



Royal Vancouver Yacht Club

Coal Harbour Marina Expansion Project
Input Consideration Report

October 2020



This Input Consideration Report has been prepared as part of an application under the Project and Environmental Review (PER) process of the Vancouver Fraser Port Authority. It presents the findings from public input received during the Application Review public comment period for the Coal Harbour Expansion Project. The data analysis and reporting was prepared by Lucent Quay Consulting Inc. on behalf of the Royal Vancouver Yacht Club.

Lucent Quay Consulting Inc. is a Vancouver-based communications and engagement firm with extensive experience in port-related and other transportation projects.

For more information about the engagement process, please see the *Application Review Public Comment Period Overview* section of this report.

Note that the input received reflects the interests and opinions of people who chose to participate in the PER process consultation and engagement process.



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1 Purpose of this report

This Input Consideration Report provides a summary of comments and questions received during the Application Review Public Comment Period for the proposed expansion and renewal project at Royal Vancouver Yacht Club's (RVYC) historic Coal Harbour Marina. This report also includes the related responses and actions from the project team. Interested parties were invited to provide feedback and ask questions about the studies, assessments and plans completed as part of the Project and Environmental Review (PER) application submitted to the Vancouver Fraser Port Authority (the port authority).

Activities conducted and input received during the 25-business day Application Review public comment period was summarized and compiled in the Application Review public comment period *Consultation Summary Report*, which is available on the [RVYC project webpage](#) and the [port authority project webpage](#). Input received during this public comment period will be considered by the port authority as part of the final application and by the project team during design and development of the project.

2 Background

The Royal Vancouver Yacht Club (RVYC) has submitted an application to the Vancouver Fraser Port Authority (the port authority) under the Project and Environmental Review (PER) process for a proposed expansion and renewal project at RVYC's historic Coal Harbour Marina.

2.1 About RVYC

RVYC has shared the Vancouver waterfront in Coal Harbour with other organizations and marine users since 1903. It is a member-managed, non-profit organization with more than 5,000 members, and its existing Coal Harbour Marina has been part of the Coal Harbour waterfront view for decades. Recreational boating has played, and will continue to play, a major role in the city and within Coal Harbour and RVYC continues to make significant contributions to the boating community and the broader community.

2.2 About the Project

More than 10 years of planning and technical studies have been completed as part of this comprehensive proposed expansion and upgrade. A PER application was submitted to the port authority and is currently under review.

RVYC's proposed \$12-million expansion and renewal project for the southern portion of the marina focuses on excellence in both design and environmental sustainability. It will:

- Help address demand for moorage in Coal Harbour
- Enhance environmental protection by replacing aging infrastructure, including removal of creosote coated piles, and help meet the goal of achieving the highest ranking within the Clean Marine BC Program
- Increase boater safety for all Coal Harbour users by reconfiguring the marina to provide safer entry and exit points from RVYC. Improvements will eliminate any need for boats to reverse out of the marina
- Improve services for RVYC members and visiting tourists by increasing the number of available boat slips

Key project components are:

- 47 new slips created from expansion and reconfiguring the existing marina
- 37 older boat sheds replaced, and 52 existing sheds reconfigured
- 85 old, creosote treated wooden piles removed and replaced with more environmentally friendly steel piles
- New floats installed, and existing floats and fingers repositioned - new floats replace pressure treated timber and Styrofoam with concrete
- Upgrades to float utilities, lighting, wiring and fire protection



RVYC has been working with the port authority to ensure that community interests are considered as part of the PER process. Considerable emphasis has been placed on environmental management, light and view impact studies, along with habitat and fisheries assessments.

The proposed construction period would be split into eight phases and is estimated to take approximately two years to complete:

- Phases 1 through 4 - August 16, 2021 to February 28, 2022
- Phases 5 through 8 - August 16, 2022 to February 28, 2023

Construction activities would include:

- Removing piles by vibratory extraction or direct pull
- Installing piles by vibratory or drop hammer from a barge
- Dismantling old infrastructure
- Installing new floats and sheds, plumbing, electrical, and lighting systems

3 Consultation and Engagement

The RVYC project team led a comprehensive round of engagement and consultation in accordance with the port authority's requirements as part of the PER process. Local residents, businesses and organizations and the general public were invited to provide comments and ask questions about the proposed project and the technical studies and plans that were completed as requirements of the PER process. Due to British Columbia's COVID-19 related restrictions on public gatherings at the time of the public comment period, public open houses were not possible, and the engagement program was developed and conducted according to the port authority's public modified engagement requirements in respect of these restrictions.

3.1 Overview

The 25-business day Application Review public comment period was held from 2 June to 7 July 2020. A range of opportunities to submit comments and questions was provided – an online feedback form, two webinars and a project email and phone line.

All input received during the Application Review public comment period is summarized in this report, including comments received through the online feedback form as well as those submitted by phone or email, or received during the online webinar sessions. This input will be considered during the review of the final application.

3.2 Approach and Methodology

The Application Review public comment period was designed to inform the local community and stakeholders about the results of studies conducted and seek feedback as part of the process. Project stakeholders and members of the public were invited to provide comments and ask questions about the studies, assessments and plans completed as part of the permit application to the port authority.

RVYC is working with the port authority to ensure that community and stakeholder interests are considered as part of the PER process. RVYC's approach for the Application Review public comment period was to deliver a comprehensive public engagement process that would provide valuable information to members of the public and key stakeholders and generate meaningful dialogue.

During the application review period, RVYC led the public consultation with port authority approval and participation, and the port authority led stakeholder consultation with the support and participation of RVYC. The port authority sent notifications and an invitation to provide input as part of the PER process to stakeholders including adjacent municipalities and local businesses.

The RVYC engagement program met all requirements outlined by the port authority for public consultation. Guidelines outlining the requirements are available on the [port authority website](#) including [public engagement requirements during COVID-19](#).

During the Application Review public comment period, the following activities were completed as per the port authority guidelines:

- Developed a dedicated **project web page** on the RVYC main website to make all application information available to the community and stakeholders
- Placed **advertisements** in the Vancouver Sun and the Georgia Straight newspapers
- Created a **project overview document, information video, and webinar presentation** which are available for download on the project web page
- Developed an **online feedback form** to collect community and stakeholder input and made a **PDF feedback** form available for download and printing
- Developed a **notification postcard** which was delivered by regular mail to local residents and businesses within a port authority defined area map
- Developed a **notification letter** which was delivered to provincial and federal government representatives and the local residents association by email
- Hosted **two online webinars** consisting of a presentation by the project team followed by a moderated community discussion forum with the project team and representatives from the port authority
- Posted notifications and reminders on RVYC social media channels, in the weekly members newsletter and sent emails to the membership database

3.3 Participation

The Application Review public comment period provided a variety of methods for participation and input as outlined in the table below.

Engagement Method	Description
Webinar – 16 June 2020	<ul style="list-style-type: none"> • 71 people attended (81 registered) • 26 attendees submitted questions or comments during the webinar • A total of 121 questions and comments were submitted
Webinar – 24 June 2020	<ul style="list-style-type: none"> • 91 people attended (115 registered) • 7 people submitted questions and comments in advance of the webinar <ul style="list-style-type: none"> ○ 5 submitted by the posted deadline and were included in the webinar presentation

Engagement Method	Description
	<ul style="list-style-type: none"> ○ 2 submitted after the posted deadline so were not reflected in the webinar presentation but are included in the Question and Response document ● 38 people submitted questions and comments during the webinar ● A total of 140 questions and comments were submitted
Feedback form	<ul style="list-style-type: none"> ● 1,732 people completed the feedback form online ● 2 people submitted PDF feedback forms
Project phone line	<ul style="list-style-type: none"> ● Four people submitted questions or comments via phone
Written correspondence	<ul style="list-style-type: none"> ● 28 pieces of written correspondence were received via email by the RVYC or the port authority <ul style="list-style-type: none"> ○ 14 pieces of correspondence were received directly by RVYC ○ 10 pieces of correspondence were received directly by the port authority and forwarded on to RVYC ○ 4 pieces of correspondence were letters forwarded by the Coal Harbour Preservation Group to both the RVYC and the port authority. <p><i>Note: one piece of written correspondence was submitted to the Coal Harbour Preservation Group outside of the engagement period (31 July 2019) but will be considered as part of the public comment period feedback.</i></p>
Project web page	<ul style="list-style-type: none"> ● 2,920 views to the project main web page were recorded during the public comment period ● A total of 43 documents from the web page were accessed by users during this time
Project materials downloaded from website	<ul style="list-style-type: none"> ● The top 10 documents accessed from the website by users for a total of 582 views are as follows: <ul style="list-style-type: none"> ○ Project Overview (85 views) ○ Appendix F Marine Seismic Refraction Bathymetry and Sub Bottom Acoustic Profiling Survey Report (73 views) ○ Appendix A Coal Harbour Marina Expansion Master Plan (64 views) ○ Executive Summary (62 views)

Engagement Method	Description
	<ul style="list-style-type: none"> ○ Project Feedback Form (51 views) ○ Appendix H Rowing Technical Memo (51 views) ○ 16 June Webinar Question and Responses (50 views) ○ Appendix B Coal Harbour Navigation Channel Design Study (49 views) ○ Appendix I Emergency Response Plan (49 views) ○ Webinar Presentation (48 views)
Facebook posts	<ul style="list-style-type: none"> ● 2 June 2020 – reach 1,200 people with 179 engagements ● 12 June 2020 – reach 6,015 people with 565 engagements ● 15 June 2020 – reach 681 people with 26 engagements ● 23 June 2020 – reach 7,822 people with 980 engagements ● 7 July – reach 465 people with 34 engagements <p><i>Note: “reach” indicates the number of people who received impressions of a page post a minimum of once and “engagement” indicates the number of people who engaged with the post by liking, reacting, commenting, clicking on or sharing the page post.</i></p>
Instagram posts	<ul style="list-style-type: none"> ● 2 June 2020 – 613 impressions, 40 likes and 3 comments ● 12 June 2020 – 581 impressions, 45 likes and 0 comments ● 16 June 2020 – 500 impressions, 28 likes and 0 comments ● 24 June 2020 – 492 impressions, 30 likes and 0 comments <p><i>*Note: impressions represent the total number of times the post was seen.</i></p>

Further details about the Application Review public comment period are provided in the *Consultation Summary Report*, which is available on the [RVYC project webpage](#) and the [port authority project webpage](#).

4 Consideration of Consultation Input

The following sections summarize input received from respondents through the project online feedback form, public webinars written submissions and call to the Project phone line. **Tables in each section include the project team’s response to questions and comments.**

Please note that similar comments or questions have been summarized into themes. For detailed verbatim comments from the online feedback form please see the *Consultation Summary Report, Appendix 6 – Online Feedback Form Record of Verbatim Responses* and for verbatim questions, comments and responses see *Consultation Summary Report, Appendix 7 – Webinar Question and Response Documents*.

