environment in which they operate, are mindful of their environmental footprint, strive to reduce negative environmental impacts of their activities, give back to their communities, and treat their employees and suppliers fairly.¹⁵

Expanding the TBL framework from a company-level to a community-level scope, this study relied on traditional economic impact modeling techniques to quantify jobs and other measures of economic activity generated by users of the harbours, while accounting for their social and environmental initiatives in order to reflect the full range of socio-economic impacts.

Analysis Scope

Impacts were estimated based on information extracted from the *Economic Impact Study of the Victoria and Esquimalt Harbour*. Only businesses located on the properties managed by GVHA with a direct link to the Victoria harbour were included in the study.

Cruise and passenger ferry services are principal activities of the Victoria harbour. In 2019, the Victoria Cruise Ship Terminal welcomed more than 700,000 passengers, of which over 510,000 passengers disembarked the cruise ships to visit the local area¹⁶. Additionally, Belleville Terminal welcomed more than 340,000 passengers by the Black Ball Ferry Line MV Coho and Clipper Vacations. However, for the purposes of this study which focused on the working harbour and the expenditures of the working harbour, passenger spending was not included. As such, spending directly related to the visitor economy at restaurants, retail, and tour excursions taking place outside of the Victoria harbour is not included.

¹⁴ University of Wisconsin Sustainable Management <https://sustain.wisconsin.edu/sustainability/triple-bottom-line/>

¹⁵ Fernandes, Paula 2020 <https://www.business.com/articles/triple-bottom-line-defined/>

¹⁶ Business Research & Economic Advisors (BREA). Prepared for the Greater Victoria Harbour Authority. *The Economic Contribution of the Cruise Industry in Victoria, Canada*. July 2021.

Based on this scope, 49 harbour businesses were identified for inclusion in this study. A complete list can be found in Appendix A.

Economic Impacts

The economic impacts were assessed using a traditional economic impact analysis methodology that identifies and quantifies the economic activity that is generated or can be linked to an organization and its socio-economic activity. Simply put, the methodology uses information about business expenditures and revenues (like hiring staff or purchasing and selling goods) to estimate how those activities affect overall economic activity in the local, regional, and national economy.

ECONOMIC IMPACT ANALYSIS APPROACH

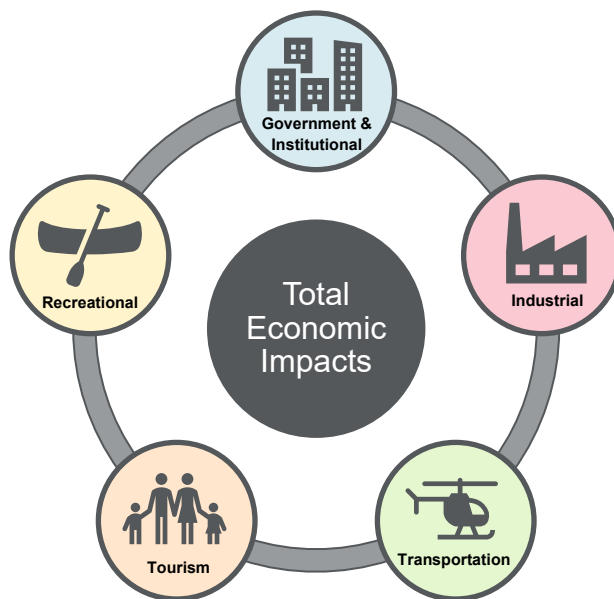
The economic impacts were based on two broad categories of business expenditures:

1. Annual impacts from ongoing business operations in 2019; and
2. Impacts from additional capital expenditures in 2019 that were not related to regular business operations.

These impacts were estimated at the regional level for Greater Victoria, at the provincial level for British Columbia, and at the national level for all of Canada using economic input-output multipliers derived from Statistics Canada's input-output Interprovincial Model (see Appendix D for a detailed description of the methodology and technical terminology)¹⁷.

The scope of the economic impact analysis captured what are called direct, indirect, and induced impacts of harbour businesses.

- **Direct impacts** are simply the economic activity directly associated with the businesses in the working harbour and make up the bulk of the Greater Victoria Region impacts. For instance, a business with 10 permanent employees and \$2 million in annual revenues would be considered to create 10 direct jobs and enable \$2 million in direct economic output.
- **Indirect impacts** capture the economic activity associated with suppliers of goods and services to businesses in the harbour. For instance, purchasing goods from a supplier in Vancouver creates revenue for that supplier which enables them to pay employees, hire new staff, and purchase additional goods and services. Even if a company purchases only locally produced goods, the raw components required to produce those goods and their transportation could impact other parts of the country. As a result, local harbour activity impacts both the Greater Victoria Region and other parts of Canada.

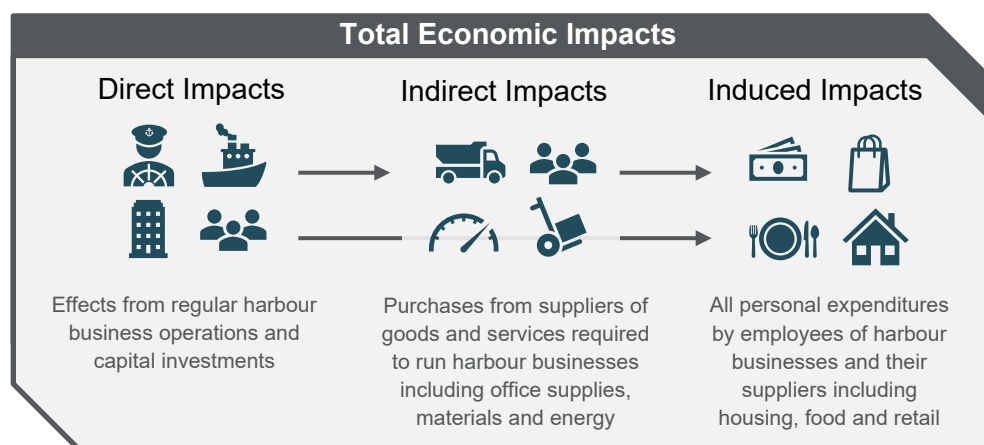


¹⁷ Multipliers used in the economic analysis are presented in the Appendix E.

- **Induced impacts** capture the economic activity associated with the spending of personal income by employees of all the harbour businesses and their suppliers.

The total economic impacts are simply the sum of the direct, indirect, and induced effects. Figure 8 below illustrates and summarizes the three types of economic impacts included in the analysis.

Figure 8: Scope of Economic Impact Estimates



Each of these impacts is estimated in terms of several common measures of economic activity including economic output, gross domestic product (GDP), jobs, employment income, and tax revenue as described below.

Figure 9: Measures of Economic Activity

Economic Output	Gross Domestic Product (GDP)	Jobs	Employment Income	Tax Revenue
Economic output is the total gross output value of all business activity. It represents the total sum of all economic activity that has taken place in connection with harbour businesses and is the broadest measure of economic activity.	GDP is the net value added to the economy, or the value of output minus the value of purchased goods and services used in the production process. It represents the unduplicated measure of the total value of economic activity and is the standard metric for quantifying the size of the economy.	Jobs are the incremental full time equivalent (FTE) jobs created as a result of harbour businesses and capital expenditures. All jobs, including seasonal, contract, and part time work are converted to FTE's.	Employment income is the sum of wages and salaries paid to employees as a result of operations from harbour businesses, and capital expenditures.	Tax revenue is all government revenue associated with the economic activity that has taken place, including income taxes, sales taxes, and municipal property taxes.

The main sections of this report present the total economic impacts in terms of these five measures for Greater Victoria, British Columbia and for Canada as a whole. A more detailed breakdown including the direct, indirect, and induced impacts is presented in Appendix B.

An online survey and in-person interviews were used to gather as much of the information as possible from the identified 49 harbour businesses. Specific questions were asked about employment levels and expenditures. The survey also invited respondents to provide information on capital investments in 2019. The survey responses and interviews were then used to determine the economic impact of the harbour businesses. A copy of the survey used within the study is presented in Appendix E.

Social and Environmental Impacts

The TBL framework for this study attempts to capture the social and environmental impacts of harbour businesses using a combination of two distinct approaches to tracking the value and implications of business' actions and initiatives:

1. Costs occasioned by business investments and initiatives; and
2. Benefits derived from these activities.

The costs occasioned approach treats expenditures associated with social and environmental programs and initiatives as creating economic activity and impacts in the form of jobs and income in a similar manner as business operations and capital expenditures. These impacts can be estimated in a similar way as the economic impacts of operating and capital program expenditures discussed earlier, and some of the impacts may overlap, making them not additive to the economic impact analysis results.

The benefits derived approach involves assigning economic values to metrics associated with social and environmental programs (e.g., reduction in greenhouse gas emissions, or creation of recreational and educational opportunities to the public). This approach relies on extensive data about the nature of the activities generating the impacts, how they affect local communities and society more broadly, and how the communities value those impacts.

While significant efforts were made to collect the necessary information from harbour businesses to estimate the impacts using both approaches, ultimately a limited number of businesses were able to quantify and provide their social and environmental contributions to the harbours. As a result, the costs occasioned estimate presented may not paint a complete picture, while the benefits derived impacts are addressed qualitatively with a focus on the identification of the various initiatives, their goals, and their achievements.

An online survey and in-person interviews were used to gather as much of the information as possible from the identified harbour businesses. Specific questions were asked about the amount that harbour businesses spent on social and environmental programs in 2019, as well as the nature and goals of those programs. Some of the potential goals included improving air quality, improving water quality, reducing general waste, and reducing energy use. The survey also invited respondents to provide estimates of benefits and impacts of their programs, either

using quantitative metrics (where available), or anecdotes and quotes. The survey responses and interviews were then used to determine the incidence of social and environmental programs and initiatives, their purpose, key themes, and amount of expenditures.

3.2 Stakeholder Survey and Interview Design and Implementation

The purpose of the stakeholder survey was to collect information from harbour business operations and their involvement in any social and environmental programs and initiatives in order to populate the TBL evaluation model framework.

The survey questions were designed to collect the following information:

- Business industrial classification and description of activities;
- Measures of business operations (in particular employment) as well as payroll and other operating expenditures;
- Types and geographic distribution of expenditures (e.g., within the Greater Victoria region, elsewhere in British Columbia, or out of province);
- Capital investment projects currently taking place as well as their goals and costs;
- Relationships with First Nations and engagement in cultural reconciliation; and,
- Environmental and social programs and initiatives, their purpose, outcomes, and amount of expenditures incurred.

The draft survey questions developed initially by HDR were reviewed by the GVHA who provided extensive comments regarding survey content and wording of some questions. The final approved questionnaire is provided in Appendix E.

49 harbour businesses were identified as target respondents, and information was provided either through the survey or an interview. The survey questionnaire was coded into an online survey platform, and a link to the survey was sent to respondents by email. This email was accompanied by a letter from GVHA to inform the respondents about the study, the survey itself, and encouraging them to respond. The survey link was distributed in the week of October 8, 2020 and responses were accepted until December 10, 2020.

The survey design attempted to balance the need to obtain specific information for this study while reducing the burden on respondents. The questionnaire used a combination of question types including single and multiple-choice questions as well as questions with open-ended answers and questions that required a short but specific answer (such as number of employees).

Interviews were used to collect more detailed information from some of the largest harbour businesses in the study and used the same survey questionnaire as a guide. The interviews were conducted in person and through videoconferencing in the weeks from November 1, 2020 to November 27, 2020.

3.3 Survey Response Rates and Interview Participation

Of the 49 harbour businesses contacted, 41 provided responses resulting in an overall 84% response rate. Of the remaining 16% of contacted harbour businesses, some were not able to be reached, while others felt that the study was outside of their scope. Twelve of the respondents were subsequently interviewed either in person or by teleconference. These harbour businesses were generally chosen based on a number of factors including, but not limited to, the number of employees, the number of customers (e.g. passengers or tourists), those with known major capital projects in 2019, and those with significant involvement in social or environmental initiatives. The table below provides the responses received from harbour businesses by sector.

Table 2: Survey Responses by Sector

Sector	Total Contacted	Total Responses	Interviews	Survey Responses
Government & Institutional	4	4	3	4
Tourism	20	14	1	14
Transportation	6	6	3	6
Industrial	7	5	3	5
Recreational	10	10	-	10
First Nations	2	2	2	2
Total Number of Harbour Businesses	49	41	12	41

Where information was unavailable, information was extrapolated from based upon additional research of similar organizations and businesses, industry standards with adjustments for operational size, and survey information provided for comparable businesses.

All survey respondents provided economic information about their operations including employment statistics and expenditures that allowed the study team to estimate their economic contributions.

About 44% of survey respondents reported financially supporting social programs and organizations in 2019. However, only around half of these respondents provided dollar estimates of these expenditures, and only half of those indicated that they measured the success of the programs. Most respondents also reported contributions to cultural or sporting events, contributions to not-for-profit organizations, or contributions to the construction of parks and pathways, although with minimal information on expenditures or quantitative impacts. Similarly, about 39% of survey respondents indicated that they financially invested in environmental protection and remediation or otherwise made contributions to environmental initiatives. However, only half of these respondents provided dollar estimates of their expenditures.

The surveys and interviews were instrumental in providing information on employment and business expenditures. The economic data enabled a detailed bottom-up analysis of the economic impact within the harbour. On the other hand, the responses to social and environmental impact questions were predominantly qualitative and insufficient for a meaningful quantitative assessment of the overall social and environmental impacts of harbour businesses. The results section discusses the quantified estimates that were derived, but otherwise generally focuses on qualitative measures and impact metrics such as contributions to social and environmental programs (in cash and in-kind) and specific examples of programs, initiatives, and events.



