



PORT of
vancouver

Vancouver Fraser
Port Authority

Roberts Bank Terminal 2 Project

Part one: Vancouver Fraser Port Authority response to draft conditions and public comment period submissions for the Roberts Bank Terminal 2 Project

April 22, 2022



Executive Summary

Project overview

The Roberts Bank Terminal 2 Project consists of the construction and operation of a marine container terminal in Delta, British Columbia and proximate to Tsawwassen First Nation. The Vancouver Fraser Port Authority (port authority), the project proponent, is a Canada Port Authority accountable to the federal minister of transport. It operates pursuant to the *Canada Marine Act* and is the federal agency responsible for the stewardship of the lands and waters that make up the Port of Vancouver, Canada's largest port. The port authority proposes the project consistent with its mandate under the *Canada Marine Act*.

The Roberts Bank Terminal 2 Project entails the construction and operation of three project components: a new three berth marine container terminal, a widened causeway to accommodate additional road and rail infrastructure, and an extended tug basin to accommodate expanded tug operations. The marine terminal would be located immediately west of the existing Roberts Bank terminals, about 5.5 kilometres from the shore end of the causeway, in deep subtidal waters away from sensitive intertidal habitats. The terminal would sit on new federal land, created mainly with sand that is deposited in the Fraser River each spring during freshet.

Project need and benefits

The Roberts Bank Terminal 2 Project is a critical investment in marine-side port infrastructure on the West Coast of Canada to support Canadian trade. As supported by several years of forecasts and recognized by the independent review panel, Transport Canada and industry stakeholders, additional container terminal capacity on Canada's West Coast is needed. Canada's trade competitiveness depends on the ability of Canada's supply chain to provide reliable, cost-efficient access for importers and exporters. As increasing volumes, constrained capacity, and supply chain delays have demonstrated, especially during the global pandemic, additional container terminal capacity is urgently needed at the Port of Vancouver. Investment in the project will help protect Canada's trade competitiveness and economic resiliency.

Building on significant federal and provincial government investments in road and rail infrastructure that support the Port of Vancouver's Roberts Bank terminals as a part of Canada's West Coast supply chain, marine side capacity is urgently needed to support future trade. The West Coast of Canada will fall short of the needed capacity for container trade as early as 2025. The surge in demand for containers during the pandemic has shown the impacts of current constraints as congestion at the Port of Vancouver has led to increased transportation delays, including longer container dwell times and increased use of anchorages, which are not usually required for container vessels, resulting in a bottleneck of goods to market. Our analysis shows that building the Roberts Bank Terminal 2 Project is critical to addressing congestion and ensuring the West Coast of Canada can support Canadian trade for decades to come.

Updated economic impact assessment results provided by the port authority in response to the minister's information request demonstrate that the project will provide benefits to Canada, British Columbia, and Metro Vancouver by supporting economic growth, creating tens of thousands of well-paying, family-supporting jobs during construction and operation, and generating hundreds of millions of dollars annually in combined federal, provincial, and municipal tax revenues during operation. The Roberts Bank Terminal 2 Project will measurably support increased Canadian GDP to a degree that few projects can. A decision by government is needed now to protect decades of infrastructure investment and trade policy that depends on Canada's largest and most competitive West Coast gateway. This action will support Canadian supply chain jobs and economic resiliency.

Ongoing consultation with forty-six Indigenous groups, as listed in the Updated EIS Guidelines for the Roberts Bank Terminal Project, has resulted in the refinement and enhancement of mitigation measures for species of key interest and cultural stewardship initiatives. The project has made commitments to 20 Indigenous groups so far through mutual benefit agreements, which include employment, training, and procurement opportunities, and discussions are ongoing with other Indigenous groups who have expressed an interest. The port authority has also committed to a \$5.5 million legacy fund for projects of interest to Indigenous groups.

In addition to project benefits such as direct, indirect, and induced employment, the port authority has committed to a \$6 million community investment program in Delta to support community grants and an education fund for Delta-based organizations. The port authority has also committed to a \$30 million Prey Abundance Fund to support the availability of Chinook salmon for southern resident killer whales (SRKW) to be developed in consultation with Indigenous groups and federal authorities.

Environmental assessment

After initiating consultation with Indigenous groups, local governments, stakeholders, and the public in 2011, the project entered the environmental assessment process in 2013. Under the *Canadian Environmental Assessment Act 2012*, the minister determined that the project would be reviewed by an independent panel, which took place from 2015 to 2019. In 2020, the review panel issued their report, which identified potential significant adverse effects and several areas of uncertainty. The minister determined that additional information was required regarding the implementation of mitigation measures and the requirements of the *Species at Risk Act* and issued an information request (IR) on the topics of salmon, SRKW, effects on biofilm as a result of fish mitigation measures, effects to Indigenous peoples, and updated economic information to support decision-making on the project. Following extensive consultation with Indigenous groups, government agencies, and stakeholders, and further refinement of proposed mitigation measures, the port authority provided the minister with the information requested in 2021.