4.1 Project Support

Respondents were asked to rate their level of support for the project in the project feedback form:

- **52%** of respondents **strongly support or somewhat support** the project
- **47%** of respondents **strongly oppose or somewhat oppose** the project
- **1%** of respondents **neither support nor oppose** the project

Respondents were asked to provide a reason for their level of support:

- 517 respondents provided a reason (34%)
- 1,151 respondents did not provide a reason (66%)

The following table provides a summary of general questions and comments provided by respondents and responses from the project team:

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
General question or comment – project related		
Support for planning	Overall a well-planned project to upgrade aging infrastructure and do much needed maintenance; general improvement to Coal Harbour.	The \$12 million project in the southern portion of the marina is focusing on excellence in design and environmental sustainability. The project will enhance environmental protection by replacing aging infrastructure, including removing creosote-coated piles and replacing older boat sheds. Coal Harbour boater safety will be improved by reconfiguring the marina to provide safer entry and exits points at RVYC, eliminating the need for
	Supports the local area and the marine community, optimizes the space; supports members and visitors, creates greater access	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	<p>to water for boaters; believe there is space for all users.</p> <p>In favour of marina construction, as it supports the local area and the marine community in general. Vancouver is a marine city, and it should have its coastline optimized for the benefit of the community; includes parks, and ports, and marinas; RVYC is a well-run yacht club that continues to be a valued "resident".</p>	<p>boats to reverse out of the marina. The project will address growing demand for moorage by increasing the number of slips available, improving services for RVYC members and visiting tourists.</p>
Does not benefit community	<p>Only benefits a few people; no benefits to the greater community.</p> <p>Support upgrades to current marina but not expansion.</p>	<p>The Coal Harbour marina needs significant maintenance and upgrades and the expansion project offers the opportunity to do these in a more cost effective and timely manner. The expansion also allows for internal reconfiguration of the boat sheds and slips to create a better marina design. Relocating the larger vessels to the new slip will enhance the current view corridors from Stanley Park as it relocates the large boat sheds to the East facing HMS Discovery. The view from Coal Harbour will be of boats rather than the existing large boat sheds.</p> <p>The project will enhance environmental protection by replacing aging infrastructure, including removing creosote-coated piles and replacing older boat sheds. Coal Harbour boater safety will be improved by reconfiguring the marina to provide safer entry and exits points at RVYC, eliminating the need for boats to reverse out of the marina.</p> <p>The project will address growing demand for moorage by increasing the number of slips available, improving services for RVYC members and visiting tourists and supporting local businesses with increased numbers of visitors. RVYC has almost</p>

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		<p>5,000 members and we have 300 current members currently on a waitlist because they have moorage at other facilities but would like to acquire moorage at Coal Harbour. Increases in boat sales have been recently reported in BC due to COVID-19 so it is anticipated that pressure for more marina space will continue. The project will also provide employment during the two years of construction. This is a need that this project addresses.</p> <p>RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process.</p>
Need for more moorage	<p>There is a shortage of moorage and this project will free up public marinas; currently a great shortage of marina space in the Vancouver Region with waiting lists decades-long at most marinas; addition of more marina space is more than welcome as this brings economic activity to the lower mainland as well as surrounding smaller coastal communities.</p> <p>Who decides that more moorage is needed?</p>	<p>The project will address growing demand for moorage by increasing the number of slips available, improving services for RVYC members and visiting tourists. RVYC has almost 5,000 members and 300 current members are currently on a waitlist because they have moorage at other facilities but would like to acquire moorage at Coal Harbour. This is a need that this project addresses.</p> <p>Within the RVYC, the membership and the executive decide if additional moorage within the marinas is required.</p>
Safety		
Improved safety	<p>Will result in a cleaner, safer more controlled marina.</p> <p>Will improve safety in Coal Harbour for all marine users with better access to and from marina.</p>	<p>More than 10 years of planning and technical studies have informed this application, and safety was a key consideration for the design of the new marina. This project will improve Coal Harbour boater safety by reconfiguring the marina to provide</p>

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	<p>Potential to improve traffic management in Coal Harbour.</p> <p>Will decrease safety significantly, especially for rowers.</p>	<p>safer entry and exits points at RVYC and eliminating any need for boats to reverse out of the marina.</p> <p>RVYC has a campaign in progress to promote awareness of and safety for rowing sculls and is committed to improving and expanding this program. RVYC has also recommended a more general education and awareness program be developed by all users of Coal Harbour and the creation of a rowing traffic scheme. Safety considerations for this project include warning lights and mirrors to assist with identifying rowing shells in the channel.</p> <p>Application documents, including the technical studies, are available for review at the project web page and on the port authority website.</p>
Marina Design		
Marina layout	<p>General improvement to marina layout, much better use of space, well-designed and well-researched project.</p> <p>Support project but preference would be for more smaller slips.</p> <p>Opposed to expansion but support redesign of existing marina.</p> <p>Marina is already an eyesore and this project enlarges it; boat sheds are not attractive.</p>	<p>RVYC considered many different layouts over the history of this project and the current layout emerged as the most efficient use of space. The moorage planned for the outside of “K” Float is for vessels that currently dock at the marina.</p> <p>RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process.</p> <p>Replacement boat sheds have been designed to be consistent with the existing sheds in size, height and colour to minimize view and shade effects. There will be no additional boat sheds – 37 older boat sheds will be replaced. All the new slips are open.</p> <p>The new boat sheds are also more environmentally friendly. They are made of a material that doesn’t require painting so that reduces volatile organic compounds (VOCs) in the environment</p>

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		<p>(less chemicals) and they also have plexiglass panels that allow daylight in and reduce the amount of electricity required.</p> <p>Refer to Appendix E for Marina Design, Appendix I for Dock and Float Design and Appendix J for Boat Shed Design.</p>
Environment		
Environmental protection	<p>Project will improve environmental protection by bringing marina up to today's standards; well planned in terms of impact to the environment.</p> <p>Support proposed removal of creosote pilings and styrofoam floats.</p>	<p>The proposed project enhances environmental protection by replacing aging infrastructure, removing creosote coated piles and styrofoam floats and replacing them with steel and concrete. The new boat sheds are also more environmentally friendly. They are made of a material that doesn't require painting so that reduces VOCs in the environment (less chemicals) and they also have plexiglass panels that reduce the amount of electricity required because more daylight comes in.</p>
Effects on marine life and wildlife	<p>More boats will cause more pollution and noise and harm marine life and wildlife; increased footprint and effect on environment.</p> <p>Project will improve area for marine animals.</p> <p>Wondering what effects the expansion will have on the environment 2-5 years from now.</p> <p>Concerns about increase in the number of slips and the potential for long-term, increased environmental impact and negative consequences. Including the potential for toxins (fuel spills, bottom paint sloughing, vessel exhaust and maintenance, etc.); increased anthropogenic debris (intentional</p>	<p>RVYC Coal Harbour Marina has a ranking of 4 out of 5 anchors from the Clean Marine BC program, the only marina with this ranking in the Coal Harbour Basin, and is committed to pursuing a 5 out of 5 anchors ranking. The marina has existed for over 100 years and has a track record of protecting the environment. The RVYC works closely with research organizations like the Vancouver Aquarium and UBC both to offer support and access to the marina and also to communicate with them to ensure the protection of animals that frequent the marina. The RVYC is constantly improving and looking for initiatives to improve aquatic habitat.</p> <p>As part of normal operations, RVYC cordons off areas where birds are nesting and areas where female seals haul out to birth pups. The Vancouver Aquarium is also notified to observe and ensure the safety of mother and pup. RVYC is committed to</p>

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	<p>or unintentional); and increased noise disturbance for marine life, wildlife, and humans (both during construction and from increased boat traffic after completion).</p>	<p>supporting and promoting Southern Resident Killer Whales seasonal measures with all members.</p> <p>RVYC has an Emergency Response Plan to deal with issues like spill response. All staff are trained in spill response protocols and help to educate members at every opportunity. RVYC has spill kits strategically located around the marina and they are regularly maintained.</p> <p>As part of their moorage contract, members with vessels moored at RVYC marinas are required to ensure that their vessels have regular maintenance and safety inspections. RVYC rules prohibit releasing any harmful materials into any waterway and members face consequences for non-compliance. The Coal Harbour marina has secondary containment storage areas for all hazardous materials such as fuel, bilge water, and paint. These materials are properly recycled on a regular basis.</p> <p>This proposed project represents a 13.3 % increase in the total marina size. As part of the application review process technical studies were completed. Considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.</p> <p>Refer to Appendix Q for the Bio Physical Survey and Appendix L for the Emergency Response Plan.</p>
Construction effects	Concerns about effects of construction on environment.	A Construction Environmental Management Plan (CEMP) has been prepared to address construction-related activities. The

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		<p>CEMP outlines construction best management practices, mitigation measures and environmental specifications:</p> <ul style="list-style-type: none"> • Site access, mobilization and lay down areas for support barge and components being constructed offsite • Best management practices to minimize construction noise and air quality effects on the environment and the neighbouring community including maintaining equipment and turning off emissions sources when not in use • Best management practices for pile driving will be followed to minimize potential noise and other effects on fish and fish habitat and the neighbouring community. Measures will include the use of bubble curtains, pipe pile sleeves and the use of vibratory hammer until use of an impact hammer is necessary. Pile driving will happen intermittently through two 5-month periods over the two years. • In-water work will be conducted in the least risk windows for fish and fish habitat which is approximately mid-August to late February. <p>Refer to Appendix R for the Construction Environmental Management Plan.</p>
Technical Studies and Plans		
	Enhancements will improve visual appeal of the marina.	Replacement boat sheds have been designed to be consistent with the existing sheds in size, height and colour to minimize

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View and shade assessment	Boat sheds impact views; boat sheds are unattractive.	<p>view and shade effects. There are no additional boat sheds proposed in the project only the replacement of 37 badly deteriorated sheds.</p> <p>The new boat sheds are also more environmentally friendly. They are made of a material that doesn't require painting so that reduces VOCs in the environment (less chemicals) and they also have plexiglass panels that allow daylight in and reduce the amount of electricity required.</p> <p>The Coal Harbour marina needs significance maintenance and upgrades and the expansion project offers the opportunity to do these in a more cost effective and timely manner. The expansion also allows for internal reconfiguration of the boat sheds and slips to create a better marina design. Relocating the larger vessels to the new slip will enhance the current view corridors from Stanley Park as it relocates the large boat sheds to the East facing HMS Discovery. The view from Coal Harbour will be of boats rather than the existing large boat sheds.</p> <p>Refer to Appendix K for the View and Shade Technical Memo.</p>
General comments about plans	<p>Some local residents satisfied with plans and proposed mitigation; minimal impacts on neighbours.</p> <p>Thorough review and technical studies, satisfaction with work done; this plan is a responsible way to meet the need to do upgrades and maintenance.</p>	As part of the application review process technical studies were completed. Considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.
Lighting Plan	Reduced lighting levels and LED replacements will be an improvement.	Lighting is predominately pathway lighting on the floats for pedestrian safety while walking on docks. The lights will be warm coloured LED lights and will be mounted facing downward to

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		<p>illuminate the docks and to reduce unwanted light spill and other potential effects on adjacent properties and communities.</p> <p>Refer to Appendix P for the Lighting Plan.</p>
Noise Assessment and Lighting Plan	Increased noise and light are a concern for some local residents.	<p>The noise assessment was conducted according to Vancouver Fraser Port Authority requirements. Results of assessment confirmed a weighted score of 25.2 (which is low) so a detailed assessment was not required. A total weighted score of over 30 for activities and processes expected to generate noise would require a detailed noise assessment. Noise levels for day to day operations at the project site, after completion, are expected to be consistent with current levels. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.</p> <p>Refer to Appendix P for the Lighting Plan and Appendix S for the Noise Impact Assessment.</p>
Marina Design	Concern that wind, tide and debris and marine environment was not taken into account for technical studies.	<p>The marina design considers wind, wave and water levels effects as referenced in Appendix E and in the notes on drawing 203 of the application submission.</p> <p>Wind speed is one of the factors that was used to calculate the loads on boats, boat sheds and piles. The marina is designed for the 1 in 50 year return period hourly wind speeds, which are then increased by 25% to calculate the wind loads from the 1 minute gusts as per the National Building Code of Canada (NBCC) and British Standard BS 6349-1:2000, "Maritime Structures, Part 1, Code of Practice for General Criteria", 2003 edition. The marina design provides for wind sheltering on boats in the interior of the marina. Pile load factors ensure adequate capacity and the</p>

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		<p>design meets the National Building Code of Canada guidelines for wind loading.</p> <p>Wave and storm surge effects are determined using the state-of-the-art program Mike21 computer program which was developed by the Danish Hydraulic Institute (DHI), and used for design and harbour agitation (waves in the marina) as per guidelines of the Small Craft Harbours Directorate, Fisheries and Oceans Canada.</p> <p>Water level effects due to tides and sea-level rise are included in the design, with tide elevations from the Canadian Hydrographic Services “Canadian Tide and Current Tables”, and the increase in water levels due to climate change extracted from the Representative Concentration Pathway (RCP) Scenario 8.5 (RCP8.5) in James et al Geological Survey of Canada Open File 7942 Report “Tabulated Values of Relative Sea-level Projections in Canada and the Adjacent Mainland United States”.</p> <p>Debris has not historically been an issue regarding marina operations. However, RVYC recently installed a Seabin automatic debris extractor in the marina which collects debris from outside the marina and responsibly disposes of it off-site.</p> <p>Refer to Appendix B Coal Harbour Navigation Channel Design and Appendix E Marina Design for the physical and environmental conditions. Winds and waves are noted in section 4.3 and water levels (tides) are noted in section 6 of Appendix E.</p>
Construction		
Construction effects	Concern about construction impacts on neighbours.	A Construction Environmental Management Plan has been prepared to address construction-related activities. All