4. Economic Impact Study Results

4.1 Economic Impacts

The economic impact analysis results illustrate the economic activity of harbour businesses in Greater Victoria and across Canada. The analysis captures all economic activity associated with harbour businesses including purchases of goods and services from elsewhere in British Columbia or Canada by the businesses themselves as well as their employees. Even if a company purchases only locally produced goods, the raw components required to produce those goods and their transportation could impact other parts of the country. As a result, activities by harbour businesses impact both the Greater Victoria Region and other parts of Canada.¹⁸

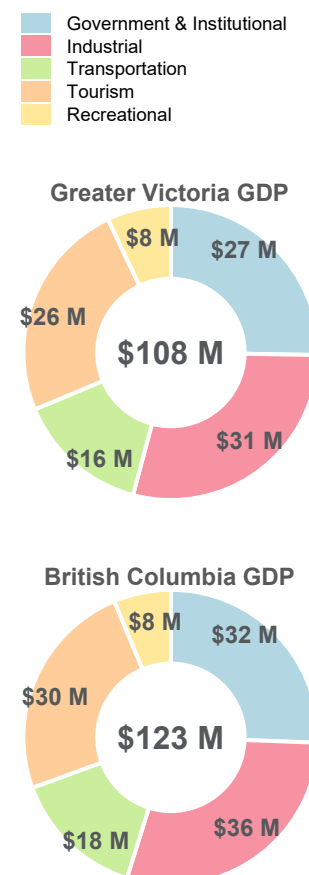
LOCAL IMPACTS

In 2019, harbour businesses generated \$196 million worth of economic activity in the form of gross economic output¹⁹ within the Greater Victoria region which translated to a net value added of \$108 million in GDP to the local economy. These businesses supported a total of 1,048 local jobs²⁰ and \$53 million in employee wages and benefits. This economic activity is estimated to have generated \$33 million in government tax revenues, including \$17 million in federal taxes, \$13 million in provincial taxes, and \$2.7 million in municipal taxes across Greater Victoria.

PROVINCIAL IMPACTS

More broadly, harbour businesses generated \$221 million worth of economic activity across British Columbia which translated to a net value added of \$123 million in GDP to the provincial economy. These businesses supported a total of 1,174 jobs and \$60 million in employee wages and benefits. This economic activity is estimated to have generated \$37 million in government tax revenues, including \$20 million in federal taxes, \$15 million in provincial taxes, and \$3.1 million in municipal taxes throughout the province.

Figure 10: Contribution of Harbour Businesses to the Regional and Provincial GDP by Sector



¹⁸ Results by region are cumulative, as in the results for British Columbia incorporates the results for Greater Victoria, and the results for Canada includes the results for British Columbia and Greater Victoria.

¹⁹ Gross economic output is the sum of all commercial activity associated with business operations and reported 2019 capital expenditures by Victoria Harbour organizations included in the study.

²⁰ Many of the businesses in recreation and tourism reported relying on contract and seasonal workers which were converted to full time equivalents. Since 3 seasonal workers working for 4 months in a year would equate to only 1 FTE job, these figures understate the number of individuals employed by harbour businesses throughout the year.

VICTORIA CRUISE INDUSTRY SPOTLIGHT²¹

Cruise is a principal activity of the Victoria harbour. While passenger spending outside of the Victoria harbour businesses is not included in this study, cruise is a major contributor to regional economy and the primary revenue source for GVHA.

The Victoria Cruise Terminal at The Breakwater District is currently the busiest cruise ship port-of-call in Canada, generating approximately \$143.5 million into Victoria's economy. This includes passenger, crew, and cruise line expenditures.



In 2019, Victoria welcomed more than 700,000 passengers. Cruise passengers who disembarked and visited Victoria establishments on and off GVHA properties contributed a total of \$45 million to the local economy through expenditures of an average of \$86 per passenger. This includes approximately \$23.7 million on tours and local transportation, \$14.6 million on retail goods, and \$6.7 million on food and beverages. Additionally, crew members who disembarked spent an average of \$117, contributing a total of \$11.4 million to the local economy. Finally, cruise lines expenditures contributed a total of \$84 million on services such as transportation, warehousing, port fees, ship agents, and stevedores.

The cruise industry generated direct employment of 807 annualized full-time and part-time employees paying \$40.4 million in wage income. Combining business and income taxes, the direct cruise-related spending in Victoria generated \$11.2 million in governmental tax payments.

Beyond the economic impact, the triple bottom-line analysis highlighted that GVHA contributes to the vitality of the region through social and environmental initiatives and programs both alone and with harbour partners.

GVHA sponsors a number of annual events around Victoria Harbour and owns and manages a number of community amenities – the Ogden Point Breakwater, Ship Point, Raymur Point Customs Dock, James Bay Boat Launch, and the Inner Harbour Lower Causeway – at a cost of more than \$300,000 annually.

With respect to environmental initiatives, GVHA and on-property harbour businesses partake in ongoing initiatives to help preserve and improve the habitat for the flora and fauna in the area. The organization has led several projects to help the local wildlife, including perches for eagles, nesting boxes for birds, and ramps to help ducklings reach land. GVHA is certified as a Green Marine partner for the Victoria Cruise Terminal, a Clean Marine BC 5-anchor rated partners for its Inner Harbour marinas and is a Climate Smart business through its corporate and maintenance office activities.

²¹ BREA. *The Economic Contribution of the Cruise Industry in Victoria, Canada*. July 2021.

NATIONAL IMPACTS

Finally, harbour businesses generated \$266 million worth of economic activity across all of Canada which translated to a net value added of \$146 million in GDP to the national economy. These businesses supported a total of 1,351 full time equivalent jobs and \$72 million in employee wages and benefits. This economic activity is estimated to have generated \$44 million in government tax revenues, including \$30 million in federal taxes, \$18 million in provincial taxes, and \$3.7 million in municipal taxes across Canada.

Table 3 below presents the overall local, provincial, and national economic impacts of GVHA activity and the activity of their tenants, including reported capital expenditures carried out in 2019. Additional details, including a breakdown of results into direct, indirect, and induced effects by sector, are presented in Appendix B.

Figure 11: Contribution of harbour businesses to the Canadian GDP by Sector

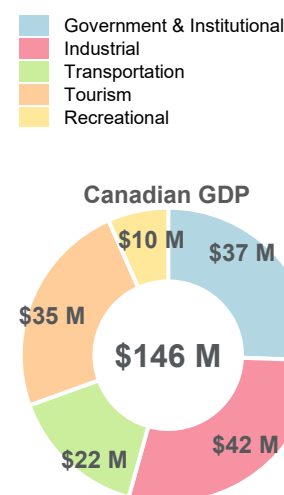


Table 3: Economic Impacts from All Business Activity²²

	Greater Victoria	British Columbia	Canada
Economic Output (millions)	\$196.0	\$220.8	\$265.5
GDP (millions)	\$107.9	\$123.2	\$145.8
Jobs (FTEs)	1,048	1,174	1,351
Employment Income (millions)	\$53.2	\$60.3	\$72.0
Tax Revenue (millions)¹	\$32.8	\$37.5	\$44.3
Federal	\$17.1	\$19.5	\$23.1
Provincial	\$13.0	\$14.9	\$17.6
Municipal	\$2.7	\$3.1	\$3.7

(1) Government revenues capture revenues generated from all forms of taxation (income, property, sales, etc.) and collected by all three levels of government (municipal, provincial, and federal).

Included in these estimates were a couple major capital projects underway in Victoria Harbour in 2019. The first was a \$6.8 million Ogden Point Pier B Dolphin Extension to allow larger cruise vessels to safely dock sponsored by GVHA²³. Another notable project was a \$2 million Ship Point repair project which was a joint venture between GVHA and the City of Victoria²⁴.

²² Results reflect the total economic impact (i.e. the sum of direct, indirect, and induced impacts).

²³ GVHA. Greater Victoria Harbour Authority Completes \$6.8 Million, 58-Metre Extension to Pier B Mooring Dolphin. <https://gvha.ca/about-gvha/blog/greater-victoria-harbour-authority-completes-6-8-million-58-metre-extension-to-pier-b-mooring-dolphin/>

²⁴ GVHA. Ship Point Reopens on Saturday, May 11, 2019. <https://gvha.ca/about-gvha/newsroom/ship-point-reopens-on-saturday-may-11-2019/>

SHIP POINT REPAIR PROJECT SPOTLIGHT

Ship Point is a key part of the Inner Harbour in Victoria, and has been used for numerous community events, celebrations, and fundraisers on an annual basis.²⁵

In 2017, a structural analysis was conducted and the results indicated that the structure was in need of critical repair work. The Ship Point Repair Project was a joint project between the Greater Victoria Harbour Authority and the City of Victoria to maintain the structure, which was originally constructed in 1949. The \$1.8 million project, completed by Salish Seas Industrial, replaced some of the original timber piles with new steel piles and replacement timber beams.²⁶ The project was completed in May 2019 in advance of the season's summer events.



Photo courtesy of GVHA

²⁵ Ibid.

²⁶ Ibid.

4.2 Social Impacts

Harbour businesses provide significant support to social programs and local events including organizing and hosting community events, supporting and promoting local businesses, and donating to local charitable organizations. Contributions made by harbour businesses include both monetary donations and free services such as transportation to venues for big events. Some of the harbour businesses also work with Esquimalt Nation and Songhees Nation to find opportunities to support Lekwungen culture. This includes cultural placemaking initiatives, sponsoring programs for training and education, as well as supporting their economic and cultural aspirations as it relates to the harbour.

Only some harbour businesses were able to provide quantitative data on their social contributions, but those that did reported contributing over \$560,000 to various initiatives supporting local programs and events in 2019. Several businesses also reported in-kind contributions (e.g., staff time, rent relief) which would be captured under economic impacts. This section outlines some of the key social programs and events supported by harbour businesses that may not be quantified but are nevertheless an important part of the triple bottom line evaluation framework.

This section discusses some of the important social programs and events supported by the local harbour businesses as noted in the interviews, surveys or found in existing reports and studies.



Photo courtesy of
Victoria Symphony

SPONSORSHIP FOR LOCAL EVENTS AND ORGANIZATIONS

GVHA sponsors a number of local events around the Victoria Harbour. Most notably, these have included the Swiftsure International Yacht Race, the largest sailing race on the West Coast of North America with over 1,000 sailors participating in 2019; the Classic Boat Festival, organized by the Maritime Museum of BC, attracting more than 10,000 visitors in 2019; the Symphony Splash, an annual outdoor event with a live performance of the Victoria Symphony and a fundraiser for the Victoria Symphony, and various cultural programs, including the Ska Festival, Causeway Activation, and Victoria International Jazz Festival.

2019 VICTORIA DRAGON BOAT FESTIVAL SPOTLIGHT

Since its inception in 1994, the Victoria Dragon Boat Festival has become one of the largest events hosted in the Victoria Harbour. This annual event is sponsored by numerous local organizations including GVHA, the Royal Canadian Navy, and the City of Victoria. In recent years, the event has been known to attract up to 80,000 people over the course of three days.²⁷ In 2019, the 25th annual Dragon Boat Festival attracted around 2,000 paddlers and more than 60 teams from all over the world²⁸.

The event brings people to the Inner Harbour to either participate or spectate the dragon boat races and offers various attractions, cultural performances and activities, and musical performances from local musicians. The event also

celebrates several different cultures including Asian culture through events like the Eye Dotting Ceremony. In 2019, the event put on several cultural performances including a Latin folklore dance and productions from various groups such as Lekwungen Dancers and Lila Polynesian Dancers among others.²⁹

In addition to promoting a sense of community, the festival also raises funds for the BC Cancer Foundation through activities like the Lights of Courage which allows people to hang paper lanterns filled with personal messages related to cancer near the water.³⁰ From 2008 to 2018, the festival has raised over \$667,000 for the BC Cancer Foundation through the Lights of Courage and other donations.³¹



Photo courtesy of Victoria Dragon Boat Festival

²⁷ Victoria Dragon Boat Festival. About Us. <https://victoriadragonboatfestival.com/about-us/>

²⁸ Nicole Crescenzi. *Victoria Welcomes the 25th Dragon Boat Festival*. Sooke News Mirror. August 7th, 2019.

²⁹ Ibid.

³⁰ Victoria Dragon Boat Festival. Lights of Courage. <https://victoriadragonboatfestival.com/lights-of-courage/>

³¹ Ibid.

COMMUNITY SUPPORT & CHARITABLE DONATIONS

Harbour businesses provided significant contributions to the community through cash donations, free services, and other in-kind contributions.

Below is a summary of a number of initiatives:

- Pacific Northwest Transportation Services (PNWTS) provided bus transportation for a community school group field trip and donated services to help raise money for the David Foster Foundation and the James Bay Community Picnic.
- Helijet donates to a variety of organizations and groups by offering free seats on their aircraft. In 2019, they donated significant amounts in seat value to Power to Be which is a group helping people living with disabilities and unable to access nature. They are also a major supporter of the Victoria Arts and Entertainment industry and frequently offer free seats to those working in the industry. Helijet also runs “Santa Flights” with BC Emergency Health Services, an annual event that brings Santa via air ambulance to visit children in BC hospitals. 2019 was the 15th annual Santa Flight.
- Destination Greater Victoria contributed to the David Foster Harbour Pathway – a waterfront route that connects residents and visitors with various tourism and recreational activities around the city, recognizes the Lekwungen People history, enhances the natural marine habitat, and supports social and economic wellbeing.³²
- Western Stevedoring provided donations to two local organizations, the James Bay New Horizons Society and the James Bay Community Project in 2019.
- Tymac Launch Service (Tymac) has an initiative that donates reusable materials from ships, such as furniture and refrigerators) to local not-for-profit associations. In 2019, Tymac partnered with Victoria’s Habitat for Humanity, donating 400 chairs and 91 tables. They also provided 700 keyhole life jackets to Firefighters Without Borders.