The review panel report and the port authority's response to the minister's information request provide sufficient information to establish i) whether the project will result in significant adverse effects, ii) that any significant adverse effects would be justified, and iii) the conditions to include in a decision statement. The port authority's IR response demonstrates how the concerns raised in the review panel report and expressed by Indigenous groups have been addressed through new technical analysis and enhanced mitigation measures. In particular, the additional information demonstrates that neither the project nor the vessel traffic incidental to it will jeopardize the survival or recovery of SRKW. Remaining uncertainty regarding effects identified by the review panel that were not included in the minister's IR will be addressed through draft project conditions developed by the Impact Assessment Agency of Canada (IAAC) and follow-up programs to be implemented by the port authority.

Throughout the environmental assessment, the port authority has been responsive to feedback from Indigenous groups, federal and provincial agencies, local governments, communities, and stakeholder interest groups. The prioritization of a thorough and comprehensive consultation process with Indigenous groups has resulted in important enhancements to the project, and to increased benefits and opportunities for Indigenous groups through close collaboration on key issues of interest and concern. In the environmental assessment, uncertainty has been addressed by adopting a science-based approach and through the use of conservative assumptions. It has also been informed by Indigenous knowledge.

Purpose of the submission

This submission has been developed in response to IAAC's invitation to comment on the draft conditions, and to submissions made by others, including Indigenous groups, during the public comment period on the IR response. Submissions posted to the public registry during the comment period have been carefully considered by the port authority and responded to within this submission. Several parties provided comments on the IR response and on the draft conditions with respect to biofilm and the potential impact to western sandpiper. The port authority will provide a separate submission responding to those comments. In addition, several submissions were received in April and the port authority will

respond to comments that raise interests or concerns that are not already covered within this response under separate cover.

The information contained in this submission demonstrates that the Roberts Bank Terminal 2 Project can be implemented with effective mitigation in place for key species and priorities of Indigenous groups, agencies, and the public.

Information on the record to date demonstrates the following:

- The Crown's duty to consult with Indigenous groups and to accommodate the potential impacts to rights has been met to date
- Project design changes and additional mitigation measures will serve to further mitigate and/or reduce the likelihood of potential adverse effects of the project
- With the port authority's suggested revisions, the draft conditions are technically and economically feasible, within the care and control of the proponent, and will appropriately mitigate the potential environmental effects of the project
- Work by other federal authorities to address regional-scale issues and further mitigate cumulative effects that are outside the care and control of the port authority is underway, and where appropriate, the port authority is participating and supports this work
- The project is needed and will deliver important and significant economic benefits locally, regionally, provincially, and nationally, as well as benefits through agreements with numerous Indigenous groups
- Any potentially significant adverse environmental effects, including any cumulative effects, would be justified and it is in the public interest to approve the project to proceed

Advancements described in the IR response

Through extensive consultation with Indigenous groups and ongoing engagement with agencies, the port authority has completed additional technical work, adding project design changes and additional mitigation that will further reduce effects identified by the review panel. The port authority has worked to refine mitigation measures for potential effects of the project on key species such as SRKW, fish and fish habitat, particularly Chinook salmon, and Dungeness crab, and includes the following analysis and additional measures.

Marine shipping and vessel projections

In response to the minister's IR, the port authority provided updated and extended projections of container vessel numbers and sizes expected to call at Roberts Bank Terminal 2 and the Port of Vancouver overall. The updated projections indicate that, in the most-realistic scenario, the number of container vessels forecasted to call at Port of Vancouver container terminals would be the same with or without the Roberts Bank Terminal 2 Project. Transport Canada has indicated in their written submission to the registry that the new work provided is a well-constructed and plausible projection of future vessel traffic at the Port of Vancouver.

The port authority's IR response demonstrates that in the most-realistic scenario, only small changes in sound exposure are predicted with the project, which are not anticipated to reduce the quality of the acoustic environment for SRKW. Therefore, the potential environmental effects found by the review panel as likely to result from marine shipping incidental to the project—some of which they considered significant—are based on very conservative assumptions and are not likely to occur. The port authority has proposed a marine shipping follow-up program to verify predictions and suggested revisions and additions to the draft conditions to provide greater certainty regarding the number of measures that could be implemented in the unlikely event that vessel traffic is greater than predicted.

Underwater noise and southern resident killer whales

In its response to the minister's IR, and in consultation with Indigenous groups, Fisheries and Oceans Canada, and Transport Canada, the port authority proposed additional mitigation measures for SRKW,

which, in combination with previously proposed measures, would further reduce potential adverse effects of project construction, project operation, and marine shipping incidental to the project on SRKW.