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	<p>Local residents satisfied with mitigation strategies.</p>	<p>construction work, including pile driving, will take place during normal daytime hours, 9:00 am to 5:00 pm, and will not be performed on weekends or statutory holidays. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.</p> <p>Best management practices for pile driving will be followed to minimize potential noise and other effects. Measures will include the use of bubble curtains, pipe pile sleeve and the use of vibratory hammer until use of an impact hammer is necessary. Pile driving will happen intermittently through two 5-month periods over the two years. The work will be conducted in the least risk windows for fish and fish habitat which is approximately September through February. The piles are small, the largest ones are 16 inches and best management practices will help to minimize any effects like the use of bubble curtains pipe pile sleeves and the use of vibratory pile driving unless the drop hammer is necessary.</p> <p>All construction activities will be conducted on the water with the floats and boat sheds built off site in Richmond and Delta and then arriving by water minimizing construction noise and road traffic effects on neighbourhoods.</p> <p>A noise assessment was conducted according to Vancouver Fraser Port Authority requirements. Results of the assessment confirmed a weighted score of 25.2. A total weighted score of over 30 for activities and processes expected to generate noise would require a detailed noise assessment so this project did not require a detailed assessment. Noise levels for day to day</p>

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		<p>operations at the project site, after completion, are expected to be consistent with current levels.</p> <p>RVYC marina has been in existence for over 100 years. Noise from the ongoing operation of the marina has never been an issue and that is not expected to change after the marina expansion. Noise levels during the two year construction window will be closely monitored.</p> <p>Refer to Appendix S for the Noise Impact Assessment and Appendix R for the Construction Environmental Management Plan.</p>
PER Process or other regulatory process		
Application process and stakeholder consultation	A lot of studies and consultation with stakeholders have been completed; impressed with due diligence on project.	As part of the application review process technical studies were completed. Considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.
Notifications and public engagement	Suggestion to consult with strata councils in Coal Harbour area.	1,890 postcards were mailed to local residents and businesses in the Coal Harbour and Stanley Park area. The Coal Harbour Resident's Association was also provided with information about the project and distributed notifications to their membership.
Indigenous group consultation	Question and concern about how First Nations have been consulted.	The port authority is consulting with Indigenous groups on the proposed project application. A summary of these comments would be made available in the port authority's PER Report, should the proposed application be approved.

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Stakeholder consultation	Questions and concern about level of consultation with the Vancouver Rowing Club.	<p>RVYC met with Vancouver Rowing Club representatives numerous times during the past decade. There have been four meetings between the Vancouver Rowing Club and the RVYC and three joint meetings including the Vancouver Rowing Club, the RVYC and the port authority. There has also been a significant amount of written communication between the Vancouver Rowing Club, the RVYC and the port authority.</p> <p>More than 10 years of planning and technical studies have informed this application including working with port authority and local stakeholders since 2017 to ensure that community interests were considered in the project design. The port authority engaged with stakeholders through the stakeholder consultation process which is conducted concurrently to the public engagement process.</p>
	City of Vancouver should conduct planning process for Coal Harbour.	
	Have the City of Vancouver and Parks Board been consulted?	
Community concern for rowers		
Safety	Channel is already busy for rowers; increased boat traffic will put more risk on rowers; expansion will increase risk of collisions between rowers and other marine users because of narrower channel.	<p>RVYC met with Vancouver Rowing Club representatives numerous times during the past decade. There have been four meetings between the Vancouver Rowing Club and the RVYC and three joint meetings including the Vancouver Rowing Club, the RVYC and the port authority. There has also been a significant amount of written communication between the Vancouver Rowing Club, the RVYC and the port authority.</p> <p>More than 10 years of planning and technical studies have informed this application including working with port authority and local stakeholders since 2017 to ensure that community interests were considered in the project design.</p>
	Expansion will threaten Vancouver Rowing Club's ability to run training programs for novice rowers.	
Ability to run programs	Expansion will impact important historic organization in Coal Harbour.	
	Expansion will impact important historic organization in Coal Harbour.	
Engagement with VRC	Questions about compromise proposed by Vancouver Rowing Club.	<p>Prior to submitting the PER application, a Rowing Technical Memo was developed by the RVYC to create a benchmark</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>review of similar multiuse waterways. The Rowing Technical Memo concluded that a 63.4 m wide channel supports the continued use of Coal Harbour for rowing.</p> <p>Refer to Appendix H for the Rowing Technical Memo.</p>
General question or comment – outside of PER scope		
Coal Harbour current conditions	<p>Coal Harbour should not have more boats.</p> <p>Preserving park space and nature should be a priority.</p>	<p>RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process.</p> <p>Coal Harbour is a commercial shared waterway administered by the port authority.</p>
Cost of project	Concern from RVYC member about cost of project.	This project has been extensively reviewed with the RVYC membership and members voted by a margin of 81% to approve and proceed with this project.
Public waterway	Concern about selling public space to pay for project.	RVYC is applying to the port authority for permission to expand its commercial lease within the port authority’s jurisdiction. There is no sale of public space.
	Private use of a public waterway.	
	Oppose the commercialization of a public waterway.	RVYC has a commercial lease in this commercial shared waterway that they pay for. That lease comes with obligations and rights between the port authority and the RVYC just like the 100’s of port authority tenants in the harbour, including RVYC’s neighbours in Coal Harbour.
	Vancouver Rowing Club is a private club using public waters and also have marina slips leased for larger boats; Vancouver Rowing Club also expanded their marina so RVYC should be able to as well; If rowing is unsafe why are they allowed to do it in public waterways?	After lengthy and careful planning, RVYC applied to the port authority for a project to expand and renew the Coal Harbour Marina. The Vancouver Rowing Club expanded their marina in 2017 under the same process.

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		Public access to the water in the port of Vancouver is administrated by the port authority. Please see the Port Information Guide for more information.
Support for RVYC	RVYC is a responsible organization, supports the community and maintains its marina, they are good neighbours.	As part of the application review process technical studies were completed. Considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.
Vancouver Rowing Club communications	Concerns about misleading Facebook ads from Vancouver Rowing Club.	<p>While not part of the formal notification process, RVYC is aware that other organizations also placed advertisements and distributed notice of the public comment period using social media. As such, members of the public may have received notice of the opportunity to participate from a variety of sources other than official RVYC notices.</p> <p>RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process.</p>
Alternate plans	This project should be built somewhere else.	<p>RVYC considered expanding their Jericho facility as an alternate location, but it has deeper water, which makes construction more difficult, and is closer to deep sea anchorages that limits expansion possibilities. RVYC members voted by a margin of 81% to approve this project.</p> <p>More than 10 years of planning and technical studies have informed this application. This includes considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Application documents, including the technical studies, are available on our project web</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		page and on the port authority website. Based on the study results effects on the community and the local environment are anticipated to be minimal.

4.2 Technical Studies and Plans – Marina Design

Level of satisfaction with Marina Design in the project feedback form:

- **52%** of respondents are **very satisfied or somewhat satisfied**
- **47%** of respondents are **very dissatisfied or somewhat dissatisfied**
- **4%** of respondents are **neither satisfied nor dissatisfied**
- **2% did not review** the documents

612 respondents provided reasons for their level of satisfaction with Marina design:

- 257 comments are related to Marina Design
- 355 outside of the PER scope

The following table provides a summary of questions and comments provided by respondents regarding marina design and responses from the project team:

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Boat sheds		
Boat sheds vs open moorage	If boat sheds needed to be removed why replace them? Why not just have open moorage?	Boat sheds are considered an essential part of the marina providing environmental protection for vessels. This greatly reduces deterioration of the vessel and significantly reduces maintenance and upkeep activities such as washing and painting. The boat sheds identified for replacement are in disrepair. Replacement boat sheds have been designed to be consistent with the existing sheds in size, height and colour to minimize view and shade effects. There are no additional boat sheds proposed in the project only the replacement of 37 badly deteriorated sheds.
Boat shed appearance	Boat sheds are not attractive; would support the expansion if there were no boat sheds in design. Is there an opportunity to change the appearance to integrate into surrounding context better (nature and architecture)?	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>The new boat sheds are also more environmentally friendly. They are made of a material that doesn't require painting so that reduces VOCs in the environment (less chemicals) and they also have plexiglass panels that allow daylight in and reduce the amount of electricity required.</p> <p>In the proposed layout, K-float, on the south side of the marina, is set back from the navigation channel, to allow for a row of larger boats. K float does not include any boat sheds. There will only be open slips in this area.</p> <p>Relocating the larger vessels to the new slip will enhance the current view corridors from Stanley Park as it relocates the large boat sheds to the East facing HMS Discovery. The view from Coal Harbour will be of boats rather than the existing large boat sheds.</p> <p>Refer to Appendix J for Boat Shed Design.</p>
Boat shed design	<p>Concerned that boat sheds are going to be bigger and higher.</p> <p>New boat shed design with more light is an improvement, will improve view with updated sheds that match what is already there.</p>	<p>Replacement boat sheds have been designed to be consistent with the existing sheds in size, height and colour to minimize view and shade effects.</p> <p>The new boat sheds are also more environmentally friendly. They are made of a material that doesn't require painting so that reduces VOCs in the environment (less chemicals) and they also have plexiglass panels that reduce the amount of electricity required because more daylight comes in.</p> <p>Refer to Appendix J for Boat Shed Design.</p>
Number of boat sheds	Marina does not need more boat sheds; strongly object to any additional sheds.	The number of boat sheds in the marina will stay the same with 37 older boat sheds replaced with new more environmentally

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	Glad the number of boat sheds are staying the same.	friendly boat sheds. Existing large boat sheds will be relocated to the East facing HMS Discovery making room for the larger vessels on the new slip. This reconfiguration will enhance the current view corridors from Stanley Park as the view from Coal Harbour will be of boats rather than the existing large boat sheds. Refer to Appendix E for Marina Design.
Marina design/ configuration		
Size of yachts	Catering to large yachts does not seem the best use of space, could fit multiple smaller boats in that space.	Many different layouts have been considered over the history of this project and the current layout emerged as the most efficient use of space. The size of vessels already moored at Coal Harbour as well as those on the wait list were also factors. The moorage planned for the outside of “K” Float is for vessels that currently dock at the marina. Refer to Appendix E for Marina Design.
Marine traffic	Marina is well designed but does it address the marine traffic increases to the area?	Marine traffic studies determined that the additional moorage will result in an average increase of 2.5 transits per day during the summer high season, with a smaller average increase during the low season. More than 10 years of planning and technical studies have informed this application, and safety was a key consideration for the design of the new marina. This project will improve Coal Harbour boater safety by reconfiguring the marina to provide safer entry and exits points at RVYC and eliminating any need for boats to reverse out of the marina.
Support redesign	Expansion has been designed while keeping the low profile of a smaller scale recreational marina; increased slips is an improvement	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	and addresses a need for more moorage in Coal Harbour; marina is in need of upgrades.	This proposed \$12 million project in the southern portion of the marina is focusing on excellence in design and environmental sustainability.
Floats, docks, slips and piles	Steel piles and concrete floats are a big improvement from an environmental and maintenance perspective.	The proposed project will enhance environmental protection by replacing aging infrastructure, including removing creosote-coated piles and replacing older boat sheds. Refer to Appendix E for Marina Design, Appendix I for Dock and Float Design and Appendix J for Boat Shed Design.
Safety		
Improved safety	Limiting entrances/ exits lowers risk and improves safety. Vessels will be able to manoeuvre within RVYC water lot.	The proposed expansion provides improved safety by: <ul style="list-style-type: none"> Relocating existing boat sheds to either the interior or along the east side of the marina, so no boats can exit from them perpendicular to the longitudinal axis of the channel/waterway. Having boats leave the marina at the south-west or south-east corners of the marina, where they have a very good view of the channel/waterway, where they have room to hold up before establishing that it is safe to proceed into the channel, and where warning lights and mirrors would assist in identifying rowing shells or other boats in the channel/waterway. Eliminating boats reversing out of the marina into the shared channel.
Hazards	Design will create safety hazards with blind spots, narrow channel and increased vessel traffic and more vehicle parking in Stanley Park.	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<ul style="list-style-type: none"> • Providing a full 180-degree view of the channel/waterway for the boats moored along the side of K-Float so they can be sure that they would not leave their slip unless safe to do so. <p>The additional marine transits as a result of the expansion are estimated to be 2.5 transits per day during the peak summer period. This should not have a significant impact on channel traffic.</p> <p>Vehicle parking requirements can be accommodated within the existing parking lot. There is regular communication between marina and Stanley Park staff on parking and other operational matters.</p> <p>RVYC has a campaign in progress to promote awareness of and safety for rowing sculls and is committed to improving and expanding this program.</p> <p>Refer to Appendix E for Marina Design, Appendix I for Dock and Float Design and Appendix J for Boat Shed Design.</p>
Environment		
Support for environmental upgrades	Environmental upgrades are good; removing creosote piles and old floats is an improvement.	The project will enhance environmental protection by replacing aging infrastructure, including removing creosote-coated piles and replacing older boat sheds.
Materials	No details about what materials will be used other than concrete. What other materials will be used in float construction and how can we be sure they will be safe for the environment?	Concrete floats and boat sheds will be long lasting with completely enclosed foam floatation. This mitigates the risk of styrofoam breaking up and entering the marine environment. Wood construction will predominantly use cedar with sheet metal protection to minimise the amount of treated wood in the marina.