Photo courtesy of
Power to Be

³² City of Victoria. *David Foster Harbour Pathway*. <https://www.victoria.ca/EN/main/residents/parks/david-foster-harbour-pathway.html>

FIRST NATIONS RELATIONSHIPS AND INITIATIVES

Various harbour businesses provide social benefits to the area through education and training. GVHA offers a variety of programs including job shadowing opportunities for Lekwungen youth and training opportunities for Lekwungen members, with a focus around the skills and licensing required in the maritime industry. Additionally, GVHA has also partnered with the Victoria Native Friendship Centre to support their various career and training programs. Similarly, Seaspan ULC supported First Nations skills and training development through the Camosun Coastal Centre.



Finally, Eagle Wing Tours has partnered with the Songhees Nation in providing a First Nations Cultural Tour.³³ This tour, narrated by a Songhees guide, provides knowledge on cultural marine wildlife and 50% of the proceeds are donated to the Nation with the goals of promoting ecological and cultural integrity and long-term sustainability.³⁴

³³ Destination Greater Victoria. *5 Ways to Experience Aboriginal Culture in Victoria*. April 10, 2016. <https://www.tourismvictoria.com/blog/5-ways-experience-aboriginal-culture-victoria>

³⁴ Eagle Wing Whale Watching Tours. Songhees Nation Cultural Tours. June 21, 2016. <https://www.facebook.com/EagleWingTours/posts/have-you-heard-about-our-songhees-nation-cultural-tour-this-5-hour-educational-10153704938238730/>

VICTORIA HARBOUR COMMUNITY AMENITIES SPOTLIGHT

Along with its ownership and management of harbourfront facilities such as Fisherman's Wharf and The Breakwater District at Ogden Point, the Greater Victoria Harbour Authority stewards several high-profile community amenities and assets that help enhance the livability of the city.

Perhaps most recognizable is the Ogden Point Breakwater. Even though it is now more than a century old, it is a stalwart workhorse for the harbour, protecting the piers of the Victoria Cruise Terminal and the entrance to Victoria Harbour, providing a home to sea life and migratory birds, and servicing as a popular spot for residents and visitors to use; more than 450,000 people visit the Ogden Point Breakwater each year.



The Inner Harbour Lower Causeway serves as the focal point of the city's iconic harbourfront. The Lower Causeway is home to the popular Inner Harbour Summer Line-Up which is filled with artisans, street musicians, performers, and food vendors. The southern apron of the Lower Causeway – home to the Welcome to Victoria ornamental garden – further comes alive with Lekwungen artisans and vendors. Located adjacent to the Lower Causeway, Ship Point is animated by dozens of annual public and private events including the Dragon Boat Festival, Ska Fest, and Buskers Festival.

Additional community amenities, such as the James Bay Boat Launch at the northern end of The Breakwater District and the Raymur Point Customs Dock in the outer harbour, provide critical services to the local and visiting boating communities.

The cost of maintaining these community amenities is approximately \$300,000/year, which is funded by GVHA through its revenue-generating operations such as a cruise and marinas.

4.3 Environmental Benefits

ENVIRONMENTAL INITIATIVES

Harbour businesses reported numerous environmental initiatives and efforts to reduce their environmental footprint, promote sustainable practices, and help improve local wildlife habitats. The initiatives came in various forms including fleet electrification, implementation of new environmentally friendlier technologies or methodologies, infrastructure to prevent water contamination, and significant efforts to reduce waste.

Only a few harbour businesses provided quantitative environmental data, but those that did reported spending more than \$275,00 on environmental initiatives in 2019. This section outlines some of the key environmental programs and initiatives being carried out by harbour businesses as noted in the interviews, surveys or found in existing reports and studies.

This section discusses some of the notable environmental programs or initiatives supported by the harbour businesses as noted in the interviews, surveys or found in existing reports and studies.

In 2019, harbour businesses invested over \$275,000 in environmental initiatives.



Air Quality



Water Quality



Habitat



Waste



Photo courtesy of
Victoria Harbour Ferry

TRANSPORTATION FLEET ELECTRIFICATION

Victoria Harbour Ferry is electrifying its fleet. In 2016, the organization expanded to three electric vessels to respond to growing demand and uphold their commitment in maintaining the unpolluted waterways.³⁵ The company plans to acquire more vessels and to continue expanding its electric fleet.

Also, in 2019 PNWTS began working with the Vancouver Island Green Business Collective to measurably reduce its environmental impact. In 2020, the Vancouver Island Green Business Collective recognized PNWTS with the highest certification level. The Green Certification highlights include plans to convert a diesel double-decker bus to hydrogen fuel-cell.

³⁵ Andrew Duffy. *Victoria Harbour Ferry triples its electric fleet*. Times Colonist. July 26, 2016

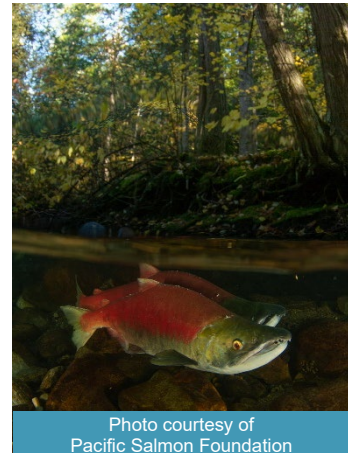
HABITAT INITIATIVES

Various harbour businesses partake in initiatives to help preserve and improve the habitat for the flora and fauna in the area. GVHA has led several projects to help the local wildlife, including perches for eagles, nesting boxes for birds, and ramps to help ducklings reach land. Meanwhile, Victoria Harbour Ferry has been involved with the Gorge Water Society and the Gorge Waterway Preservation program. The program focuses on cleaning up the Gorge Waterways with the goal of bringing back the local flora and fauna, as well as promoting seabed growth.

In 2019, Eagle Wing Tours partnered with World Fisheries Trust on a Herring Enhancement Project researching and monitoring herring to inform recovery of the species in the Victoria harbour. They are also supporters of the Goldstream Fish Hatchery, and their funds support the raising of up to 250,000 Chinook salmon every year. In 2019, Eagle Wing Tours contributed, through its 1% for the Planet Program and Wildlife Passenger Fee, \$220,383 to environmental projects in the region, including the Centre for Whale Research, Ocean Wise Marine Mammal Research, and SeaChange Marine Conservation Society.

Prince of Whales incorporated a conservation fee to help them raise and leverage funds for initiatives that help preserve local ocean wildlife. Since 2015, the organization has donated to several programs including Wild Salmon Enhancement and Marine Mammal Research.

Since 2018, Helijet has had a partnership with the Pacific Salmon Foundation generating an annual donation based on the number of one-way flights sold on Helijet's scheduled passenger service routes between Vancouver and Nanaimo harbours. The partnership is also helping to significantly reduce costs for research and assessment activities in remote locations by donating use of a helicopter and pilot.





GREEN MARINE CERTIFICATION

Green Marine is an environmental certification program for North America's maritime industry. Green Marine audits and ranks various maritime groups (ship owners, shipyards, terminal and stevedoring companies, and port authorities) in 6 comprehensive environmental categories on a scale of 1 to 5, where Level 1 reflects basic regulatory compliance, and Level 5 reflects excellence and leadership.³⁶

GVHA has participated in the program since 2011. For 2019, the GVHA had a Level 5 rating in two categories: community impacts, and environmental leadership as well as a Level 4 in Spill Prevention. For the remaining categories, GVHA received two

Level 3 ratings (GHG & air pollutants, and waste management), and one Level 2 rating (Underwater Noise).³⁷ While the rating for Underwater Noise was only level 2, this category was relatively new, and improvements were made based on the organization's work with the Southern Resident Killer Whale Recovery Communications Committee and Ocean Networks Canada. The goal is to better understand the impacts of underwater noise pollution.³⁸

Seaspan ULC has also participated in the Green Marine program since 2011. For 2019, Seaspan ULC had a Level 4 rating in the following categories: air emissions (SO_x, PM, and NO_x), garbage management, and underwater noise and a Level 3 rating in spill prevention and garbage management.

Other Victoria harbour participants in the Green Marine certification program include Tymac, who has been involved with the Green Marine program since 2015. Tymac also currently holds a Level 3 rating in Environmental Leadership, Waste Management, and Greenhouse Gases.

³⁶ Greater Victoria Harbour Authority. Healthy Harbour. <https://gvha.ca/about-gvha/sustainability/healthy-harbour/>

³⁷ Green Marine. *Green Marine Performance Report 2019*. https://green-marine.org/wp-content/uploads/2020/06/GM_perfo_report2019_ENG_WEB.pdf

³⁸ Greater Victoria Harbour Authority. Healthy Harbour.

OTHER ENVIRONMENTAL CERTIFICATIONS AND PROGRAMS

In addition to their Green Marine Certification, GVHA is also certified by Climate Smart. Through Climate Smart, a social enterprise assisting organizations in improving their environmental footprint and sustainable practices, GVHA has been able to obtain a better grasp of their environmental impact as an organization. Since joining in 2012, GVHA has been able to measure their corporate emissions, set meaningful emission reduction goals, and track their achievements through time.³⁹

GVHA is also part of Clean Marine BC, “a voluntary environmental program for marinas and harbour authorities offered by the Georgia Strait Alliance BC.”⁴⁰ The program assesses its participants relative to the best practices in a variety of categories including but not limited to fuel use, drainage, water quality, water conservation, and waste management. Based on the most recent audit in 2018, GVHA marinas were awarded a 5-Anchor rating, which is the highest possible rating. This was achieved through their efforts in water quality and waste management for preventing water pollution, as well as staff training in spill response.

In addition to Green Marine, Tymac is also involved with Call 2 Recycle, a battery recycling service, where they have been a Leader in Sustainability since 2013. In past years, they have also been awarded with the *Excellence in Leadership and Environmental Stewardship Award* from the Recycling Council of BC. In general, Tymac works to re-use, repurpose, or recycle materials taken off cruise ships as part of their waste removal and recycling services. In 2019, Tymac was able to recycle 83% of the materials they collected from the cruise ship industry.

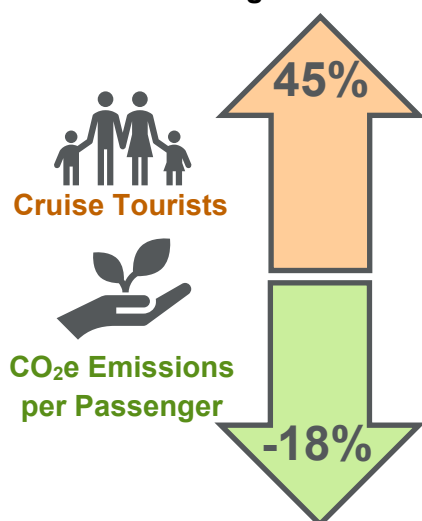


Photo courtesy of
GVHA

³⁹ Greater Victoria Harbour Authority. *Climate Action*. 2020. <https://gvha.ca/about-gvha/sustainability/climate-action/>

⁴⁰ Greater Victoria Harbour Authority. *Healthy Harbour*. 2020 <https://gvha.ca/about-gvha/sustainability/healthy-harbour/>

Since 2010 at Ogden Point



EMISSIONS INVENTORY ASSESSMENTS

Emissions inventory assessments are qualitative methods in which organizations can better understand the environmental footprint from their operations and how it changes over time.

Since 2010, GVHA has had emission inventory assessments conducted by Victoria-based Synergy Enterprises for The Breakwater District at Ogden Point to understand the environmental footprint from operating Victoria Cruise Terminal and the activities at the site. The most recently assessment in 2018 indicates that though cruise visitor volume has increased by 45% since 2010, GHG emissions have only increased by 19% due to changes in vessel size and efficiencies in cruise ship technology. In addition, criteria air contaminants (CACs)

have declined since 2010, with nitrogen oxides (NO_x), sulphur oxides (SO_x), and particulate matter decreasing by 7%, 95%, and 79% respectively.

In 2019, PNWTS also worked with Synergy Enterprises to measure and report its greenhouse gas (GHG) emissions, including GHG emissions from natural gas, fuel used to power buses and shuttles, refrigerants, electricity, and paper. Total emissions in 2019 came to 730.2 tCO₂e, 84% from fuel use and 15% from refrigeration used in the vehicles' air conditioning systems. PNWTS had a total of 239,544 passengers and 3,839 trips over the year. In addition, in 2019 PNWTS began its journey to becoming carbon-neutral, which was fully achieved in 2020.

Finally, Eagle Wing is Canada's first and only carbon neutral whale watching company. They purchase carbon offsets from Wilderness International, with the funds going toward habitat preservation in the Toba Valley.

Tymac Waste Management

Waterside Chat on Waste Management, May 6th, 2021



Photo courtesy of Tymac

Founded in 1929, Tymac started providing waste removal services and recycling programs to the Port of Vancouver and the cruise ship industry. The organization started their operations in Victoria in 2017 at the request of cruise lines who asked that the same waste management processes be applied in all ports they called at within British Columbia⁴¹.

In 2019, the average Victoria resident produced about 1 kg of waste per day. Cruise passengers generated only 0.27 kg of waste per passenger as a result of waste management processes aboard the ships and Tymac's operations. Tymac receives waste that is previously sorted into different groupings aboard the cruise ships, further sorts the waste into glass, metals, wood, etc., and transports these items to various recycling facilities, including those off Vancouver Island. In addition, some items are donated to various charitable organizations. As a result of Tymac's services, only 10 percent of all waste coming off cruise ships is sent to landfills, and some ships have had 100% recycling rates.

Tymac is currently assessing the potential to develop their own small waste to energy facility to further reduce waste headed to landfills and provide energy back into the grid while repurposing the by-products.



Photo courtesy of Tymac

⁴¹ Tymac. About Tymac. <http://tymac.ca/about-tymac/>

4.4 Conclusions

The results of the Economic Impact Study highlight the significant contributions of harbour businesses through economic, social, and environmental benefits to the Greater Victoria region, as well as British Columbia and Canada more broadly.