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		Other materials used will be galvanized steel and aluminum which means less maintenance and painting so less VOCs.
Impact of increased vessels	The greater number of slips increased the potential for long-term increased environmental impacts (e.g. fuel spills, bottom paint, vessel exhaust, noise disturbances)	<p>The added slips represent a 13.3% increase in the marina. RVYC has an Emergency Response Plan to deal with issues like spill response. All staff are trained in spill response protocols and help to educate members at every opportunity. RVYC has spill kits strategically located around the marina and they are regularly maintained.</p> <p>RVYC Coal Harbour Marina has a ranking of 4 out of 5 anchors from the Clean Marine BC program, the only marina with this ranking in the Coal Harbour Basin and is committed to pursuing a 5 out of 5 anchors ranking. The marina has existed for over 100 years and there has a track record of protecting the environment. The RVYC works closely with research organizations like the Vancouver Aquarium and UBC both to offer support and access to the marina and also to communicate with them to ensure the protection of animals that frequent the marina. The RVYC is constantly improving and looking for initiatives to improve aquatic habitat.</p> <p>Refer to Appendix L for the Emergency Response Plan.</p>
Construction		
Construction effects	Concerned about two years of construction; amount of pile driving and how disruptive boat shed construction will be.	Best management practices for pile driving will be followed to minimize potential noise and other effects. Measures will include the use of bubble curtains, pipe pile sleeve and the use of vibratory hammer until use of an impact hammer is necessary. Pile driving will happen intermittently through two 5-month periods over the two years. The work will be conducted in the least risk windows for fish and fish habitat which is approximately

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>September through February. The piles are small, the largest ones are 16 inches and best management practices will help to minimize any effects like the use of bubble curtains pipe pile sleeves and the use of vibratory pile driving unless the drop hammer is necessary.</p> <p>Major components such as docks and boat sheds are built off site and then transported by water to the project site.</p> <p>A Construction Environmental Management Plan has been prepared to address construction-related activities. All construction work, including pile driving, will take place during normal daytime hours, 9:00 am to 5:00 pm, and will not be performed on weekends or statutory holidays.</p> <p>Refer to Appendix R for the Construction Environmental Management Plan.</p>
General question or comment – outside of PER scope		
Navigation channel effects	Support the redesign and reconfiguration but not the expansion into the channel.	RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process.
	Expansion of K float will impact rowers and other marine users.	More than 10 years of planning and technical studies have informed this application, and safety was a key consideration for the design of the new marina. This project will improve Coal Harbour boater safety by reconfiguring the marina to provide safer entry and exits points at RVYC and eliminating any need for boats to reverse out of the marina.
	Do not agree that the marina design will improve safety, expansion will make channel more congested.	RVYC has a campaign in progress to promote awareness of and safety for rowing sculls within RVYC membership and is

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>committed to improving and expanding this program. RVYC has also recommended a more general education and awareness program be developed by all users of Coal Harbour and the creation of a rowing traffic scheme. Safety considerations for this project include warning lights and mirrors to assist with identifying rowing shells in the channel.</p> <p>Application documents, including the technical studies, are available for review at the project web page and on the port authority website.</p>
Public waterway	Private use of a public waterway.	<p>Public access to the water in the port of Vancouver is administered by the port authority. Please see the Port Information Guide for more information.</p> <p>RVYC has a commercial lease in this commercial shared waterway that they pay for. That lease comes with obligations and rights between the port authority and the RVYC just like the 100's of port authority tenants in the harbour, including RVYC's neighbours in Coal Harbour.</p> <p>After lengthy and careful planning, RVYC applied to the port authority for a project to expand and renew the Coal Harbour Marina. The Vancouver Rowing Club expanded their marina in 2017 under the same process.</p>

4.3 Technical Studies and Plans – View and Shade Study

Level of satisfaction with View and Shade Study in the project feedback form:

- **53%** of respondents are **very satisfied or somewhat satisfied**
- **32%** of respondents are **very dissatisfied or somewhat dissatisfied**
- **12%** of respondents are **neither satisfied nor dissatisfied**
- **3% did not review** the documents

357 respondents provided reasons for their level of satisfaction with the View and Shade Study:

- 184 comments are related to the View and Shade Study
- 173 are outside of the PER scope

The following table provides a summary of questions and comments provided by respondents regarding marina design and responses from the project team:

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Boat Sheds		
Boat shed numbers	Too many boat sheds; do not want more boat sheds.	The number of boat sheds in the marina will stay the same with 37 older boat sheds replaced with new more environmentally friendly boat sheds.
	Boat sheds are important to keep historic boats protected.	Boat sheds provide environmental protection for vessels. This greatly reduces deterioration of the vessel and significantly reduces maintenance and upkeep activities such as washing and painting.
	Boat sheds should be removed from the project and not be allowed in Coal Harbour.	Relocating the larger vessels to the new K float will enhance the current view corridors from Stanley Park as it relocates the large boat sheds to the East facing HMS Discovery. The view from

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		Coal Harbour will be of boats rather than the existing large boat sheds.
Boat shed appearance	Boats sheds do not have a nice appearance.	<p>Replacement boat sheds have been designed to be consistent with the existing sheds in size, height and colour to minimize view and shade effects.</p> <p>The new boat sheds are also more environmentally friendly. They are made of a material that doesn't require painting so that reduces VOCs in the environment (less chemicals) and they also have plexiglass panels that reduce the amount of electricity required because more daylight comes in.</p> <p>Refer to Appendix J for Boat Shed Design.</p>
	New boat sheds will have a modern look and provide more light penetration; no increase in height is good.	
	Sheds in a variety of colours could increase the vibrancy of the area.	
	Shed design should reflect the surrounding environment (e.g. nature and architecture).	
View effects		
Views of Stanley Park	Obstructing views of Stanley Park is unacceptable.	<p>The number of boat sheds in the marina will stay the same and there are no sheds planned for the expansion portion of the project. Boat sheds will be consistent with existing sheds in size, height and colour. Potential view and shade effects associated with the project were assessed and no significant effects were identified. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.</p> <p>Relocating the larger vessels to the new slip will enhance the current view corridors from Stanley Park as it relocates the large boat sheds to the East facing HMS Discovery. The view from Coal Harbour will be of boats rather than the existing large boat sheds.</p> <p>Refer to Appendix K for the View and Shade Technical Memo and Appendix J for Boat Shed Design.</p>
Satisfied with study	Appears to be minimal impact from low height structures.	
Improved visuals	Will remove inconsistent slips and be more visually appealing.	
View effects	How will 13.3%/47 slips and 37 sheds have minimal effect. Is it minimal for the size of the growth or minimal to what we currently see?	
	New large boats will block the view of Stanley Park; more boats in view.	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Shade effects		
Increased shade on seabed	Shade will be further into the waterway affecting marine ecosystem negatively.	<p>Potential view and shade effects associated with the project were assessed and no significant effects were identified. Replacement boat sheds will have plexiglass panels in the roof that allow light to penetrate to the seabed and reduce the amount of electricity required because more daylight comes in.</p> <p>Shading effects on the seabed will also be reviewed by Fisheries and Oceans Canada (DFO). Application documents, including the technical studies, are available for review at the project web page and on the port authority website.</p>
	More shade may benefit marine life that do well in partially shaded waters.	
Satisfied with study	Appears to be minimal impact from low height structures.	<p>Boat sheds will be consistent with existing sheds in size, height and colour.</p> <p>Refer to Appendix K for the View and Shade Technical Memo and Appendix J for Boat Shed Design.</p>
PER process/ port authority consultation		
Indigenous group consultation	Have indigenous groups been consulted?	The port authority is consulting with Indigenous groups on the proposed project application. A summary of these comments would be made available in the port authority's PER Report, should the proposed application be approved.
General question or comment – outside of PER scope		
Navigation channel effects	Reduces sight lines for users of the channel; marine traffic congestion and narrowing of channel.	The proposed expansion provides improved safety by eliminating boats reversing out of the marina into the shared channel. This improves sight lines by removing a blind spot and by providing a full 180-degree view of the channel/waterway for the boats moored along the side of K-Float so they can be sure that they would not leave their slip unless safe to do so.
Coal Harbour Appearance	The RVYC and boats in Coal Harbour are an important view in Vancouver; boats in marina are attractive.	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	<p>Many boats never leave the marina; boat “parking lot”; too many boats in marina already.</p>	<p>RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process.</p> <p>All vessels in the marina are used by active boaters. The RVYC requires that all vessels must be used a minimum of four times per year and must pass regular safety checks. This policy is strongly enforced.</p>
Public waterway	Private use of a public waterway.	<p>Public access to the water in the port of Vancouver is administrated by the port authority. Please see the Port Information Guide for more information.</p> <p>RVYC has a commercial lease in this commercial shared waterway that they pay for. That lease comes with obligations and rights between the port authority and the RVYC just like the 100’s of port authority tenants in the harbour, including RVYC’s neighbours in Coal Harbour.</p> <p>After lengthy and careful planning, RVYC applied to the port authority for a project to expand and renew the Coal Harbour Marina. The Vancouver Rowing Club expanded their marina in 2017 under the same process.</p>

4.4 Technical Studies and Plans – Lighting Plan

Level of satisfaction with the Lighting Plan in the project feedback form:

- **56%** of respondents are **very satisfied or somewhat satisfied**
- **24%** of respondents are **very dissatisfied or somewhat dissatisfied**
- **15%** of respondents are **neither satisfied nor dissatisfied**
- **5% did not review** the documents

268 respondents provided reasons for their level of satisfaction with the Lighting Plan:

- 147 comments are related to the Lighting Plan
- 121 are outside of the PER scope

The following table provides a summary of questions and comments provided by respondents regarding the lighting plan and responses from the project team:

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Energy conservation and environmental protection		
Energy efficiency/ conservation	Environmental benefits are positive; conserve energy and preserve the environment.	Improvements to the marina will help to conserve electrical energy and reduce unnecessary use of electrical power. Energy efficient LED lights are specified in the Lighting Plan and lighting is shut off during the daytime to limit the amount of electricity used. The proposed marina will also have new conduits and utilities put into place to increase efficiency and the marina electrical transformer was upgraded in 2017 to the latest technology. The RVYC monitors the power being used by each boat in the marina and if unusually high electrical usage is evident the member will receive education about reducing their electrical consumption.
	Conserves energy for whom? RVYC?	
	More boats mean more energy consumption no matter how energy efficient you are.	
	If you decrease the number of slips more energy will be conserved.	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		As part of the application review process technical studies were completed. Considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.
LED lighting	<p>Use of LED lights is positive for energy conservation; would be great if it was all LED.</p> <p>No objection if the new lights are dimmer and they are not bright white LED.</p>	<p>Energy efficient LED lights are specified in the Lighting Plan and lighting is shut off during the daytime to limit the amount of electricity used. Lighting is predominately pathway lighting on the floats for pedestrian safety while walking on docks. The lights will be warm coloured LED lights and will be mounted facing downward to illuminate the docks and to reduce unwanted light spill and other potential effects on adjacent properties and communities.</p> <p>Refer to Appendix P for the Lighting Plan.</p>
Lighting design/ light spill		
Benefits of reduced light spill	Reduced light spill will be a benefit; reduction in light pollution is good; reduction of light spill is good for birds.	<p>New lighting is predominantly pathway lighting to illuminate the docks and reduce unwanted light spill .The 28 new lamp standards are pathway lighting on the floats for pedestrian safety while walking on docks and are approximately three feet (one meter) in height. The lights will be warm coloured LED lights and will be mounted facing downward.pointing at the dock surface. The effects on adjacent properties, and the environment is expected to be less than it is today.</p> <p>Refer to Appendix P for the Lighting Plan.</p>
Light spill effects	<p>Concerned that you cannot completely remove all light spill; cannot see how design considerations have been made to reduce the extra light pollution; plan is to add 28 lamp standards how can this not affect users of Coal Harbour waterway.</p> <p>Will light spill across the harbour?</p>	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Increased light levels		
More boats	Does more boats mean more light from the marina as a whole?	Boats in the marina will likely not have lighting on when in dock. Lighting is predominately pathway lighting on the floats for pedestrian safety while walking on docks. The lights will be warm coloured LED lights and will be mounted facing downward to illuminate the docks and to reduce unwanted light spill and other potential effects on adjacent properties and the environment is expected to be less than it is today. Refer to Appendix P for the Lighting Plan.
Effect on wildlife	Concern that increased light will affect marine life (fish and seals), biofilm, diving ducks, local park raptors, racoons and bats.	Lighting is predominately pathway lighting on the floats for pedestrian safety while walking on docks. The lights will be warm coloured LED lights and will be mounted facing downward to illuminate the docks and reduce unwanted light spill and other potential effects on adjacent properties and the environment is expected to be less than it is today. The Lighting Plan includes only commercial grade lighting, no industrial lighting and the plan also accounts for low lighting to aid nighttime navigation. Refer to Appendix P for the Lighting Plan.
Light pollution	There is too much light pollution now in Coal Harbour adding more lights will just add to the problem; dark sky principles should be used; industrial scale lights are not appropriate.	
Safety		
Balances safety and spill	Plan seems to balance safety and light spill; could more be done to use lighting as a theft and vandalism deterrent?	CCT cameras are mounted in the marina and there is a 24-hour security guard to deter theft and vandalism. Some areas of the marina do have some increased lighting for safety but new lighting as part of the project is predominately pathway lighting on the floats for pedestrian safety while walking on docks. Refer to Appendix P for the Lighting Plan.

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Effects on night navigation	Increased light will make night navigation more challenging to identify navigation lights of other vessels and channel markers.	<p>RVYC has consulted with the Canadian Coast Guard (CCG) Marine Communication and Traffic Services (MCTS) to determine required navigational lighting. The proposed marina lighting does not effect navigational lighting.</p> <p>Lights that will be installed as part of the project will be predominantly pathway lighting and will be warm coloured LED lights and will be mounted facing downward to illuminate the docks and to reduce unwanted light spill and other potential effects on adjacent properties and communities. The lighting plan also accounts for low lighting to aid nighttime navigation.</p>
General question or comment – outside of PER scope		
Commitment to environment	Marina working towards preserving the environment sets a good example.	As part of the application review process technical studies were completed. Considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.
Vancouver Rowing Club lighting	This plan seems more state of the art than the rowing club facilities.	
Navigation channel effects	Lighting benefits do not outweigh the negative impacts of expansion into the channel; increases risks of collisions; restricting use of the waterway for other uses.	RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process.
Public waterway	Private use of a public waterway.	<p>Public access to the water in the port of Vancouver is administrated by the port authority. Please see the Port Information Guide for more information.</p> <p>RVYC has a commercial lease in this commercial shared waterway that they pay for. That lease comes with obligations and rights between the port authority and the RVYC just like the</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>100's of port authority tenants in the harbour, including RVYC's neighbours in Coal Harbour.</p> <p>After lengthy and careful planning, RVYC applied to the port authority for a project to expand and renew the Coal Harbour Marina. The Vancouver Rowing Club expanded their marina in 2017 under the same process.</p>

4.5 Technical Studies and Plans – Biophysical Survey of Sub-tidal Habitat

Level of satisfaction with the Biophysical Survey of Sub-tidal Habitat and Assessment in the project feedback form:

- **55%** of respondents are **very satisfied or somewhat satisfied**
- **31%** of respondents are **very dissatisfied or somewhat dissatisfied**
- **10%** of respondents are **neither satisfied nor dissatisfied**
- **4% did not review** the documents

331 respondents provided reasons for their level of satisfaction with the Biophysical Survey of Sub-tidal Habitat and Assessment:

- 235 comments are related to the Biophysical Survey of Sub-tidal Habitat and Assessment
- 96 are outside of the PER scope

The following table provides a summary of questions and comments provided by respondents regarding the biophysical survey of sub-tidal habitat and responses from the project team:

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Protection of marine life and habitat		
Support for project	There has been a century of activity in this area with little respect for the environment, but this project is being carried out in and environmentally responsible fashion.	This project enhances environmental protection by replacing aging infrastructure, removing creosote coated piles and styrofoam floats and replacing them with steel and concrete. The removal of 85 old creosote-treated piles will help to minimize effects on biodiversity in the area. Refer to Appendix Q for the Biophysical Survey of Subtidal Habitat.
Increased habitat	Critters like the diversity to the ecology due to dock and pilings so addition marinas are a positive thing.	
Removal of creosote piles	Replacement of the creosote piles will benefit environment; satisfied with plan.	
Boat electrolysis	There already is high electrolysis in many parts of the water in Coal Harbour and more	All vessels and docks in the Coal Harbour Marina are properly maintained by qualified professionals to ensure electrolysis

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	boats with copper rudders and propellers will not help sea life.	problems do not occur. Testing for these effects is performed on a regular basis and it is part of the RVYC's yearly safety boat check program. The RVYC safety checks also include fuel storage, electrical safety, moorage lines, bilges and pollution prevention, safety devices and equipment, navigation devices,
Harbour seal use of area	Blocking the passage by the sea wall could prevent many mother seals from entering Coal Harbour. During the spring and summer months this area is used as a nursery by seals and their young to be safe and learn the ropes of life.	The RVYC marina project keeps passages and access for marine mammals open at all times throughout the site. Seals regularly use the RVYC marina as a nursery and they will be welcome to continue to do so. When seals are in the marina with their young RVYC is in contact with the Vancouver Aquarium to ensure the health and safety of these animals. Refer to Appendix E for Marina Design.
Construction effects		
Dredging	Assume there will be dredging, I hope that it will be properly disposed of.	Dredging is not included in the RVYC PER application.
Pile driving	Pile driving will disturb layers of past industrial sediments and release these contaminants into Coal Harbour; may contain heavy metals and other toxic substances.	Best Management Practices for Pile Driving and Related Operations will be implemented during pile removal/ driving works to maximize environmental protection. When piles are removed, they will be placed directly on a barge, no mud will be hosed off, and transported to a safe disposal site. DFO is reviewing the project to ensue effects are minimized.
Disturbance of seabed	Regardless of timing this project will disturb the seabed, marine life and wildlife.	The project area was surveyed for the presence of significant biological resources including sensitive and rare species for habitats. No provincially or federally listed endangered species were observed in the survey area or are expected to occur in the project area and no sensitive habitat was present within the project site. The project was assessed for the potential to affect aquatic species. No adverse residual effects are expected to