Harbour businesses generated \$196 million in output across Greater Victoria in 2019, contributed \$108 million to local GDP, supported 1,048 local jobs, paid \$53 million in employment income, and generated \$33 million in total tax revenues including \$2.7 million in local municipal taxes.

More broadly, harbour businesses generated \$221 million in output across British Columbia, contributed \$123 million to provincial GDP, supported 1,174 jobs across the province with \$60 million in employment income, and generated \$37 million in total tax revenues including \$15 million in provincial taxes for BC.

Finally, harbour businesses generated \$266 million in output across all of Canada, contributed \$146 million to Canadian GDP, supported 1,351 jobs with \$72 million in employment income, and generated \$44 million in total tax revenues.

Harbour businesses also contributed over \$560,000 to social programs in 2019 and supported numerous local community initiatives and programs which provided significant social value to the region.

Finally, harbour businesses reported spending more than \$275,000 in 2019 on environmental initiatives such as efforts to reduce their overall environmental footprint, promote sustainable practices, and help improve the local wildlife habitats.



5. Sector-specific Impact Summaries

5.1 Government & Institutional Sector



Government and institutional organizations that actively monitor, use, or directly support the working harbour including the GVHA, the Western Canada Marine Response Corp., and the Pacific Pilotage Authority.



Economic Contributions

Government & Institutional Sector Impact on the Canadian Economy

\$67 M in output

\$37 M in GDP

314 FTE jobs

\$21 M in wages

\$11 M in taxes

The government & institutional sector generated \$49 million in output across Greater Victoria in 2019, contributed \$27 million to local GDP, supported 232 local jobs, paid \$16 million in employment income, and generated \$8.3 million in total tax revenues including \$690,000 in local municipal taxes. More broadly, the sector generated \$56 million in output across British Columbia, contributed \$32 million to provincial GDP, supported 267 jobs across the province with \$18 million in employment income, and generated \$9.6 million in total tax revenues including \$3.8 million in provincial taxes for BC. Finally, government & institutional organizations generated \$67 million in output across all of Canada, contributed \$37 million to Canadian GDP, supported 314 jobs with \$21 million in employment income, and generated \$11 million in total tax revenues. The total economic impacts of the government & institutional sector are summarized in the table below.

Table 4: Economic Impacts of the Government & Institutional Sector

	Greater Victoria	British Columbia	Canada
Economic Output (millions)	\$48.9	\$56.0	\$67.2
GDP (millions)	\$27.3	\$31.5	\$37.3
Jobs (FTEs)	232	267	314
Employment Income (millions)	\$15.9	\$18.0	\$20.9
Tax Revenue (millions)¹	\$8.3	\$9.6	\$11.3

(1) Government revenues capture revenues generated from all forms of taxation (income, property, sales, etc.) and collected by all three levels of government (municipal, provincial, and federal).

Social Programs and Events

Social contributions were primarily in-kind through a variety of community programs and events including sponsorship of several programs and events around the Victoria Harbour. Large outdoor events include the Symphony Splash, the Dragon Boast Festival and Swiftsure International Yacht Race). Other social programs offered by GVHA include career and training opportunities for the Lekwungen People.

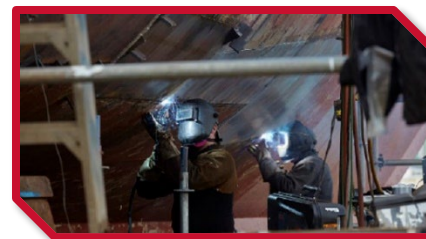
Environmental Initiatives

GVHA supported numerous environmental initiatives through programs such as Green Marine, Climate Smart, and Clean Marine BC. Additionally, the latest emission assessment conducted on the cruise operations at The Breakwater District at Ogden Point indicated that while cruise visitor volume increased by 45% since 2010, GHG emissions have only increased by 19%, and nitrogen oxides (NO_x), sulphur oxides (SO_x), and particulate matter decreased by 7%, 95%, and 79% respectively.

5.2 Industrial Sector



Industrial sector businesses include fishing, tugs & barge, waste removal, recycling, and other support industries.



Economic Contributions

Industrial Sector Impact on the Canadian Economy

- \$58 M in output
- \$42 M in GDP
- 321 FTE jobs
- \$18 M in wages
- \$13 M in taxes

The industrial sector generated \$58 million in output across Greater Victoria in 2019, contributed \$31 million to local GDP, supported 236 local jobs, paid \$13 million in employment income, and generated \$9.5 million in total tax revenues including over \$788,000 in local municipal taxes. More broadly, the sector generated \$66 million in output across British Columbia, contributed \$36 million to provincial GDP, supported 275 jobs across the province with \$15 million in employment income, and generated \$11 million in total tax revenues including \$4.3 million in provincial taxes for BC. Finally, industrial businesses generated \$77 million in output across all of Canada, contributed \$42 million to Canadian GDP, supported 321 jobs with \$18 million in employment income, and generated \$13 million in total tax revenues. The total economic impacts of the industrial sector are summarized below.

Table 5: Economic Impacts of the Industrial Sector

	Greater Victoria	British Columbia	Canada
Economic Output (millions)	\$58.0	\$65.8	\$77.4
GDP (millions)	\$31.1	\$36.0	\$41.9
Jobs (FTEs)	236	275	321
Employment Income (millions)	\$12.5	\$14.6	\$17.9
Tax Revenue (millions)¹	\$9.5	\$11.0	\$12.8

(1) Government revenues capture revenues generated from all forms of taxation (income, property, sales, etc.) and collected by all three levels of government (municipal, provincial, and federal).

Social Programs and Events

Social contributions by industrial businesses were primarily in-kind. Tymac, for instance, has a social initiative that donates reusable materials from ships to local not-for-profit associations. In 2019, they donated 400 chairs and 91 tables to Victoria's Habitat for Humanity, as well as 700 keyhole life jackets to Firefighters without Borders. Other social initiatives include donations from Western Stevedoring to the James Bay New Horizons Society and the James Bay Community Project.

Environmental Initiatives

Many industrial businesses have partaken in various certifications reflecting their efforts to reduce their environmental footprint. Both Seaspan ULC and Tymac have been participants of the Green Marine certification program. Tymac also has a recycling program and in 2019 it was able to recycle 83% of the materials they collected from the cruise ship industry.

5.3 Transportation Sector



Transportation businesses include harbour ferries, Helijet, PNWTS, and other carriers.



Economic Contributions

The transportation sector generated \$31 million in output across Greater Victoria in 2019, contributed \$16 million to local GDP, supported 145 local jobs, paid \$7.4 million in employment income, and generated \$4.8 million in total tax revenues including \$0.4 million in local municipal taxes. More broadly, the sector generated \$35 million in output across British Columbia, contributed \$18 million to provincial GDP, supported 164 jobs across the province, paid \$8.4 million in employment income, and generated \$5.5 million in total tax revenues including \$2.2 million in provincial taxes for BC. Finally, transportation businesses generated \$43 million in output across all of Canada, contributed \$22 million to Canadian GDP, supported 194 jobs with \$10 million in employment income, and generated \$6.7 million in total tax revenues. The total economic impacts of the industrial sector are summarized below.

Transportation Sector Impact on the Canadian Economy

	\$43 M in output
	\$22 M in GDP
	194 FTE jobs
	\$10 M in wages
	\$6.7 M in taxes

Table 6: Economic Impacts of the Transportation Sector

	Greater Victoria	British Columbia	Canada
Economic Output (millions)	\$31.1	\$34.8	\$42.7
GDP (millions)	\$15.7	\$18.0	\$22.1
Jobs (FTEs)	145	164	194
Employment Income (millions)	\$7.4	\$8.4	\$10.5
Tax Revenue (millions)¹	\$4.8	\$5.5	\$6.7

(1) Government revenues capture revenues generated from all forms of taxation (income, property, sales, etc.) and collected by all three levels of government (municipal, provincial, and federal).

Social Programs and Events

The transportation sector's community contributions are frequently in the form of free services for special events and programs. Most notably, Helijet donated free seats to Power to Be and those in the Victoria Arts and Entertainment industry. PNWTS also provided bus transportation for a community school group field trip.

Environmental Initiatives

A key initiative in the transportation sector has been the fleet electrification plans such as Victoria Harbour Ferry's electric vessels and PNWTS's plans to convert their busses to hydrogen fuel cells. Additionally, PNWTS started their journey to become carbon neutral in 2019.

5.4 Tourism Sector



Tourism sector businesses include cruise services, whale watching, pocket cruise ships, tour buses, fishing services, waterfront retail, and chartered boat services.



Economic Contributions

Tourism Sector Impact on the Canadian Economy

-  \$59 M in output
-  \$35 M in GDP
-  362 FTE jobs
-  \$16 M in wages
-  \$11 M in taxes

Cruise and passenger ferry services are principal activities of the Victoria harbour. In 2019, the Victoria Cruise Ship Terminal welcomed more than 700,000 passengers and Belleville Terminal welcomed more than 340,000 passengers. However, for the purposes of this study which focused on the Harbour Businesses and their expenditures, passenger spending was not included. As such, spending directly related to the visitor economy at restaurants, retail, and tour excursions taking place outside of the Victoria harbour were not included.⁴²

The tourism sector, as defined by this scope, generated \$44 million in output across Greater Victoria in 2019, contributed \$26 million to local GDP, supported 295 local jobs, paid \$12 million in employment income, and generated \$8.0 million in total tax revenues including \$663,000 in local municipal taxes. More broadly, the sector generated \$50 million in output across BC, contributed \$30 million to provincial GDP, supported 325 jobs across the province, paid \$13 million in employment income, and generated \$9.1 million in total tax revenues. Finally, these businesses generated \$59 million in output across all of Canada, contributed \$35 million to Canadian GDP, supported 362 jobs with \$16 million in employment income, and generated \$11 million in total tax revenues.

million in employment income, and generated \$9.1 million in total tax revenues. Finally, these businesses generated \$59 million in output across all of Canada, contributed \$35 million to Canadian GDP, supported 362 jobs with \$16 million in employment income, and generated \$11 million in total tax revenues.

Table 7: Economic Impacts of the Tourism Sector

	Greater Victoria	British Columbia	Canada
Economic Output (millions)	\$44.1	\$49.8	\$59.4
GDP (millions)	\$26.2	\$29.9	\$34.8
Jobs (FTEs)	295	325	362
Employment Income (millions)	\$11.7	\$13.3	\$15.7
Tax Revenue (millions)¹	\$8.0	\$9.1	\$10.6

(1) Government revenues capture revenues generated from all forms of taxation (income, property, sales, etc.) and collected by all three levels of government (municipal, provincial, and federal).

Social Programs and Events

Tourism sector businesses contributed more than \$200,000 in social programming and events in 2019. Several companies voiced commitment to support local communities and social programs through donations and to promote local organizations through events such as Be a Local Tourist when local businesses offer free or discounted services over five days each year, free rides from Rickshaw Runners Victoria, and tour pass donations for charitable auctions.

Environmental Initiatives

Tourism sector businesses invested an estimated \$235,000 in environmental protection initiatives in 2019. Both Eagle Wing Tours and Prince of Whales have made contributions to various environmental organizations looking to protect and support marine wildlife.

⁴² A 2021 report prepared by BREA showed that in 2019 cruise passengers that disembark in Victoria spend an average of \$87 and crew spend an average of \$118. Similarly, a 2020 report on the economic impact of the Belleville Terminal showed that passenger ferry visitors stayed in Victoria an average 2-3 days and spent an average \$440 for US visitor and \$628 for international visitor.

5.5 Recreational Sector



Recreational sector businesses operating on GVHA properties include food & beverage, kayaking, as well as angling clubs.



Economic Contributions

Recreational Sector Impact on the Canadian Economy

\$19 M in output

\$10 M in GDP

160 FTE jobs

\$7 M in wages

\$3 M in taxes

The recreational sector generated \$14 million in output across Greater Victoria in 2019, contributed \$7.6 million to local GDP, supported 141 local jobs, paid \$5.8 million in employment income, and generated \$2.3 million in total tax revenues including \$191,000 in local municipal taxes. More broadly, the sector generated \$14 million in output across British Columbia, contributed \$7.7 million to provincial GDP, supported 143 jobs across the province, paid over \$6.0 million in employment income, and generated \$2.4 million in total tax revenues including over \$930,000 in provincial taxes for BC. Finally, recreational businesses generated \$19 million in output across all of Canada, contributed \$9.7 million to Canadian GDP, supported 160 jobs with \$6.8 million in employment income, and generated \$2.9 million in total tax revenues. Recreational sector businesses also invested around \$20,000 in facility improvements and renovations and contributed towards social and environmental initiatives. The total economic impacts of recreational sector

businesses are summarized below.

Table 8: Economic Impacts of the Recreational Sector

	Greater Victoria	British Columbia	Canada
Economic Output (millions)	\$14.0	\$14.4	\$18.8
GDP (millions)	\$7.6	\$7.7	\$9.7
Jobs (FTEs)	141	143	160
Employment Income (millions)	\$5.8	\$6.0	\$6.9
Tax Revenue (millions)¹	\$2.3	\$2.4	\$2.9

(1) Government revenues capture revenues generated from all forms of taxation (income, property, sales, etc.) and collected by all three levels of government (municipal, provincial, and federal).

Social Programs and Events

Recreational businesses have reportedly supported several social programs and events. In particular, the Breakwater Bistro were actively involved in the Breakwater Barge events held by GVHA. While limited information was provided regarding the participation of recreational businesses in local social programs, they did voice strong commitment to several environmental initiatives.

Environmental Initiatives

Recreational businesses expressed commitments to reducing waste, maintaining the quality of water in which they operate, and supporting local remediation activities. For instance, Red Fish Blue Fish, for instance, only purchases sustainable and responsibly caught seafood, maintains a 100% recycling and composting program, and has invested in a green roof. Additionally, many businesses, like the Breakwater Bistro have also taken upon initiatives to reduce waste through recycling and composting programs.