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		result from the project activities and any potential environmental impacts that may result from project activities can be avoided or minimized through implementation of environmental standards, guidelines, Best Management Practices and site-specific mitigation measures.
In-water work	Limitation of in-water work is a good precaution.	All in-water work will be conducted in the least risk windows for fish and fish habitat: mid-August to late February. RVYC's selected contractor will have on-site/ on board environmental monitor trained to observe and understand any effects from activities conducted during least risk windows.
Assessment		
Project effects on marine life and wildlife	Concern about project effects on marine life (crab, fish, herring spawn, seals, otters) birds (raptors, herons and sea birds), racoons and bats. There is considerable sensitivity along the shoreline adjacent to the work area.	As part of the application review process technical studies were completed. Considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Application documents, including the technical studies, are available for review at the project web page and on the port authority website. The project area was surveyed for the presence of significant biological resources including sensitive and rare species for habitats. No provincially or federally listed endangered species were observed in the survey area or are expected to occur in the project area and no sensitive habitat was present within the project site. The project was assessed for the potential to affect aquatic species. No adverse residual effects are expected to result from the project activities and any potential environmental impacts that may result from project activities can be avoided or minimized through implementation of environmental standards,
	Even if there are no rare or sensitive species in the area there will still be wildlife and organisms affected.	
	Orcas were observed close to RVYC facilities in September 2019 how will you avoid disturbances to marine wildlife? How long did consultant carry out observations?	
	Bats, raptors use the interface with the local mature forest to shorelines and open areas of water to activity feed. The shorelines and open water areas presently are used by a variety of frequently observed ducks (diving,	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	<p>dabbling), seabirds, minks, raccoons, otters, harbour seals, herons and other species. These are frequent and ongoing seasonal observations of species habitat use in the area. The observations of this variety and extent of wildlife and birds in entirely indicative of good foraging habitats and an abundance of marine life (marine vegetation, invertebrates, fish). The Fisheries and Oceans Canada least risk window for Burrard Inlet is constantly being updated and is associated with surf smelt spawning, salmon smolt migrations, herring spawning. Changes in marine vegetation (kelps, eelgrass) have recently enhanced the habitat values in this shelter portion of the Coal harbour. The biophysical survey results were minimal at best. The surveys and work completed for the Centerm project (online), the conference centre, and other projects, their surveys were completed over multiple seasons and supported habitat restoration initiatives to balance impacts to local habitats.</p>	<p>guidelines, Best Management Practices and site-specific mitigation measures.</p> <p>This project enhances environmental protection by replacing aging infrastructure, removing creosote coated piles and styrofoam floats and replacing them with steel and concrete. The removal of 85 old creosote-treated piles will help to minimize effects on biodiversity in the area. All construction activities will occur during the least risk windows for fish and fish habitat as per DFO guidelines.</p> <p>The new boat sheds are also more environmentally friendly. They are made of a material that doesn't require painting so that reduces VOCs in the environment (less chemicals) and they also have plexiglass panels that reduce the amount of electricity required because more daylight comes in.</p> <p>RVYC provides access and support to research and rehabilitation organizations including, the Vancouver Aquarium and UBC science students to further study the marine ecosystem around Coal Harbour. RVYC has participated in a herring net spawning research program with the Squamish Streamkeepers since 2014. The program uses special fabric on a 100-foot net hung on a dock area to improve herring spawning and better understand prime locations for spawning.</p> <p>Refer to Appendix Q for the Biophysical Survey of Subtidal Habitat. This survey was completed according to requirements outlined in the port authority guidelines. The application and associated studies and place were accepted by the port authority and deemed as complete.</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Increased emissions from boats and cars	This assessment doesn't take into account the impacts of increased boat traffic and exhaust pollution; also, doesn't take into account increase car traffic to Marina in Stanley Park.	<p>Marine traffic studies determined that the additional moorage will result in an average increase of 2.5 transits per day during the summer high season, with a smaller average increase during the low season.</p> <p>Vehicle parking requirements can be accommodated within the existing parking lot. There is regular communication between marina and Stanley Park staff on parking and other operational matters.</p> <p>A motor vehicle traffic assessment was not identified as a requirement by the port authority as part of the PER process. The RVYC is in regular contact with the Vancouver Park Board about parking in Stanley Park and requirements which RVYC must adhere to.</p> <p>RVYC encourages its members to minimize vehicle access to Stanley Park. Members are encouraged to use transit, taxis, cycling and car-pooling to reduce traffic. Refer to Executive Summary noting parking and RVYC mitigative measures to reduce parking in Stanley Park.</p>
Waste disposal	Plan doesn't mitigate the illegal disposal of human waste and garbage in Coal Harbour.	RVYC is committed to minimizing effects on the environment and we believe all marine users in the basin are committed to the same. RVYC vessels do not discharge oil and sewage into the harbour. Sewage must be contained in a holding tank.
Accidental spills	Doesn't seem to take in to account increased risk of accidental fuel spills or sewerage leak.	<p>There are strict rules at RVYC about discharging any deleterious material into the water. Vessel safety checks are conducted regularly, and vessels must pass inspections in order to remain in RVYC marinas. All vessels with toilets are required to have properly functioning marine holding tanks and these are checked as part of RVYC's regular inspection program. The marina has a</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>holding tank pump out facility for properly emptying holding tanks.</p> <p>Vessel safety checks including checking the inside of the boats to make sure their bilges are clean, and that people are following good housekeeping practices.</p> <p>RVYC rules prohibit releasing any harmful materials into any waterway and members face consequences for non-compliance. The Coal Harbour marina has secondary containment storage areas for all hazardous materials such as fuel, bilge water, and paint.</p> <p>RVYC recently purchased a Seabin machine, which sits in the water and collects surficial debris in and around the area very gently including microplastics and oil sheen floating around in the basin and it is emptied several times a day. RVYC also does a shoreline clean up around the Coal Harbour basin every year.</p> <p>RVYC has an Emergency Response Plan to deal with issues like spill response. All staff are trained in spill response protocols and help to educate members at every opportunity. RVYC has spill kits strategically located around the marina and they are regularly maintained.</p> <p>Refer to Appendix L for the Emergency Response Plan.</p> <p>RVYC Coal Harbour Marina has a ranking of 4 out of 5 anchors from the Clean Marine BC program, the only marina with this ranking in the Coal Harbour Basin and is committed to pursuing a 5 out of 5 anchors ranking. The marina has existed for over 100 years and there has a track record of protecting the environment.</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		The RVYC is constantly improving and looking for initiatives to improve aquatic habitat.
Application	Seems that professionals in these areas have been consulted and made good recommendations.	More than 10 years of planning and technical studies have informed this application. This includes considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Application documents, including the technical studies, are available on our project web page and on the port authority website. Based on the study results effects on the community and the local environment are anticipated to be minimal.
PER process/ port authority consultation		
Indigenous group consultation	What did the indigenous peoples that have history on that land and sea say about the biology?	The port authority is consulting with Indigenous groups on the proposed project application. A summary of these comments would be made available in the port authority's PER Report, should the proposed application be approved.
Port authority review	I trust that the port would not allow anything to be done if it wasn't safe for humans and animals.	The port authority PER process evaluates physical works and activities proposed to take place within port authority jurisdiction, to ensure works will not likely cause significant adverse environmental effects and takes into consideration the interests of local communities.
Pollution		
Contaminants in environment	More paint, fuels and diesel and human waste will impact the environment; the water is already poor quality with surface oil and garbage.	RVYC is committed to minimizing effects on the environment and we believe all marine users in the basin are committed to the same. RVYC vessels do not discharge oil and sewage into the water. All sewage must be contained in a holding tank. There are strict rules in the club about discharging any deleterious material into the water. Vessel safety checks are conducted regularly, and
	RVYC allows painting and sanding of boat hulls without dust cloths and dust	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	<p>containment; concerns about environmental responsibility.</p>	<p>vessels must pass inspections in order to remain in RVYC marinas.</p> <p>RVYC is part of the Clean Marine program which specifies behaviour in regard to contamination entering the waterways. Major works are not to be completed in the marina. Sanding and painting require containment protocols to be in place to avoid any materials entering the waterway. Sanding requires boats to have curtains to contain all fugitive dust then the dust is collected and disposed of according to requirements. RVYC is the only marina in Coal Harbour in the Clean Marine program and has a ranking of 4 out of 5 anchors, and is committed to pursuing a 5 out of 5 anchors ranking. The marina has existed for over 100 years and there has a track record of protecting the environment. The RVYC is constantly improving and looking for initiatives to improve aquatic habitat.</p> <p>Refer to Appendix L for the Emergency Response Plan for more information about spill response.</p>
General question or comment – outside of PER scope		
Commitment to the environment	<p>Long term resident of the West End has seen an improvement in the waters of Coal Harbour because of organizations like RVYC.</p> <p>Have followed the yacht club on Facebook for a few years and they seem genuine in their attention to the environment. It makes sense though since that is where they spend their play time.</p>	<p>RVYC is very committed to environmental protection, they have a very high standing in the Clean Marine BC program all marinas have a 4/5 or higher (two have a 5/5). RVYC participates in an annual shore clean up and they recently installed a “Seabin automated collector” at Coal Harbour. They take environmental protection very seriously and are always looking for new ways to improve. This is the only marina in Coal Harbour to have Clean Marine certification.</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	Facilities like RVYC are going beyond what is required to care for the seabed; they are a leader in clean marinas.	
Effects on rowers	Proposed expansion impacts rowers.	RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process.
Public waterway/ channel effects	Do not support expansion into the channel; public use of a public waterway.	<p>RVYC has a commercial lease in this commercial shared waterway that they pay for. That lease comes with obligations and rights between the port authority and the RVYC just like the 100's of port authority tenants in the harbour, including RVYC's neighbours in Coal Harbour.</p> <p>Public access to the water in the port of Vancouver is administrated by the port authority. Please see the Port Information Guide for more information.</p> <p>After lengthy and careful planning, RVYC applied to the port authority for a project to expand and renew the Coal Harbour Marina. The Vancouver Rowing Club expanded their marina in 2017 under the same process.</p>
Relocation	Relocation, phasing out this site completely to another site would allow the natural habitat to recover. The RVYC owes its unique location due to the time it came into existence. Times have changed. Our understanding of the connections of the natural environment have also changed. Facilities like this for servicing the needs of powered watercraft are no longer appropriate. Relocate to a less confined and	<p>RVYC considered expanding their Jericho facility as an alternate location, but it has deeper water, which makes construction more difficult, and is closer to deep sea anchorages that limits expansion possibilities. RVYC members voted by a margin of 81% to approve this project.</p> <p>More than 10 years of planning and technical studies have informed this application. This includes considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Application documents, including the technical studies, are available on our project web</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	<p>environmentally sensitive fore-shore area when there are alternatives available.</p>	<p>page and on the port authority website. Based on the study results effects on the community and the local environment are anticipated to be minimal. The project area was surveyed for the presence of significant biological resources including sensitive and rare species for habitats. No provincially or federally listed endangered species or species at risk were observed in the survey area or are expected to occur in the project area and no sensitive habitat was present within the project site.</p> <p>RVYC Coal Harbour Marina has a ranking of 4 out of 5 anchors from the Clean Marine BC program, the only marina with this ranking in the Coal Harbour Basin and is committed to pursuing a 5 out of 5 anchors ranking. The marina has existed for over 100 years and there has a track record of protecting the environment. The RVYC is constantly improving and looking for initiatives to improve operations.</p>

4.6 Technical Studies and Plans – Noise Assessment

Level of satisfaction with the Noise Assessment in the project feedback form:

- **54%** of respondents are **very satisfied or somewhat satisfied**
- **32%** of respondents are **very dissatisfied or somewhat dissatisfied**
- **11%** of respondents are **neither satisfied nor dissatisfied**
- **3% did not review** the documents

297 respondents provided reasons for their level of satisfaction with the Noise Assessment:

- 212 comments are related to the Noise Assessment
- 85 are outside of the PER scope

The following table provides a summary of questions and comments provided by respondents regarding the noise assessment and responses from the project team:

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Projected noise levels		
Minimal effects	Project should not affect condos nearby significantly; RVCY is showing concerns for neighbours	As part of the application review process technical studies were completed. Considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. Noise levels for day to day operations at the project site, after completion, are expected to be consistent with current levels. Application documents, including the technical studies, are available for review at the project web page and on the port authority website. Refer to Appendix S for the Noise Impact Assessment.
	This marina is every quiet contributes a very small level to the overall noise levels in the area. Traffic noise in the West End and sea planes are much louder.	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Modelling	Additional slips mean more traffic and noise. How can you ensure that noise will be within current levels?	The noise assessment was conducted according to Vancouver Fraser Port Authority requirements. Results of assessment confirmed a weighted score of 25.2 so a detailed assessment was not required. A total weighted score of over 30 for activities and processes expected to generate noise would require a detailed noise assessment. Noise levels for day to day operations at the project site, after completion, are expected to be consistent with current levels. Application documents, including the technical studies, are available for review at the project web page and on the port authority website. Refer to Appendix S for the Noise Impact Assessment.
Coal Harbour noise/ current levels	There is already enough noise in Coal Harbour.	
Noise assessment	Why was noise only studied as a single component of the construction work? Why wasn't the ongoing and perpetual noise increase for the life of the project due to the increase in moorage studied?	
Construction		
Temporary effects from construction	Recreational boating use contributes minimal noise levels and construction noise is to be expected and will be temporary; environmental benefits of the project are worth the temporary disruption; removing creosote piles will be worth it.	A Construction Environmental Management Plan has been prepared to address effects of construction-related activities and is available for review on the project website and the port authority website. Best practices will be used to minimize potential effects on the local community including noise, light and traffic during construction. Work, including pile driving, will be conducted during normal daytime hours and will not be performed on weekends or statutory holidays. Refer to Appendix R for the Construction Environmental Management Plan.
Construction timing	Work schedule is during least busy time for visitor and during the daytime; proposed approach mitigates noise levels. Would like to know when work will take place so I can protect my workers.	A Construction Environmental Management Plan has been prepared to address construction-related activities. All construction work, including pile driving, will take place during normal daytime hours, 9:00 am to 5:00 pm, and will not be performed on weekends or statutory holidays.

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>Information about construction activities will be available on the project web page and interested parties can sign up to joining the project update email list. The RVYC will also follow construction notification requirements which will be outlined in a construction communications plan approved by the port authority prior to construction starting.</p>
Effects on community	<p>How long will this project take? Noise level will obviously affect neighbouring yacht clubs.</p> <p>Concern about noise effects of construction on nearby hotels and residents.</p> <p>Live locally and don't want any additional noise from the project.</p> <p>With other construction noise in the area assume this will hardly register.</p> <p>Appears that every effort will made to reduce noise during construction; hours of construction will be better for community.</p>	<p>The proposed project construction will take approximately two years to complete. Construction activities include removal and installation of piles, dismantling of old infrastructure and installation of new floats and sheds. A Construction Environmental Management Plan has been prepared to address effects of construction-related activities. Best practices will be used to minimize potential effects on the local community including noise, light and traffic during construction. Work, including pile driving, will be conducted during normal daytime hours and will not be performed on weekends or statutory holidays. Pile driving will happen intermittently through two 5-month periods over the two years.</p> <p>Best management practices for pile driving will be followed to minimize potential noise and other effects. Measures will include the use of bubble curtains, pipe pile sleeve and the use of vibratory hammer until use of an impact hammer is necessary. Pile driving will happen intermittently through two 5-month periods over the two years. The work will be conducted in the least risk windows for fish and fish habitat which is approximately September through February. The piles are small, the largest ones are 16 inches and best management practices will help to minimize any effects like the use of bubble curtains pipe pile</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>sleeves and the use of vibratory pile driving unless the drop hammer is necessary.</p> <p>Refer to Appendix R for the Construction Environmental Management Plan.</p>
Effects on environment	<p>Construction noise will have a negative impact on the wildlife, birds, mammals and marine life, especially hammering and pile driving.</p> <p>Fish and harbour seals will be impacted during construction and by large motor vessel props and engines.</p>	<p>A Construction Environmental Management Plan has been prepared to address effects of construction-related activities and is available for review on the project website and the port authority website. Best practices will be used to minimize potential effects on the local community and the environment including noise, light and traffic during construction. Work will be conducted in the least risk windows for fish and fish habitat which is approximately mid-August to late February.</p> <p>Best management practices for pile driving will be followed to minimize potential noise and other effects. Measures will include the use of bubble curtains, pipe pile sleeve and the use of vibratory hammer until use of an impact hammer is necessary. Pile driving will happen intermittently through two 5-month periods over the two years. The piles are small, the largest ones are 16 inches and best management practices will help to minimize any effects like the use of bubble curtains pipe pile sleeves and the use of vibratory pile driving unless the drop hammer is necessary. All in-water work will be conducted in the least risk windows for fish and fish habitat: mid-August to late February. RYVC's selected contractor will have on-site/ on board environmental monitor trained to observe and understand any effects from activities conducted during least risk windows.</p> <p>Refer to Appendix R for the Construction Environmental Management Plan.</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Pile Driving	<p>The summary provided in this questionnaire implies that underwater noise mitigation measures such as bubble curtains and pile sleeves would be used to protect fish and marine mammals. This is misleading since the construction environment management plan says it is assumed underwater noise levels will be ok without mitigation, and mitigation and monitoring would only be used if dead/injured fish are observed.</p>	<p>The Construction Environmental Management Plan states:</p> <p>“All applicable BMPs suggested in the Best Management Practices for Pile Driving and Related Operations (BC Marine and Pile Driving Contractors Association, 2003; Appendix F) should be implemented during pile removal/ driving works to maximize environmental protection and avoid contravention to the Fisheries Act.”</p> <p>This includes best management practices for pile driving to minimize potential noise and other effects. Measures will include the use of bubble curtains, pipe pile sleeve and the use of vibratory hammer until use of an impact hammer is necessary.</p> <p>All construction work, including pile driving, will take place during normal daytime hours, 9:00 am to 5:00 pm, and will not be performed on weekends or statutory holidays.</p> <p>Refer to Appendix R for the Construction Environmental Management Plan.</p>
Pile driving		
Construction schedule	<p>As a nearby resident my primary concern is that vibratory and impact hammers won't be used early in the morning.</p>	<p>A Construction Environmental Management Plan has been prepared to address effects of construction-related activities. Best practices will be used to minimize potential effects on the local community including noise, light and traffic during construction. Best management practices for pile driving will be followed to minimize potential noise and other effects. Measures will include the use of bubble curtains, pipe pile sleeve and the use of vibratory hammer until use of an impact hammer is necessary.</p>
Type of equipment used	<p>New vibrating drivers are much quieter than pounding drivers; seaplane base didn't have many complaints so this number of pilings shouldn't have many effects.</p> <p>We tend to use way more energy trying to good. Probably best to drive the piles the simplest way and save energy.</p>	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Effects on community	Pile driving will be disruptive to neighbours.	Work, including pile driving, will be conducted during normal daytime hours, 9:00 am to 5:00 pm, and will not be performed on weekends or statutory holidays. Pile driving will happen intermittently through two 5-month periods, mid-August to late February, over the two years. Refer to Appendix R for the Construction Environmental Management Plan.
	Last pile driving incident was very intrusive, this is last thing we need.	
General question or comment – outside of PER scope		
Other projects in area	Coal Harbour residents have experienced construction of tower after tower in their neighbourhood. Is the addition of facilities for the few in the best interest of everyone in the community?	A Construction Environmental Management Plan has been prepared to address effects of construction-related activities. Best practices will be used to minimize potential effects on the local community including noise, light and traffic during construction. Work, including pile driving, will be conducted during normal daytime hours, 9:00 am to 5:00 pm, and will not be performed on weekends or statutory holidays. Pile driving will happen intermittently through two 5-month periods, mid-August to late February, over the two years. Refer to Appendix R for the Construction Environmental Management Plan.
	Work at Harbour Ferries and expansion of the Bayshore Marina was very disruptive.	
	This is a small project in the grand scheme of things.	
Effects to rowers	Rowing lanes should be left alone.	RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process. Construction will have minimal impacts on the channel. Construction will take place for the most part within the RVYC water lot.
	As a rower, I have nearly been hit by boaters listening to loud music and they cannot hear my whistle.	
	Rowers can deal with the noise but not a blocked waterway.	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		RVYC has recommended a general education and awareness program be developed by all users of Coal Harbour and the creation of a rowing traffic scheme in partnership with Coal Harbour marinas.

4.7 Technical Studies and Plans – Construction Staging

Level of satisfaction with the Detailed Construction Staging Memo in the project feedback form:

- **52%** of respondents are **very satisfied or somewhat satisfied**
- **37%** of respondents are **very dissatisfied or somewhat dissatisfied**
- **8%** of respondents are **neither satisfied nor dissatisfied**
- **3% did not review** the documents

332 respondents provided reasons for their level of satisfaction with the Detailed Construction Staging Memo:

- 122 comments are related to the Detailed Construction Staging Memo
- 210 are outside of the PER scope

The following table provides a summary of questions and comments provided by respondents regarding the construction staging memo: and responses from the project team:

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Construction Staging		
Construction phases	Seems well thought out, K float going in first seems like good planning to contain subsequent activity; addresses concerns about navigation impact during construction. Professionally managed project by people who will use this site themselves.	A Construction Environmental Management Plan has been prepared to address construction-related activities which includes 8-stage construction phasing to minimize disruption. Refer to Appendix R for the Construction Environmental Management Plan.
Offsite work	Efforts to do portions of work offsite to minimize disruptions is appreciated.	Major components such as docks and boat houses are built off site and then transported by water to the project site.
Construction scheduling	What are “normal daylight hours” does this mean after 9:00 am?	Best management practices for pile driving will be followed to minimize potential noise and other effects. Measures will include

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	<p>During daytime hours means that people cannot hear ourselves think or work from home; pile driving noise every day is very disruptive.</p>	<p>the use of bubble curtains, pipe pile sleeve and the use of vibratory hammer until use of an impact hammer is necessary. Pile driving will happen intermittently through two 5-month periods over the two years. The work will be conducted in the least risk windows for fish and fish habitat which is approximately mid-August to late February. The piles are small, the largest ones are 16 inches and best management practices will help to minimize any effects like the use of bubble curtains pipe pile sleeves and the use of vibratory pile driving unless the drop hammer is necessary.</p> <p>A Construction Environmental Management Plan has been prepared to address construction-related activities. All construction work, including pile driving, will take place during normal daytime hours, 9:00 am to 5:00 pm, and will not be performed on weekends or statutory holidays.</p> <p>Refer to Appendix R for the Construction Environmental Management Plan.</p>
	<p>Please clarify the term “reconfiguration”.</p>	<p>Reconfiguration refers to moving existing infrastructure within the water lot resulting in a new marina layout. In the proposed layout, K-float, on the south side of the marina, is set back from the navigation channel, to allow for a row of larger boats. K float does not include any boat sheds. There will only be open slips in this area.</p> <p>The design approach maximizes the available space by placing larger boats around the perimeter to:</p> <ul style="list-style-type: none"> • Provide shelter to the interior of the marina • Keeps the largest boats in the most accessible area of the marina

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<ul style="list-style-type: none"> Group boats of similar size on the sides of the “fairways” or the channels between the rows of boats
Noise effects		
Pile driving	The CEMP doesn’t list commitment to implement any measures to reduce noise from pile driving either in air or water.	<p>The Construction Environmental Management Plan states:</p> <p>“All applicable BMPs suggested in the Best Management Practices for Pile Driving and Related Operations (BC Marine and Pile Driving Contractors Association, 2003; Appendix F) should be implemented during pile removal/ driving works to maximize environmental protection and avoid contravention to the Fisheries Act.”</p> <p>This includes best management practices for pile driving to to minimize potential noise and other effects. Measures will include the use of bubble curtains, pipe pile sleeve and the use of vibratory hammer until use of an impact hammer is necessary.</p> <p>All construction work, including pile driving, will take place during normal daytime hours, 9:00 am to 5:00 pm, and will not be performed on weekends or statutory holidays.</p> <p>Refer to Appendix R for the Construction Environmental Management Plan.</p>
Environmental benefits		
Creosote pilings	<p>Creosote pilings will be removed and replaced with steel and habitat will benefit.</p> <p>Pile driving is important part of upgrading all facilities. For example when will the Coast Guard remediate the HMCS Discovery dock and all its creosote covered pilings to be</p>	As part of the application review process technical studies were completed. Considerable focus on environmental management, minimizing light and view effects, and habitat and fisheries assessments. The project will enhance environmental protection by replacing aging infrastructure, including removing creosote-coated piles and replacing older boat sheds.

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
	<p>compliant with current standards. All improvements that benefit the environment are helpful and necessary. Also, the expansion is good for Vancouver jobs and the BC economy.</p>	
Construction effects on marine users		
	<p>Construction will require pile driving vessels and equipment to protrude into the waterway.</p>	<p>All internal marina reconfiguration will be conducted within the RVYC water lot and will have few effects on external channel traffic or commercial operations. Construction on K Float will take place in proximity to but not within the navigation channel so may have some minor and temporary effects on marine users. Construction on K float will take approximately 30 days.</p> <p>Equipment will abut the navigation channel during “K” Float installation, and then for the remainder of construction all works will be inside the marina water lot, with very little impact on the channel.</p>
Construction effects on community		
Pile driving	<p>Pile driving will be disruptive for the community for two years.</p> <p>Considerations for community taken into account including operating hours; as long as pile driving is during the daytime is should be fine.</p>	<p>Best management practices for pile driving will be followed to minimize potential noise and other effects. Measures will include the use of bubble curtains, pipe pile sleeve and the use of vibratory hammer until use of an impact hammer is necessary. Pile driving will happen intermittently through two 5-month periods over the two years. The work will be conducted in the least risk windows for fish and fish habitat which is approximately September through February. The piles are small, the largest ones are 16 inches and best management practices will help to minimize any effects like the use of bubble curtains pipe pile</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>sleeves and the use of vibratory pile driving unless the drop hammer is necessary.</p> <p>A Construction Environmental Management Plan has been prepared to address construction-related activities. All construction work, including pile driving, will take place during normal daytime hours, 9:00 am to 5:00 pm, and will not be performed on weekends or statutory holidays.</p> <p>Refer to Appendix R for the Construction Environmental Management Plan.</p>
View effects	Interruption of views of Stanley Park may impact customer base of nearby businesses.	<p>The number of boat sheds in the marina will stay the same and there are no sheds planned for the expansion portion of the project. Boat sheds will be consistent with existing sheds in size, height and colour. Potential view and shade effects associated with the project were assessed and no significant effects were identified. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.</p> <p>Relocating the larger vessels to the new slip will enhance the current view corridors from Stanley Park as it relocates the large boat sheds to the East facing HMS Discovery. The view from Coal Harbour will be of boats rather than the existing large boat sheds.</p>
Support for plan	Well thought out plan; concerns for local residents and workers has been appropriately addressed.	<p>A Construction Environmental Management Plan has been prepared to address construction-related activities. All construction work, including pile driving, will take place during normal daytime hours, 9:00 am to 5:00 pm, and will not be performed on weekends or statutory holidays.</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		Refer to Appendix R for the Construction Environmental Management Plan.
Construction communications	How will you explain to members about construction impacts including relocation while work is being done to floats they occupy?	Detailed construction sequencing and timing will be developed and communicated to members in the marina, should the permit application be approved, and project construction proceed.
PER process/ port authority consultation		
Indigenous group consultation	Are the indigenous peoples of that land satisfied with the pile driving that will occur near their historic burial island?	The port authority is consulting with Indigenous groups on the proposed project application. A summary of these comments would be made available in the port authority's PER Report, should the proposed application be approved.
Stakeholder engagement	Concern with level of early engagement with neighbouring organizations.	<p>RVYC met with Vancouver Rowing Club representatives numerous times during the past decade. There have been four meetings between the Vancouver Rowing Club and the RVYC and three joint meetings including the Vancouver Rowing Club, the RVYC and the port authority. There has also been a significant amount of written communication between the Vancouver Rowing Club, the RVYC and the port authority.</p> <p>Prior to submitting the PER application, a Rowing Technical Memo was developed by the RVYC to create a benchmark review of similar multiuse waterways. The Rowing Technical Memo concluded that a 63.4 m wide channel supports the continued use of Coal Harbour for rowing.</p> <p>Refer to Appendix H for the Rowing Technical Memo.</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
General question or comment – outside of PER scope		
Effects on rowers	Concerned that proposal puts rowers and other channel users at risk; work will impact rowers.	RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process.
Coal Harbour building	Don't add any more structures that will disrupt local ecology and make Coal Harbour more crowded.	
Commitment to community	Royal Vancouver Yacht Club is a good neighbour and this plan demonstrates this.	