6. Appendices

6.1 Appendix A – Stakeholder List

This appendix presents a list of all the harbour businesses that were contacted for this EIS.

Adam's Fishing Charters	RBS Seafood Harvesting
Attractions Victoria	Rickshaw Runners
Barb's Fish and Chips	Red Fish Blue Fish Seafood
Barrt's Craft	Seaspan Marine
BC Whale Tours	Smoke and Anchor
Breakwater Restaurant	Songhees First Nation
Destination Greater Victoria	Springtide Whale Watching & Eco Tours
Eagle Wing Whale & Wildlife Tours	Steamship Grill and Bar
Esquimalt First Nation	Tally-Ho Victoria Carriage Tours
Experience Victoria	The Fish Store
Finest At Sea	The Natural Coast Duen
Fisherman's Wharf Sweets	Transport Canada / Victoria Harbour Master
Five Star Charter	Tymac Launch Service
FX Connector	V2V
Global Marine Group	Victoria Bike Rentals
Greater Victoria Harbour Authority	Victoria Harbour Ferries
Helijet	Victoria Kayak
Jackson's Ice Cream	Victoria Marine Fuels
James Bay Anglers Association	Victoria Pedicab Company
No Limit Charter	Victoria Single Horse Drawn Carriage Tours
Orca Spirit	West Coast Agencies
Pacific Northwest Transportation Services	Western Canada Marine Response Corporation
Pacific Pilotage Authority	Western Stevedoring
Prince of Whales & Marine Wildlife Adventures	Whitehall Rowing and Sail
Puerto Vallarta Amigos	

6.2 Appendix B – Detailed Economic Impact Results

This appendix presents the detailed economic impact results for harbour businesses by sector including a breakdown of direct, indirect, and induced effects.

Detailed Economic Impacts by Sector

Table 9: Economic Impacts from All Business Activity

	Greater Victoria	British Columbia	All of Canada
Economic Output (millions)	\$196.0	\$220.8	\$265.5
GDP (millions)	\$107.9	\$123.2	\$145.8
Jobs (FTEs)	1,048	1,174	1,351
Employment Income (millions)	\$53.2	\$60.3	\$72.0
Tax Revenue (millions)	\$32.8	\$37.5	\$44.3
Federal	\$17.1	\$19.5	\$23.1
Provincial	\$13.0	\$14.9	\$17.6
Municipal	\$2.7	\$3.1	\$3.7

Table 10: Economic Impacts from the Government & Institutional Sector

	Greater Victoria	British Columbia	All of Canada
Economic Output (millions)	\$48.9	\$56.0	\$67.2
GDP (millions)	\$27.3	\$31.5	\$37.3
Jobs (FTEs)	232	267	314
Employment Income (millions)	\$15.9	\$18.0	\$20.9
Tax Revenue (millions)	\$8.3	\$9.6	\$11.3
Federal	\$4.3	\$5.0	\$5.9
Provincial	\$3.3	\$3.8	\$4.5
Municipal	\$0.7	\$0.8	\$0.9

Table 11: Economic Impacts from the Industrial Sector

	Greater Victoria	British Columbia	All of Canada
Economic Output (millions)	\$58.0	\$65.8	\$77.4
GDP (millions)	\$31.1	\$36.0	\$41.9
Jobs (FTEs)	236	275	321
Employment Income (millions)	\$12.5	\$14.6	\$17.9
Tax Revenue (millions)	\$9.5	\$11.0	\$12.8
Federal	\$4.9	\$5.7	\$6.6
Provincial	\$3.8	\$4.3	\$5.1
Municipal	\$0.8	\$0.9	\$1.1

Table 12: Economic Impacts from the Transportation Sector

	Greater Victoria	British Columbia	All of Canada
Economic Output (millions)	\$31.1	\$34.8	\$42.7

	Greater Victoria	British Columbia	All of Canada
GDP (millions)	\$15.7	\$18.0	\$22.1
Jobs (FTEs)	145	164	194
Employment Income (millions)	\$7.4	\$8.4	\$10.5
Tax Revenue (millions)	\$4.8	\$5.5	\$6.7
Federal	\$2.5	\$2.9	\$3.5
Provincial	\$1.9	\$2.2	\$2.7
Municipal	\$0.4	\$0.5	\$0.6

Table 13: Economic Impacts from the Tourism Sector

	Greater Victoria	British Columbia	All of Canada
Economic Output (millions)	\$44.1	\$49.8	\$59.4
GDP (millions)	\$26.2	\$29.9	\$34.8
Jobs (FTEs)	295	325	362
Employment Income (millions)	\$11.7	\$13.3	\$15.7
Tax Revenue (millions)	\$8.0	\$9.1	\$10.6
Federal	\$4.1	\$4.7	\$5.5
Provincial	\$3.2	\$3.6	\$4.2
Municipal	\$0.7	\$0.8	\$0.9

Table 14: Economic Impacts from the Recreational Sector

	Greater Victoria	British Columbia	All of Canada
Economic Output (millions)	\$14.0	\$14.4	\$18.8
GDP (millions)	\$7.6	\$7.7	\$9.7
Jobs (FTEs)	141	143	160
Employment Income (millions)	\$5.8	\$6.0	\$6.9
Tax Revenue (millions)	\$2.3	\$2.4	\$2.9
Federal	\$1.2	\$1.2	\$1.5
Provincial	\$0.9	\$0.9	\$1.2
Municipal	\$0.2	\$0.2	\$0.2

Detailed Economic Impacts by Type of Impact

Table 15: Direct Impact on the Local Economy

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Government & Institutional	\$48.9 M	\$27.3 M	232	\$15.9 M	\$8.3 M
Industrial	\$58.0 M	\$31.1 M	236	\$12.5 M	\$9.5 M
Transportation	\$31.1 M	\$15.7 M	145	\$7.4 M	\$4.8 M
Tourism	\$44.1 M	\$26.2 M	295	\$11.7 M	\$8.0 M
Recreational	\$14.0 M	\$7.6 M	141	\$5.8 M	\$2.3 M
Total	\$196.0 M	\$107.9 M	1,048	\$53.2 M	\$32.8 M

Table 16: Indirect Impact on British Columbia's Economy

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Government & Institutional	\$13.9 M	\$7.6 M	72	\$4.5 M	\$2.3 M
Industrial	\$17.3 M	\$9.1 M	84	\$4.8 M	\$2.8 M
Transportation	\$8.8 M	\$4.7 M	45	\$2.9 M	\$1.4 M
Tourism	\$11.5 M	\$6.3 M	61	\$3.7 M	\$1.9 M
Recreational	\$3.1 M	\$1.6 M	17	\$0.9 M	\$0.5 M
Total	\$54.6 M	\$29.4 M	280	\$16.9 M	\$8.9 M

Table 17: Induced Impact on British Columbia's Economy

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Government & Institutional	\$10.6 M	\$7.7 M	56	\$2.8 M	\$2.4 M
Industrial	\$9.9 M	\$7.2 M	51	\$2.6 M	\$2.2 M
Transportation	\$5.4 M	\$3.9 M	28	\$1.4 M	\$1.2 M
Tourism	\$9.0 M	\$6.6 M	47	\$2.3 M	\$2.0 M
Recreational	\$2.7 M	\$2.0 M	14	\$0.7 M	\$0.6 M
Total	\$37.6 M	\$27.5 M	196	\$9.8 M	\$8.4 M

Table 18: Total Impact on British Columbia's Economy

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Government & Institutional	\$56.0 M	\$31.5 M	267	\$18.0 M	\$9.6 M
Industrial	\$65.8 M	\$36.0 M	275	\$14.6 M	\$11.0 M
Transportation	\$34.8 M	\$18.0 M	164	\$8.4 M	\$5.5 M
Tourism	\$49.8 M	\$29.9 M	325	\$13.3 M	\$9.1 M
Recreational	\$14.4 M	\$7.7 M	143	\$6.0 M	\$2.4 M
Total	\$220.8 M	\$123.2 M	1,174	\$60.3 M	\$37.5 M

Table 19: Indirect Impact on the Canadian Economy

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Government & Institutional	\$20.3 M	\$10.8 M	97	\$6.2 M	\$3.3 M
Industrial	\$24.3 M	\$12.3 M	109	\$6.9 M	\$3.8 M
Transportation	\$14.1 M	\$7.2 M	63	\$4.2 M	\$2.2 M
Tourism	\$17.1 M	\$9.0 M	81	\$5.1 M	\$2.8 M
Recreational	\$6.2 M	\$2.8 M	28	\$1.5 M	\$0.9 M
Total	\$81.9 M	\$42.2 M	379	\$24.0 M	\$12.8 M

Table 20: Induced Impact on the Canadian Economy

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Government & Institutional	\$15.3 M	\$10.4 M	77	\$4.0 M	\$3.2 M
Industrial	\$14.7 M	\$9.9 M	73	\$3.8 M	\$3.0 M
Transportation	\$8.1 M	\$5.5 M	40	\$2.1 M	\$1.7 M
Tourism	\$13.0 M	\$8.8 M	64	\$3.4 M	\$2.7 M
Recreational	\$4.0 M	\$2.7 M	20	\$1.0 M	\$0.8 M
Total	\$55.1 M	\$37.2 M	274	\$14.3 M	\$11.3 M

Table 21: Total Impact on the Canadian Economy

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Government & Institutional	\$67.2 M	\$37.3 M	314	\$20.9 M	\$11.3 M
Industrial	\$77.4 M	\$41.9 M	321	\$17.9 M	\$12.8 M
Transportation	\$42.7 M	\$22.1 M	194	\$10.5 M	\$6.7 M
Tourism	\$59.4 M	\$34.8 M	362	\$15.7 M	\$10.6 M
Recreational	\$18.8 M	\$9.7 M	160	\$6.9 M	\$2.9 M
Total	\$265.5 M	\$145.8 M	1,351	\$72.0 M	\$44.3 M

Detailed Economic Impacts by Sector, Type of Impact, and Region

Table 22: Total Direct, Indirect, and Induced Economic Impacts

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Greater Victoria					
Direct	\$127.2 M	\$65.8 M	694	\$33.3 M	\$20.0 M
Indirect	\$42.3 M	\$22.7 M	216	\$13.0 M	\$6.9 M
Induced	\$26.5 M	\$19.3 M	138	\$6.9 M	\$5.9 M
Total	\$196.0 M	\$107.9 M	1,048	\$53.2 M	\$32.8 M
British Columbia					
Direct	\$128.5 M	\$66.4 M	699	\$33.6 M	\$20.2 M
Indirect	\$54.6 M	\$29.4 M	280	\$16.9 M	\$8.9 M
Induced	\$37.6 M	\$27.5 M	196	\$9.8 M	\$8.4 M
Total	\$220.8 M	\$123.2 M	1,174	\$60.3 M	\$37.5 M
All of Canada					
Direct	\$128.5 M	\$66.4 M	699	\$33.6 M	\$20.2 M
Indirect	\$81.9 M	\$42.2 M	379	\$24.0 M	\$12.8 M
Induced	\$55.1 M	\$37.2 M	274	\$14.3 M	\$11.3 M
Total	\$265.5 M	\$145.8 M	1,351	\$72.0 M	\$44.3 M

Table 23: Government & Institutional Sector Direct, Indirect, and Induced Economic Impacts

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Greater Victoria					
Direct	\$30.3 M	\$15.6 M	135	\$10.3 M	\$4.8 M
Indirect	\$10.8 M	\$5.9 M	56	\$3.5 M	\$1.8 M
Induced	\$7.9 M	\$5.7 M	41	\$2.0 M	\$1.7 M
Total	\$48.9 M	\$27.3 M	232	\$15.9 M	\$8.3 M
British Columbia					
Direct	\$31.5 M	\$16.1 M	139	\$10.7 M	\$4.9 M
Indirect	\$13.9 M	\$7.6 M	72	\$4.5 M	\$2.3 M
Induced	\$10.6 M	\$7.7 M	56	\$2.8 M	\$2.4 M
Total	\$56.0 M	\$31.5 M	267	\$18.0 M	\$9.6 M
All of Canada					
Direct	\$31.5 M	\$16.1 M	139	\$10.7 M	\$4.9 M
Indirect	\$20.3 M	\$10.8 M	97	\$6.2 M	\$3.3 M
Induced	\$15.3 M	\$10.4 M	77	\$4.0 M	\$3.2 M
Total	\$67.2 M	\$37.3 M	314	\$20.9 M	\$11.3 M

Table 24: Industrial Sector Direct, Indirect, and Induced Economic Impacts

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Greater Victoria					
Direct	\$38.5 M	\$19.7 M	140	\$7.2 M	\$6.0 M
Indirect	\$13.4 M	\$7.0 M	65	\$3.7 M	\$2.1 M
Induced	\$6.0 M	\$4.4 M	31	\$1.6 M	\$1.3 M
Total	\$58.0 M	\$31.1 M	236	\$12.5 M	\$9.5 M
British Columbia					
Direct	\$38.5 M	\$19.7 M	140	\$7.2 M	\$6.0 M
Indirect	\$17.3 M	\$9.1 M	84	\$4.8 M	\$2.8 M
Induced	\$9.9 M	\$7.2 M	51	\$2.6 M	\$2.2 M
Total	\$65.8 M	\$36.0 M	275	\$14.6 M	\$11.0 M
All of Canada					
Direct	\$38.5 M	\$19.7 M	140	\$7.2 M	\$6.0 M
Indirect	\$24.3 M	\$12.3 M	109	\$6.9 M	\$3.8 M
Induced	\$14.7 M	\$9.9 M	73	\$3.8 M	\$3.0 M
Total	\$77.4 M	\$41.9 M	321	\$17.9 M	\$12.8 M