4.8 Technical Studies and Plans – Marine Traffic and Safety Plan

Level of satisfaction with the Marine Traffic Safety Plan in the project feedback form:

- **54%** of respondents are **very satisfied or somewhat satisfied**
- **41%** of respondents are **very dissatisfied or somewhat dissatisfied**
- **4%** of respondents are **neither satisfied nor dissatisfied**
- **1% did not review** the documents

452 respondents provided reasons for their level of satisfaction with the Marine Traffic Safety Plan:

- 147 comments are related to the Marine Traffic Safety Plan
- 305 are outside of the PER scope

The following table provides a summary of questions and comments provided by respondents regarding the marine traffic and safety plan and responses from the project team:

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Access and egress		
Access points at marina	Fire and safety improved; ingress and egress improved with only two entrances.	More than 10 years of planning and technical studies have informed this application, and safety was a key consideration for the design of the new marina. This project will improve Coal Harbour boater safety by reconfiguring the marina to provide safer entry and exits points at RVYC and eliminating any need for boats to reverse out of the marina. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.
	Minimizes or eliminates potential conflicts between vessels of all sizes when maneuvering in and out of their facilities.	
	Eliminates practices of backing out into the navigation channel.	
	New plan looks reasonable for the yachters at the Vancouver Rowing Club and RVYC as well as commercial users; will be safer for rowers with only two points of access to marina; the Vancouver Rowing Club marina	

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
K float	<p>may still be a problem with many points of ingress and egress.</p> <p>Could there be a blinking light system for boats exiting from the outside of K float?</p> <p>The boats/yachts that are moored along the channel on K-Float would be a third point of access; while they have 180 a degree views, I imagine it will also be quite an active access point.</p>	<p>The Canadian Coast Guard (CCG) of Marine Communications and Traffic Services (MCTS) have provided details on the required navigational lighting aids to be installed to address navigational safety issues. Proposed navigational aids for the new float are a yellow flashing light and a radar reflector at each end of the float. These aids will not interfere with navigation during hours of darkness or reduced visibility.</p> <p>Reducing the number of entrances into the channel from the RVYC marina will significantly increase safety. We will be installing mirrors and navigational lights on K Float to assist with sight lines when entering and exiting the marina.</p> <p>There will be a long, wide space to the west of “K” Float for vessels to observe and hold if necessary and wait for traffic to pass. The new marina design eliminates vessels backing out directly into the channel.</p> <p>The proposed expansion provides improved safety by:</p> <ul style="list-style-type: none"> • Relocating existing boat sheds to either the interior or along the east side of the marina, so no boats can exit from them perpendicular to the longitudinal axis of the channel/waterway • Having boats leave the marina at the south-west or south-east corners of the marina, where they have a very good view of the channel/waterway, where they have room to hold up before establishing that it is safe to proceed into the channel, and where warning lights and

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>mirrors would assist in identifying rowing shells or other vessels in the channel</p> <ul style="list-style-type: none"> • Eliminating boats reversing out of the marina into the shared channel • Providing a full 180-degree view of the channel/waterway for the boats moored along the side of K-Float so they can be sure that they would not leave their slip unless safe to do so.
Visitors and navigation	<p>Which members are provided these moorage points? Will they be visitors from the partnerships, who will not be familiar with the local marine activity? Has a boat/yacht "Traffic" circulation diagram of what the boats/yacht manoeuvring and mooring along the K-float been presented, as it wasn't mentioned in the presentation? Would they have to do a 180° turn in the navigation channel to have the boat/yacht facing towards Canada Place like in the diagram presented? What does this turning circle look like? and where would this turn mostly likely been done?</p>	<p>Visitors are assigned moorage slips within the Marina, that are vacant when members are out using their vessels. The visiting vessels would enter and leave at one of the two proposed access channels which will improve safety significantly.</p> <p>Vessels will have to turn to either leave or approach "K" float. This is a normal docking process identical to that performed by vessels on the South side of the channel.</p>
VRC water lot	<p>RVYC already uses VRC water lot for their boats to enter/exit.</p>	<p>In 2019, under a separate permit, RVYC removed six slips from the area of "I" Float, adjacent to the west lease line boundary. This created a wider channel for people using the entrance and for people in the channel and ensured that RVYC members do not enter the Vancouver Rowing Club water lot when accessing the RVYC Coal Harbour Marina.</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Blind spots	<p>Would create a huge blind spot at entry access.</p> <p>Updates to marina plan reduces blind spots and allocates new rules for ingress-egress; proper navigable channel markings and rules will add greatly to the safety of all users.</p> <p>More blind spots created by additional boat sheds. Boat traffic exiting and entering coal harbour on the east side (f float) may propose a blind spot for traffic. This is mostly a traffic concern for within the marina limits. Also, large vessels moored on the outside of K dock will restrict visibility (particularly of small craft - rowing skiffs/ kayaks) to vessels entering and leaving the marina to the east.</p>	<p>The proposed expansion provides improved safety by:</p> <ul style="list-style-type: none"> • Relocating existing boat sheds to either the interior or along the east side of the marina, so no boats can exit from them perpendicular to the longitudinal axis of the channel/waterway • Having boats leave the marina at the south-west or south-east corners of the marina, where they have a very good view of the channel/waterway, where they have room to hold up before establishing that it is safe to proceed into the channel, and where warning lights and mirrors would assist in identifying rowing shells on the course • Eliminating boats reversing out of the marina into the shared channel • Providing a full 180-degree view of the channel/waterway for the boats moored along the side of K-Float so they can be sure that they would not leave their slip unless safe to do so. <p>RVYC has a campaign in progress to promote awareness of and safety for rowing sculls and is committed to improving and expanding this program.</p> <p>There are no additional boat sheds, and boat sheds are not located near the channel. Access and maneuvering activities from boat sheds will occurring within the RVYC water lot.</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
Boat sheds	Additional boat sheds will add blind spots and much less space to avoid a dangerous situation.	<p>There are no additional boat sheds, and boat sheds will not be relocated near the channel.</p> <p>The proposed expansion provides improved safety by:</p> <ul style="list-style-type: none"> • Relocating existing boat sheds to either the interior or along the east side of the marina, so no boats can exit from them perpendicular to the longitudinal axis of the channel/waterway • Having boats leave the marina at the south-west or south-east corners of the marina, where they have a very good view of the channel/waterway, where they have room to hold up before establishing that it is safe to proceed into the channel, and where warning lights and mirrors would assist in identifying rowing shells on the course • Eliminating boats reversing out of the marina into the shared channel • Providing a full 180-degree view of the channel/waterway for the boats moored along the side of K-Float so they can be sure that they would not leave their slip unless safe to do so.
Updated plans		
Implementation	Concerns that RVYC members or staff will adhere to any safety plan.	We have installed courtesy signs advising boaters that rowers may be present and established speed limits to avoid or minimize wake when transiting in and out of the marina. We have developed an education program for our members, which we

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
		<p>implemented approximately 18 months ago and continue to expand and improve.</p> <p>RVYC members are required to adhere to all club rules including safety plans. Failure to do so will have repercussions up to and including expulsion from the club for repeated offenses.</p>
Access	Much safer with upgraded response plans; better access for first responders.	<p>More than 10 years of planning and technical studies have informed this application, and safety was a key consideration for the design of the new marina. This project will improve Coal Harbour boater safety by reconfiguring the marina to provide safer entry and exits points at RVYC and eliminating any need for boats to reverse out of the marina. Application documents, including the technical studies, are available for review at the project web page and on the port authority website.</p>
Safety for marine users	<p>Makes more room and is safer for rowers than the existing dock configuration; safer for rowers even with expansion.</p> <p>This Marine Traffic routing plan is important for safety of all users of the inner harbour area; the area has a busy daytime movement of boaters.</p>	
Plan development	Very much appreciate that 3rd party feedback was sought out and used to develop generous dimensions to the various other use cases (traffic lanes, sporting lanes etc.).	
Construction		
Marine traffic during construction	Reduced boats in marina are needed during construction to ensure safety.	Some member vessels will be temporarily relocated to RVYC out stations to allow for construction. Detailed construction sequencing and timing will be developed and communicated to members in the marina, should the permit application be approved, and project construction proceed.

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
General question or comment – outside of PER scope		
Effects on rowers/ channel effects	<p>Vancouver Rowing Club will benefit from the new plan; larger boats will no longer back out in front of the rowers; rowers face backwards and have even been known to run into moored, stationary vessels; not all rowers are familiar with the marine rules of the road including knowing what three blasts of a horn means.</p> <p>40 more boats isn't a huge percentage increase from what's already there; rowers need to take responsibility for themselves; "lanes" is a good idea so boaters are not surprised by rowers.</p> <p>Expanding into channel will compromise safety for rowers and other marine users.</p> <p>All "users" whether already permitted or historically/ by precedence permitted should continue to enjoy the Coal Harbour channel; RVYC has done its very best to accommodate this for its long term neighbours; unsettling and a contradiction that some members of the Vancouver Rowing Club feel they are more equal or have superior rights to a common channel particularly given the large number of yachts that berth at their docks and use the same channel.</p>	<p>RVYC has been working with the port authority and local stakeholders since 2017 to consider community interests in the project design and as part of the review process.</p> <p>The proposed expansion provides improved safety by:</p> <ul style="list-style-type: none"> • Relocating existing boat sheds to either the interior or along the east side of the marina, so no boats can exit from them perpendicular to the longitudinal axis of the channel/waterway • Having boats leave the marina at the south-west or south-east corners of the marina, where they have a very good view of the channel/waterway, where they have room to hold up before establishing that it is safe to proceed into the channel, and where warning lights and mirrors would assist in identifying rowing shells on the course • Eliminating boats reversing out of the marina into the shared channel • Providing a full 180-degree view of the channel/waterway for the boats moored along the side of K-Float so they can be sure that they would not leave their slip unless safe to do so. <p>RVYC is not expanding into the channel. It is proposing to build up to the edge of the channel accepted by the port in 2017.</p>

THEME	CONSULTATION INPUT	PROJECT TEAM RESPONSE/ ACTION
<p>Multiuse waterway guidelines</p>	<p>The FISA rowing guidelines used as basis to justify the RVYCs accommodation of rowers in Coal harbour is not in my opinion applicable in this case; FISA guidelines pertain to a single lane in very controlled racing environment; Vancouver Rowing Club accommodates the training requirements of rowers with many different levels of age, experience and ability.</p>	<p>The RVYC technical review is thorough and references several national and international technical guidelines and references examples of jurisdictions similar to Coal Harbour, with heavier marine traffic, where a multi-use scheme has been in operation for many years. Reference material consulted as part of this project include "A Guide to Multiple Use of Waterway Management" produced by the National Water Safety Congress and the National Transportation Safety Board and ("National Transportation Safety Board Safety Recommendation Report Shared Waterways: Safety of Recreational and Commercial Vessels in Marine Transportation System").</p> <p>The administrative navigational channel is 63.4 m wide accommodating 36.4 m (representing 57% of the available administrative channel) for recreational and commercial vessels and 27 m for rowing (representing 43% of the available administrative channel).</p> <p>Under common law rowers have the right to row throughout the entire 63.4 m (208.4 Ft) width provided they do so in a safe manner considering other users.</p> <p>The application and supporting documentation are available on the project webpage.</p>