Table 25: Transportation Sector Direct, Indirect, and Induced Economic Impacts

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Greater Victoria					
Direct	\$20.5 M	\$9.4 M	91	\$4.2 M	\$2.8 M
Indirect	\$6.8 M	\$3.6 M	35	\$2.2 M	\$1.1 M
Induced	\$3.7 M	\$2.7 M	19	\$1.0 M	\$0.8 M
Total	\$31.1 M	\$15.7 M	145	\$7.4 M	\$4.8 M
British Columbia					
Direct	\$20.5 M	\$9.4 M	91	\$4.2 M	\$2.8 M
Indirect	\$8.8 M	\$4.7 M	45	\$2.9 M	\$1.4 M
Induced	\$5.4 M	\$3.9 M	28	\$1.4 M	\$1.2 M
Total	\$34.8 M	\$18.0 M	164	\$8.4 M	\$5.5 M
All of Canada					
Direct	\$20.5 M	\$9.4 M	91	\$4.2 M	\$2.8 M
Indirect	\$14.1 M	\$7.2 M	63	\$4.2 M	\$2.2 M
Induced	\$8.1 M	\$5.5 M	40	\$2.1 M	\$1.7 M
Total	\$42.7 M	\$22.1 M	194	\$10.5 M	\$6.7 M

Table 26: Tourism Sector Direct, Indirect, and Induced Economic Impacts

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Greater Victoria					

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Direct	\$29.3 M	\$17.0 M	217	\$7.2 M	\$5.2 M
Indirect	\$8.9 M	\$4.9 M	48	\$2.9 M	\$1.5 M
Induced	\$5.9 M	\$4.3 M	31	\$1.5 M	\$1.3 M
Total	\$44.1 M	\$26.2 M	295	\$11.7 M	\$8.0 M
British Columbia					
Direct	\$29.3 M	\$17.0 M	217	\$7.2 M	\$5.2 M
Indirect	\$11.5 M	\$6.3 M	61	\$3.7 M	\$1.9 M
Induced	\$9.0 M	\$6.6 M	47	\$2.3 M	\$2.0 M
Total	\$49.8 M	\$29.9 M	325	\$13.3 M	\$9.1 M
All of Canada					
Direct	\$29.3 M	\$17.0 M	217	\$7.2 M	\$5.2 M
Indirect	\$17.1 M	\$9.0 M	81	\$5.1 M	\$2.8 M
Induced	\$13.0 M	\$8.8 M	64	\$3.4 M	\$2.7 M
Total	\$59.4 M	\$34.8 M	362	\$15.7 M	\$10.6 M

Table 27: Recreational Sector Direct, Indirect, and Induced Economic Impacts

	Economic Output	GDP	Jobs	Employment Income	Tax Revenue
Greater Victoria					
Direct	\$8.6 M	\$4.2 M	112	\$4.3 M	\$1.3 M
Indirect	\$2.4 M	\$1.3 M	13	\$0.7 M	\$0.4 M
Induced	\$3.0 M	\$2.2 M	15	\$0.8 M	\$0.7 M
Total	\$14.0 M	\$7.6 M	141	\$5.8 M	\$2.3 M
British Columbia					
Direct	\$8.6 M	\$4.2 M	112	\$4.3 M	\$1.3 M
Indirect	\$3.1 M	\$1.6 M	17	\$0.9 M	\$0.5 M
Induced	\$2.7 M	\$2.0 M	14	\$0.7 M	\$0.6 M
Total	\$14.4 M	\$7.7 M	143	\$6.0 M	\$2.4 M
All of Canada					
Direct	\$8.6 M	\$4.2 M	112	\$4.3 M	\$1.3 M
Indirect	\$6.2 M	\$2.8 M	28	\$1.5 M	\$0.9 M
Induced	\$4.0 M	\$2.7 M	20	\$1.0 M	\$0.8 M
Total	\$18.8 M	\$9.7 M	160	\$6.9 M	\$2.9 M

6.3 Appendix C – Detailed Technical Methodology

Estimation of Economic Impacts

OVERVIEW OF THE METHODOLOGY

Economic impact (EI) analysis is a type of conceptual analysis that identifies and quantifies the economic activity that is generated or can be attributed and linked to business operations, an investment project, government policies, events, or an organization and its socio-economic activity. These operations, projects, policies, or events have some underlying change in the stream of expenditures in an economy and lead to a change in the demand for goods and services. This has implications on the number of jobs and other measures of economic activity in the local, regional, and national economy.

Economic impacts are frequently estimated using input-output modeling techniques and input-output (IO) multipliers sourced from regional input-output models (see Appendix D for the complete set of multipliers). An input-output model captures and quantifies the flows of goods and services between various industries in an economy. The indirect multipliers from such models provide an aggregate measure of the effect of an industry and each \$1 (one dollar) of revenue of that industry on all other industries in the economy that arise through supply-purchase relationships, or input demand that this industry has in order to produce its outputs. Indirect multipliers can be expressed in terms of employment (indirect jobs per \$1 of incremental direct revenue in an industry), output (indirect output per \$1 of incremental direct industry revenue), employment income (indirect wages and salaries per \$1 of incremental direct industry revenues), and GDP (indirect value added per \$1 of incremental direct industry revenue). The induced multipliers from such models provide similar measures of impacts but related to re-spending of employee wages and salaries for consumer goods and services, rather than purchases of production inputs to operate a business. Finally, direct multipliers (or direct ratios) provide measures of average employment, employment income, and value added in an industry for each dollar of revenues in that industry.

Input-output models and multipliers from such models can thus be used to estimate the economic impacts of a new stream of expenditures or demand in an economy by applying appropriate industry multipliers to the new streams of expenditures.

In summary, economic impact analysis involves the estimation of three distinct types of economic activity, commonly referred to as “direct impacts,” “indirect impacts,” and “induced impacts” that are attributable to an initial stream of incremental capital or operating expenditures. These are defined as follows:

- **Direct impacts** refer to the initial economic effects occurring as the result of capital or operating expenditures directly related to the operations, project, policy, or event being evaluated. Direct spending results in the employment of workers, business output, and sales of locally produced goods or services.
- **Indirect impacts** refer to the “spin-off” economic activities that result from purchases of production inputs, goods, and services by businesses that are impacted by the initial expenditures. The spending by the supplier firms on their labor, production inputs, goods

and services that they require, creates output of other firms further down the production chain, bringing about additional business output, employment, and earnings. The sum of these effects across the supply chain is the indirect impact.

- **Induced impacts** represent the increase in business output, employment, and earnings over and above the direct and indirect impacts, generated by re-spending of employment income derived from direct and indirect employment. Induced impacts are thus changes in economic activity that are the result of personal (household) spending for goods and services by employees comprising the direct and indirect impacts.
- **Total economic impacts** are the sum of the direct, indirect, and induced effects for the business activity being evaluated.

Each of the direct, indirect, and induced impacts defined are estimated in terms of the various measures of economic activity that include the following:

- **Economic Output**, also called gross output or just output, is the total gross value of all business revenue. Output represents the total sum of all economic activity that has taken place in connection with the project. This is the broadest measure of economic activity.
- **Gross Domestic Product (GDP)** is the “value added” to the economy, or value of output minus value of purchased goods and services used in the production process. Value added represents the unduplicated measure of the total value of economic activity.
- **Jobs (FTE’s)** represent employment in the form of incremental jobs created as a result of the capital and operating expenditures related to business activities.⁴³
- **Salaries and Wages**, the additional salaries and wages that would result from capital expenditures on the project and its future operations.

Another metric of economic impacts that is frequently of interest to stakeholders are the **tax revenues**. Key categories of government tax revenues such as income taxes, or sales taxes, must be estimated using supplemental methods as input-output models do not construct tax multipliers. One possible method is based on macroeconomic data that relates relevant streams of government tax revenues to provincial and national GDP to derive average tax revenues ratios in terms of tax revenues as percentage of GDP over the last few years. Such ratios can then be applied to GDP impacts derived in the previous methodological steps to estimate tax revenue impacts. This approach reflects an underlying assumption that higher GDP tends to increase government tax revenues and that historical tax ratios can be used to estimate tax revenues from a given increase in GDP.

Depending on study purpose and interest, economic impacts of business activities can be estimated as impacts of ongoing operations or impacts of capital investment projects. The former is intended to present the recurring annual impacts of daily operations while the latter is intended to show the impacts of large investments undertaken in the context of business expansion, or technological improvements.

⁴³ In economic impact analysis, employment impacts are typically estimated in terms of job-years which expresses the number of jobs created times the length of time in years that they would last for. E.g. 1 job-year is 1 job created for 1 year. For simplicity, we refer here to these impacts as “jobs” or employment impacts.

ECONOMIC IMPACT ANALYSIS SCOPE

All impacts were estimated by harbour sector groups categorized as follows:

- Government & Institutional;
- Industrial;
- Transportation;
- Tourism; and
- Recreation.

The selection of stakeholders for the study was framed around harbour businesses located on GVHA properties that have a direct link to the Victoria Harbour land and water. Section 3 provides further details which organizations were included in this scope and targeted as survey respondents to collect primary data. The impacts of tourist expenditures on items such as restaurant meals, or excursions, taking place around the harbours are not explicitly estimated in this study although any tourist spending on harbour businesses (like recreation activities) are implicitly included.

This study estimated two broad categories of impacts: (1) annual impacts of ongoing operations in the baseline year, and (2) impacts of capital expenditures in the baseline year. For both categories of impacts, the baseline year was assumed to be 2019.

All impacts were estimated at the regional level for Greater Victoria, the provincial level for British Columbia, and the national level for all of Canada.

DATA AND FRAMEWORK IMPLEMENTATION

The key data items for an economic impact analysis are IO multipliers and information about economic activity of harbour organizations within the scope of this study.

The input-output multipliers used in this analysis are British Columbia multipliers from Statistics Canada's Interprovincial Input-Output Model for 2017 (the latest available set at the time when this analysis was conducted). To account for inflationary impacts between 2017 and the baseline year of this analysis (i.e., 2019), all employment multipliers were divided by the consumer price index for the period between 2017 and 2019. Multipliers for "within province" effects were used to estimate impacts in British Columbia, and multipliers for "all provinces" effects were used to estimate impacts across Canada (including impacts in British Columbia).

A survey of stakeholders provided information about their economic activity, including critical inputs for IO modeling such as industrial classification and description of key activities, employment, payroll, and other expenditures.

IO multipliers are available for a wide range of industries defined at various levels of North American Industry Classification System (NAICS)⁴⁴ classification for up to 6-digit NAICS

⁴⁴ NAICS is an industrial classification system intended to provide systematic definitions of industries and industrial structure in an economy to facilitate statistical data collection and analysis. More information about NAICS system can be found at <https://www.census.gov/eos/www/naics/faqs/faqs.html>, and the most recent version of NAICS can be found at <https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=307532>

codes⁴⁵. The IO model industries were matched to the industry relevant for each stakeholder's economic activity based on their answer to Question 3 on the questionnaire which was also verified and corrected as needed based on the description of their activities in Question 4.⁴⁶ This classification was more extensive than the five harbour sectors identified for representing the results of the study so as to better match the most relevant industry multipliers to each stakeholder. However, all results were aggregated back to the harbour sector groups for reporting purposes. The table below shows the industry sector coverage of stakeholders and their correspondence to the harbour sector classification.

Table 28: Survey Industry Sectors and Harbour Sector Classification

Survey Sectors (Options for Selection by Respondents)	Harbour Sector Classification
Arts and culture	Tourism
Community or business organization	Government/Institution
Fishing, seafood processing or distribution	Industrial
Food and beverage services	Recreation
Government services and administration – federal	Government/Institution
Government services and administration – municipal	Government/Institution
Government services and administration – provincial	Government/Institution
Industrial: Construction Materials	Industrial
Industrial: Manufacturing	Industrial
IT and Software Development	Industrial
Marinas	Recreation
Other recreation	Recreation
Retail	Tourism
Scientific research and technical services	Industrial
Tourism	Tourism
Transportation services (e.g., ferries, air transportation)	Transportation
Transportation support services (including ship and boat repair)	Industrial
Waste management or treatment	Industrial
Wholesale trade operations, warehousing, distribution	Industrial
Other (<i>please describe</i>)	

Many respondents were reluctant to provide financial information like revenues as is typical with business surveys. Therefore, the annual impacts of ongoing operations were estimated based on employment information which was provided by virtually all survey respondents. Specifically, for each respondent, total employment was combined with direct employment-output ratios for the respondent's industry to estimate direct revenues, or direct business output. Having direct

⁴⁵ Some input-output industries are defined at a relatively broad level of 2- or 3-digit NAICS classification and may combine a few categories of business activities. Other input-output industries are more detailed referring to one or two 5- or even 6-digit NAICS classification.

⁴⁶

Stakeholder survey design is discussed in more detail in Section 3 and a copy of the questionnaire is provided in Appendix F.

business output, IO multipliers were used to estimate direct, indirect, and induced GDP, jobs, employment income, and tax revenue.

The charts below illustrate in graphical form how the impacts were estimated for each respondent. Figure 12 below shows estimation of direct business output, GDP, and employment income that represent impacts of annual operations. Figure 13 shows estimation of annual indirect and induced impacts of operations. Results for individual respondents were aggregated across harbour sectors to represent impacts of operations of that harbour sector.

Figure 12: Estimation of Direct Output, Direct GDP, and Employment Income

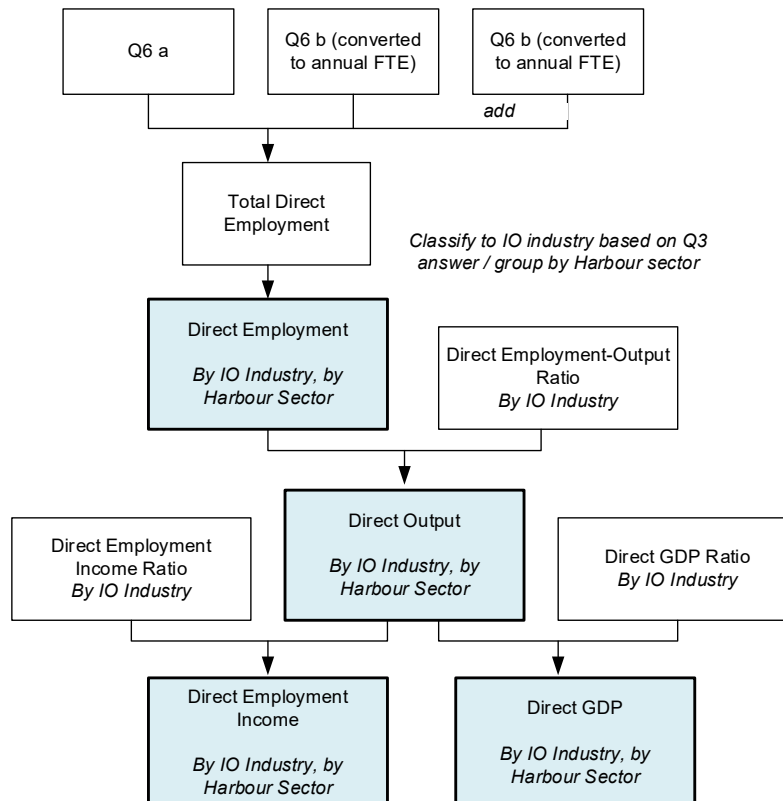


Figure 13: Estimation of Indirect and Induced Impacts in British Columbia

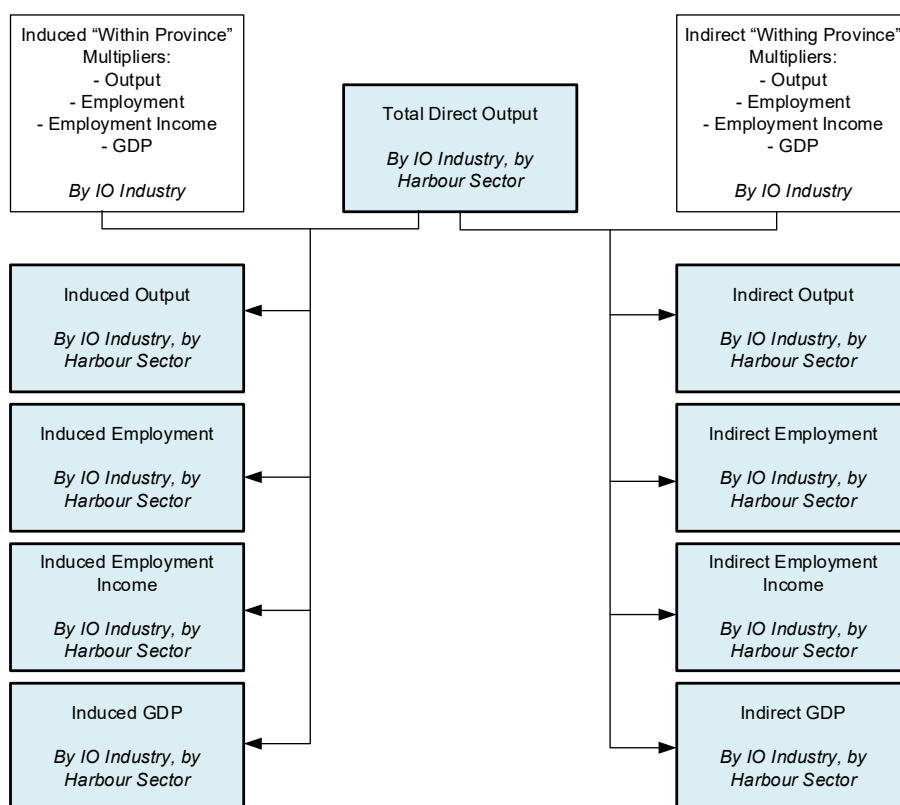


Figure 13 above refers to indirect and induced “within province” IO multipliers which were used for the estimation of indirect and induced impacts in British Columbia. Another set of “all provinces” multipliers was used to estimate indirect and induced impacts in all of Canada with the same methodology.

The impacts of capital expenditures were estimated using a similar methodology. The survey helped determine the amount of capital expenditures in 2019, the percent of expenditures that were made in the province and elsewhere in Canada, and the type of projects that these expenditures were for (survey Questions 8, 9, and 10). The type of projects described by respondents was used to classify the expenditures into a matching IO industry. Most capital expenditures were related to construction, purchase of equipment, or consulting services and were thus classified into a construction industry, manufacturing industry, or a professional services industry. Expenditures related to land purchases, or acquisition of another business, were not included in this assessment. In their essence, these purchases are transfers of money and are not expected to generate rounds of economic activity in a significant way.

Capital expenditures of a stakeholder classified into an industry were considered the direct output impact in that industry. IO multipliers for that industry were then applied to this output estimate to calculate direct GDP, direct employment, direct employment income, and all indirect and induced impacts. Figure 14 below provides an illustration of the methodology for direct and

indirect impacts. Induced impacts were estimated in the same way as indirect impacts with the use of induced multipliers instead of indirect. Results for individual respondents were then aggregated across harbour sectors to represent impacts of capital expenditures of that harbour sector.

Figure 14: Estimation of Direct and Indirect Impacts of Capital Expenditures

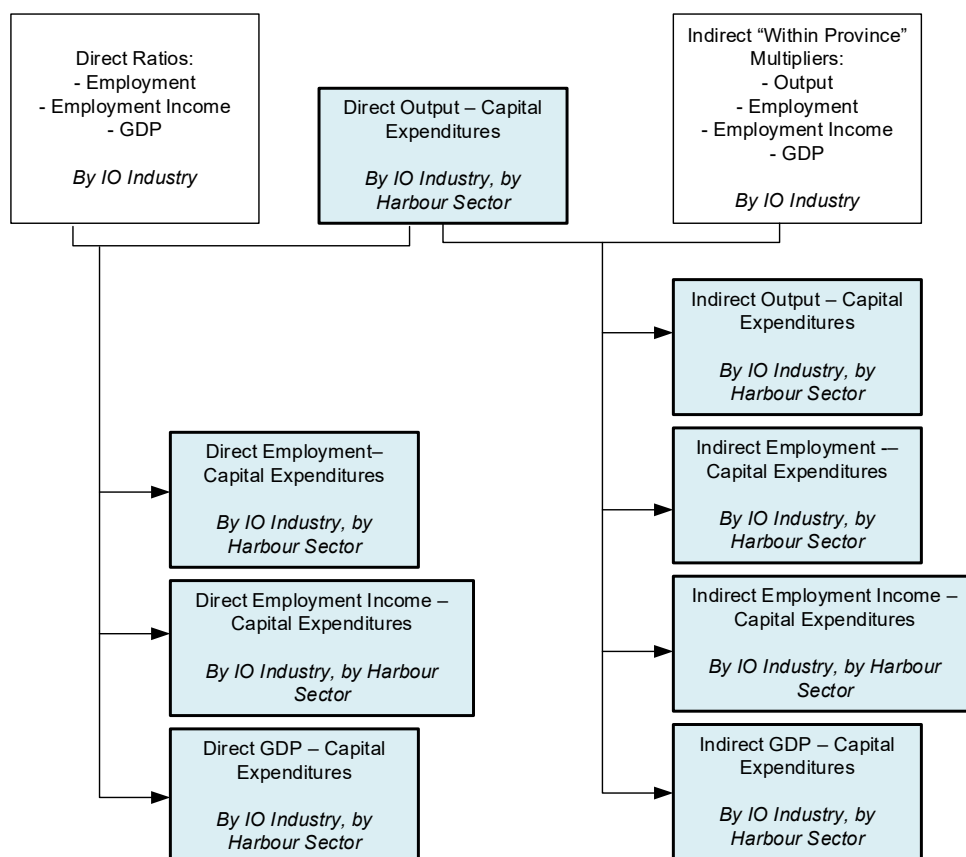


Figure 14 above refers to indirect “within province” IO multipliers which were used for the estimation of indirect impacts of capital expenditures in British Columbia. Another set of indirect “all provinces” multipliers was used to estimate indirect impacts in all of Canada with the same methodology.

Local economic impacts in Greater Victoria were estimated based on the British Columbia provincial impacts since Statistics Canada’s IO model does not provide regional multipliers, as well as information from the surveys and general assumptions regarding the structure of the local economy. The approach is summarized below.

1. Direct impacts in Greater Victoria include harbour business revenues, employees, their wages and salaries, and GDP related to their activities.
2. Indirect impacts were estimated based on the share of business expenditures on suppliers within Greater Victoria as reported in the surveys.

3. Induced impacts in Greater Victoria stem from direct and indirect employment in the region and benefit the region to the extent that expenditures from wages and salaries stay in the local economy. There are various ways to estimate the income that stays locally. One of the simplest and most practical methods is based on the economic base and location quotient approach that entails making adjustments based on the base and service employment. Base employment is related to the basic sectors, or industries whose output is exported to other communities. In contrast, service employment is related to the service sector whose ultimate market is local, or whose output is consumed in the local economy. The share of service employment in total employment is taken as a proxy of local demand satisfied from within the local economy and thus as the local share of induced impacts.

Tax revenues were calculated based on information from Statistics Canada's database below.

- Federal government tax revenues (Statistics Canada Table: 10-10-0016-01)
- British Columbia government tax revenues (Statistics Canada Table: 10-10-0017-01)
- Municipal and other local government tax revenues (Statistics Canada Table: 10-10-0020-01)
- Gross Domestic Product (GDP), at market prices in current dollars, Canada and British Columbia (Statistics Canada Table: 36-10-0222-01)

Using this data, tax revenues as a percentage of GDP was calculated (federal taxes as percentage of Canadian GDP, and provincial and local taxes as percentage of British Columbia GDP). The table below shows the results of this analysis over the last 5 years. The table demonstrates that the tax revenues as percentage of GDP (or tax ratios) were fairly stable over the period shown in the table. These average tax ratios were used in this study to estimate tax revenue impacts.

Table 29: Tax Revenues as Percentage of GDP

Tax Revenue Category	2015	2016	2017	2018	2019	Average (2015 - 2019)
Federal Taxes	15.9%	15.9%	16.2%	16.8%	16.7%	16.3%
Provincial Taxes	12.1%	12.6%	12.3%	12.9%	12.3%	12.4%
Local Taxes	2.6%	2.6%	2.6%	2.7%	2.6%	2.6%
Total	30.5%	31.2%	31.1%	32.4%	31.7%	30.4%

6.4 Appendix D – Input-Output Multipliers

This section presents the multipliers that were used in estimating the economic impact of organization activities by harbour businesses.

Table 30: Input-Output Multipliers – Direct Multipliers

Industry Name	All Provinces				Within Provinces			
	Output	GDP at Market Prices	Labour Income	Jobs	Output	GDP at Market Prices	Labour Income	Jobs
Air transportation [BS481000]	1.00	0.40	0.20	2.26	1.00	0.40	0.20	2.26
Amusement and recreation industries [BS713A00]	2.00	1.00	0.71	26.43	2.00	1.00	0.71	26.43
Architectural, engineering and related services [BS541300]	1.00	0.66	0.48	5.47	1.00	0.66	0.48	5.47
Electrical equipment manufacturing [BS335300]	1.00	0.42	0.34	3.49	1.00	0.42	0.34	3.49
Financial investment services, funds and other financial vehicles [BS52A000]	1.00	0.32	0.28	2.98	1.00	0.32	0.28	2.98
Fishing, hunting and trapping [BS114000]	1.00	0.57	0.12	2.64	1.00	0.57	0.12	2.64
Food services and drinking places [BS722000]	1.00	0.46	0.37	14.65	1.00	0.46	0.37	14.65
Management, scientific and technical consulting services [BS541600]	1.00	0.68	0.43	6.76	1.00	0.68	0.43	6.76
Manufacturing [BS3A0]	1.00	0.33	0.21	2.66	1.00	0.33	0.21	2.66
Oil and gas engineering construction [BS23C200]	1.00	0.45	0.35	4.68	1.00	0.45	0.35	4.68
Other activities of the construction industry [BS23E000]	2.00	1.43	0.50	7.32	2.00	1.43	0.50	7.32
Other engineering construction [BS23C500]	1.00	0.32	0.24	2.78	1.00	0.32	0.24	2.78
Other federal government services (except defence) [GS911A00]	1.00	0.69	0.60	5.19	1.00	0.69	0.60	5.19
Other transit and ground passenger transportation and scenic and sightseeing transportation [BS48A000]	2.00	1.19	0.67	15.26	2.00	1.19	0.67	15.26
Other transportation equipment manufacturing [BS336900]	1.00	0.42	0.40	6.14	1.00	0.42	0.40	6.14
Repair construction [BS23D000]	1.00	0.59	0.41	6.40	1.00	0.59	0.41	6.40
Retail trade [BS4A0]	1.00	0.62	0.44	11.16	1.00	0.62	0.44	11.16
Support activities for transportation [BS488000]	1.00	0.53	0.39	4.79	1.00	0.53	0.39	4.79
Water transportation [BS483000]	1.00	0.28	0.24	2.87	1.00	0.28	0.24	2.87

Source: Statistics Canada. Table 36-10-0595-01 Input-output multipliers, provincial and territorial, detailed level

* Source: Statistics Canada. Table 36-10-0113-01 Input-output multipliers, provincial and territorial, summary level

Table 31: Input-Output Multipliers – Indirect Multipliers

Industry Name	All Provinces				Within Provinces			
	Output	GDP at Market Prices	Labour Income	Jobs	Output	GDP at Market Prices	Labour Income	Jobs
Air transportation [BS481000]	0.68	0.35	0.20	3.24	0.38	0.20	0.12	2.04
Amusement and recreation industries [BS713A00]	1.30	0.73	0.43	8.09	0.93	0.54	0.32	6.14
Architectural, engineering and related services [BS541300]	0.45	0.26	0.15	2.57	0.31	0.18	0.11	1.89
Electrical equipment manufacturing [BS335300]	0.44	0.22	0.14	1.93	0.20	0.11	0.07	1.00
Financial investment services, funds and other financial vehicles [BS52A000]	1.11	0.56	0.35	4.76	0.93	0.46	0.29	3.85
Fishing, hunting and trapping [BS114000]	0.51	0.25	0.14	2.20	0.27	0.14	0.09	1.48
Food services and drinking places [BS722000]	0.76	0.34	0.19	3.62	0.37	0.19	0.11	2.21
Management, scientific and technical consulting services [BS541600]	0.44	0.25	0.15	2.54	0.32	0.19	0.11	1.91
Manufacturing [BS3A0]	0.83	0.40	0.22	3.26	0.83	0.40	0.15	3.26
Oil and gas engineering construction [BS23C200]	0.63	0.38	0.23	2.79	0.22	0.13	0.09	1.21
Other activities of the construction industry [BS23E000]	0.67	0.35	0.18	3.03	0.35	0.20	0.11	1.82
Other engineering construction [BS23C500]	0.81	0.43	0.26	3.39	0.56	0.30	0.19	2.38
Other federal government services (except defence) [GS911A00]	0.41	0.23	0.15	2.67	0.30	0.18	0.11	2.15
Other transit and ground passenger transportation and scenic and sightseeing transportation [BS48A000]	1.11	0.59	0.33	5.51	0.71	0.40	0.24	4.13
Other transportation equipment manufacturing [BS336900]	0.40	0.20	0.12	1.73	0.24	0.13	0.08	1.18
Repair construction [BS23D000]	0.50	0.25	0.15	2.56	0.30	0.16	0.10	1.83
Retail trade [BS4A0]	0.56	0.32	0.17	2.90	0.56	0.32	0.12	2.90
Support activities for transportation [BS488000]	0.64	0.34	0.19	3.31	0.44	0.24	0.14	2.47
Water transportation [BS483000]	1.07	0.53	0.32	4.46	0.80	0.40	0.26	3.61

Source: Statistics Canada. Table 36-10-0595-01 Input-output multipliers, provincial and territorial, detailed level

* Source: Statistics Canada. Table 36-10-0113-01 Input-output multipliers, provincial and territorial, summary level

Table 32: Input-Output Multipliers – Induced Multipliers

Industry Name	All Provinces				Within Provinces			
	Output	GDP at Market Prices	Labour Income	Jobs	Output	GDP at Market Prices	Labour Income	Jobs
Air transportation [BS481000]	0.33	0.23	0.09	1.74	0.21	0.15	0.05	1.13
Amusement and recreation industries [BS713A00]	0.96	0.65	0.25	5.02	0.66	0.48	0.17	3.63
Architectural, engineering and related services [BS541300]	0.56	0.38	0.15	2.90	0.40	0.29	0.10	2.16
Electrical equipment manufacturing [BS335300]	0.40	0.27	0.10	2.08	0.26	0.19	0.07	1.42
Financial investment services, funds and other financial vehicles [BS52A000]	0.54	0.36	0.14	2.79	0.37	0.27	0.10	2.02
Fishing, hunting and trapping [BS114000]	0.20	0.13	0.05	1.02	0.12	0.09	0.03	0.65
Food services and drinking places [BS722000]	0.49	0.33	0.13	2.56	0.33	0.24	0.09	1.80
Management, scientific and technical consulting services [BS541600]	0.42	0.28	0.11	2.16	0.29	0.21	0.08	1.59
Manufacturing [BS3A0]	0.35	0.23	0.09	1.81	0.23	0.17	0.06	1.24
Oil and gas engineering construction [BS23C200]	0.47	0.32	0.12	2.45	0.28	0.20	0.07	1.51
Other activities of the construction industry [BS23E000]	0.34	0.23	0.09	1.76	0.21	0.15	0.05	1.15
Other engineering construction [BS23C500]	0.44	0.30	0.12	2.30	0.29	0.21	0.08	1.60
Other federal government services (except defence) [GS911A00]	0.60	0.41	0.16	3.13	0.44	0.32	0.11	2.39
Other transit and ground passenger transportation and scenic and sightseeing transportation [BS48A000]	0.87	0.59	0.23	4.52	0.60	0.44	0.16	3.30
Other transportation equipment manufacturing [BS336900]	0.43	0.29	0.11	2.23	0.30	0.22	0.08	1.65
Repair construction [BS23D000]	0.44	0.30	0.12	2.31	0.31	0.22	0.08	1.68
Retail trade [BS4A0]	0.54	0.36	0.14	2.80	0.38	0.28	0.10	2.07
Support activities for transportation [BS488000]	0.49	0.33	0.13	2.57	0.34	0.25	0.09	1.87
Water transportation [BS483000]	0.48	0.33	0.13	2.51	0.33	0.24	0.09	1.80

Source: Statistics Canada. Table 36-10-0595-01 Input-output multipliers, provincial and territorial, detailed level

* Source: Statistics Canada. Table 36-10-0113-01 Input-output multipliers, provincial and territorial, summary level

6.5 Appendix E – Stakeholder Survey

This section presents the survey that was sent out to all stakeholder and which served as the interview guide template for all follow-on interviews.

Socio-Economic Impact Study of the Victoria and Esquimalt Harbours Stakeholders Survey about Operations in 2019

(Please note that we refer to year 2019 as the calendar year)

1. Information about your organization
 - a. Organization name: *(provide name)*
 - b. Type of your organization *(select one)*
 - i. Not-for profit
 - ii. Government
 - iii. Private for profit
 - c. What is the status of your organization with respect to the property occupied in this location? *(select one)*
 - i. Owner
 - ii. Leasing or renting
 - iii. Both lease/rent and own certain properties
2. Respondent name and contact information
 - a. Your name
 - b. Contact information (email, phone).....
 - c. Position in the organization.....
 - d. Physical location (address).....
3. Which of the following describes best the nature of the activities of your organization at this location? *(select one)*:
 - a. Arts and culture
 - b. Community or business organization
 - c. Fishing, seafood processing or distribution
 - d. Food and beverage services
 - e. Government services and administration – federal
 - f. Government services and administration – municipal
 - g. Government services and administration – provincial
 - h. Industrial: Construction Materials
 - i. Industrial: Manufacturing
 - j. IT and Software Development
 - k. Marinas

- l. Other recreation
 - m. Retail trade
 - n. Scientific research and technical services
 - o. Tourism
 - p. Transportation services (e.g., ferries, air transportation)
 - q. Transportation support services (including ship and boat repair)
 - r. Waste management or treatment
 - s. Wholesale trade operations, warehousing, distribution
 - t. Other (*please describe*)
4. Please describe in some detail the activities of your organization at this location (*please describe*)
5. Please provide measures or metrics of your organization's main activities at this location in 2019 (*please select the best answers, provide multiple answers if relevant*)
- a. Number of passengers carried
 - b. Number of recreational users served
 - c. Number of guests/customers served
 - d. Number of visitors at my location.....
 - e. Business customers/ other organizations served.....
 - f. Tonnes of cargo shipped/distributed.....
 - g. Other (*please describe*)
6. How many employees and other individuals were associated in some way with your organization (at this location) in 2019? (*answer all that apply*)
- a. Regular all-year paid employees (*provide number*)
 - b. Seasonal paid employees
 - i. Number of such employees
 - ii. Hours worked
 - c. Contract employees
 - i. Number of such employees
 - ii. Hours worked
 - d. Volunteers
 - i. Number of individuals
 - ii. Hours served
 - e. Members or associates (individuals) (*provide number*)
 - f. Business members or associates (*provide number*)

- g. Other individuals associated in some work-related way (*provide number and explain*)
7. Please report the actual dollar operating expenditures incurred by your organization in 2019.
 - a. Total payroll for the paid employees (*provide dollar amount for 2019 (calendar year); skip if no paid employees present*).....
 - b. Water lot lease (*provide dollar amount for 2019*).....
 - c. Sea Floor Tax (*provide dollar amount for 2019*).....
 - d. Other operating expenditures (*provide information for 2019 (calendar year)*).....
 - i. Total amount (*provide an estimate in dollars*)
 - ii. Percent of operating expenditures above spent (input materials and services purchased) in geographic regions (*Note: Total should add to 100 percent*)
 - Greater Victoria Region (*percentage spend*)
 - Elsewhere in British Columbia (*percentage spend*)
 - Elsewhere in Canada (*percentage spend*)
 - Outside Canada (*percentage spend*)
 - iii. List three (3) largest operating cost items (*list expenditure items*)
 - Item 1
 - Item 2
 - Item 3
8. Did your organization have any investments or capital improvement expenditures related to your assets, or conditions in which you are operating at this location in 2019?
 - a. Yes
 - b. No (**GO to Q.11**)
9. Overall, where were the capital goods and services purchased (or where they came from)?
 - a. Greater Victoria Region (*percentage spend*)
 - b. Elsewhere in British Columbia (*percentage spend*)
 - c. Elsewhere in Canada (*percentage spend*)
 - d. Outside Canada (*percentage spend*)
10. Please provide a few details about these capital expenditures. For the purpose of this survey, please group the expenditures by a broad purpose, or project, and provide information for the three (3) largest projects (*please answer below*)

- a. Project 1:
 - i. What was the project about? (*please describe*)
 - ii. Total project cost (*provide value*).....
 - iii. Project start year
 - iv. Anticipated completion year.....
 - v. Amount of expenditure in 2019 (*provide value*).....
 - vi. What was the 2019 expenditure for? (*please describe*)
 - b. Project 2: (the same)
 - c. Project 3: (the same)
11. Did your organization have expenditures or contributions in 2019 related to community, social, or cultural supports and programs in the immediate vicinity of the harbour? (E.g., programs and supports for cultural festivals, shows, exhibitions, events, or other initiatives intended to enhance public experience of the harbour.)
- a. Yes
 - i. Amount of cash expenditures (*total dollar amount*).....
 - ii. In-kind contributions (*explain*)....
 - b. No (**GO to Q.15**)
12. What were these program and initiatives about and what were their goals? (*Please describe up to three (3) largest or most impactful programs and initiatives*)
- a. Program 1:
 - b. Program 2:
 - c. Program 3:
13. Did you measure the success of the expenditures and programs supported?
- a. Yes (*please provide three (3) most impactful measures*)
 - i. Measure 1:
 - ii. Measure 2:
 - iii. Measure 3:
 - b. No
14. Does your organization have any partnerships or relationships with First Nations (Examples include business partnerships, joint ventures, employment and skills training programs, etc.)? (*Select all that apply*)
- a. Yes, Esquimalt Nation
 - b. Yes, Songhees Nation

- c. Yes, urban Victoria Indigenous community and/or Victoria Native Friendship Centre
 - d. Yes, other Indigenous groups
 - e. No (**GO to Q.17**)
15. Describe the nature of the above partnerships or relationships with First Nations? (Examples include business partnerships, joint ventures, employment and skills training programs, supporting Indigenous procurement, etc.) (*Select all that apply*)
16. Is your organization actively promoting cultural reconciliation (i.e. Indigenous cultural training for staff, participation in Indigenous events in Victoria, etc.)?
- a. Yes (*please describe*)
 - b. No
17. Did your organization have expenditures in 2019 related to environmental protection, environmental remediation, or environmental stewardship on your premises or in the immediate vicinity of the harbour? (*include capital and operating expenditures including those covered under Q.7 and Q.9. Include labour cost if work was performed with own employees*)
- a. Yes Provide \$ amount
 - b. No (**GO to Q.22**)
18. What was the key purpose of the above environmental protection and remediation expenditures? (*select all that apply*)
- a. Improve air quality
 - b. Improve water quality
 - c. Improve habitat
 - d. Reduce general waste
 - e. Reduce energy use
 - f. Upland remediation / improvement of soil quality
 - g. Water lot remediation
 - h. Other *Describe*
19. Does your organization have measures of the benefits from the expenditures referred to in the previous question? Examples may include: the quantity of greenhouse gases reduced, the quantity of waste reduced, the quantity of soil remediated, a Certificate of Compliance with environmental quality standards among others.
- a. Yes (*please provide up to three (3) most impactful measures.*

- i. Measure 1:
 - ii. Measure 2:
 - iii. Measure 3:
 - b. No
- 20. Would you like to provide qualitative illustrations (e.g., anecdotes, stories, or quotes) of the benefits of your environmental programs and initiatives?
 - a. Yes (*please provide up to three (3) most impactful examples*)
 - i. Example 1
 - ii. Example 2
 - iii. Example 3
 - b. No
- 21. Sustainability is typically defined as meeting our own needs without compromising the ability of future generations to meet their own needs. Embedded in this definition is responsible use of natural, social, and economic resources, social equity and diversity. Given this definition, did your organization implement sustainable business or operational practices in the day to day activities and operations, for example in decision-making, or training of staff?
 - a. Yes (*please describe*).....
 - b. No
- 22. Did your organization contribute to environmental sustainability in the vicinity of the harbour in other ways in 2019?
 - a. Yes (*please describe*).....
 - b. No
- 23. How was your organization affected by the COVID-19 pandemic in the first half of 2020?
(*select all answers that apply*)
 - a. Forced to close and suspend operations
 - b. Reduced revenues (*provide percent reduction*)
 - c. Increased costs (*provide percent increase*)
 - d. Had to lay off employees (*provide percent reduction*)
 - e. Other impacts (*please describe*)
 - f. Minimal or no impact
- 24. What is the current situation of your organization with respect to the ongoing pandemic?
(*select one*)

- a. Our organization has recovered from the initial negative impact of COVID-19, or will be able to recover within the next few months **GO TO Q26**
 - b. Our organization is still significantly affected
 - c. Other (*please explain*)
- 25. Please tell us about your COVID-19 recovery plans, strategies and adaptations to the new market situation if any. (*please describe*).....
- 26. May we contact you to obtain additional information or clarification to the answers provided to this survey?
 - a. Yes
 - b. No