The additional proposed measures increase confidence for decision makers that project construction and operation, and marine shipping incidental to the project, will not jeopardize the survival or recovery of the species. Construction measures include a focus on avoiding noisy activities during the SRKW peak use period, and using stop-work procedures, exclusions zones and leading marine mammal monitoring systems. Operational measures include delayed container vessel unberthing and departure, shore power and other technologies that would reduce underwater noise, as well as requirements around participation in the Enhancing Cetacean Habitat and Observation (ECHO) Program, a world-leading, first-of-its-kind program developed and led by the port authority to better understand and reduce the cumulative effects of commercial shipping on at-risk whales along British Columbia's southern coast, with a focus on endangered SRKW. The port authority has committed to continuing to lead the ECHO Program and its initiatives and signing on to an additional five years of the *Species at Risk Act* (SARA) Section 11 Conservation Agreement to Support the Recovery of the SRKW, if other parties agree. Further, the port authority suggested revisions and additions to conditions related to SRKW reflecting input received during the public comment period which will further reduce the likelihood that the Roberts Bank Terminal 2 Project will jeopardize the survival and recovery of SRKW.

Even though the number of vessels is forecasted to be the same in the future with or without the Roberts Bank Terminal 2 Project, the port authority has identified additional contingency mitigation measures that could be implemented in the unlikely event that acoustic effects to SRKW exceed predictions, as well as measures that could be implemented by the Government of Canada, including further reducing vessel speed and/or expanding vessel slowdown areas. The contingency mitigation measures demonstrate that there are effective options available to mitigate potential underwater noise effects to SRKW even in the unlikely event that acoustic effects to SRKW exceed predictions because of the project. Transport Canada has indicated that these measures would be feasible and appropriate in their written submission to the registry. The proposed marine shipping follow-up program would be developed and implemented in consultation with Indigenous groups, Transport Canada, Fisheries and Oceans Canada, and other relevant federal authorities, as described in a joint letter to IAAC on March 15, 2022, from the port authority, Tsawwassen First Nation, and Musqueam Indian Band.

These combined measures increase confidence in the prediction that project operation and marine shipping incidental to the project are unlikely to interfere with SRKW's life functions within its critical habitat and will not jeopardize SRKW survival or recovery. The IR response including the suggested additions and revisions to draft conditions related to SRKW demonstrate that all feasible mitigation measures have been identified.

Fish and fish habitat and Dungeness crab

Based on extensive consultation with Indigenous groups and Fisheries and Oceans Canada, and in response to the minister's IR, the port authority has put forward additional avoidance, reduction, and offsetting measures for fish and fish habitat, including the following:

- Reduction of the project footprint by up to approximately 14 hectares, to reduce the direct effects of the project on fish and fish habitat
- A breach for fish passage to mitigate the potential disruption of juvenile salmon migration
- A proposed offsetting plan that fully offsets the potential effects of the project on juvenile salmon resulting in a substantial **net gain** in juvenile salmon habitat and productivity
 - The plan includes 86 hectares of offsetting developed in collaboration with Indigenous groups, to support key species of interest such as Chinook salmon and Dungeness crab—this is triple the amount proposed in the environmental impact statement and considered by the review panel
 - The offsetting plan includes Indigenous group identified priority sites that support broader salmon enhancement objectives as described by Musqueam Indian Band in their letter to the registry

- This is also 22 hectares more than what is required to offset the effects of the project that would remain after implementation of avoidance and reduction measures

Based on consultation with Indigenous groups, the port authority has proposed new measures to mitigate potential effects to crab during construction, including the following:

- Conducting additional crab salvage activities prior to dredging during the Dungeness crab fisheries-sensitive window, including deploying baited closed-traps to lure Dungeness crabs (including gravid females) away from the dredge area as suggested by Musqueam Indian Band
- Collaborating with Tsawwassen First Nation and Musqueam Indian Band on a stewardship initiative identified as a priority by the nations, to retrieve and dispose of crab ghost gear (i.e., lost or discarded fishing gear), which can inadvertently harm and kill crabs and other marine life
- 12.5 hectares to 14.5 hectares of native eelgrass offsetting are planned at Roberts Bank for the project and will directly benefit multiple life stages of Dungeness crab, including juveniles, adults, and gravid females

Further, the port authority notes that the follow-up program element for current use of lands and resources for traditional purposes includes the identification of parameters to monitor changes in environmental components identified as important for current use, including crab.

Indigenous groups interest, knowledge, and input

Throughout the environmental assessment, the port authority has been committed to environmental stewardship in consultation with Indigenous groups, local governments, communities, and stakeholder interest groups. The prioritization of a thorough and comprehensive consultation process with Indigenous groups has resulted in significant ecological and cultural enhancements to the project, and to increased benefits and opportunities for Indigenous groups through close collaboration on key points of interest and concern.

As part of its ongoing consultation with Indigenous groups, the port authority has continued and will continue its collaborative work with Tsawwassen First Nation and Musqueam Indian Band through regular technical meetings, site visits, ongoing dialogue, and other jointly planned activities to further advance planning related to their project priorities. The port authority will also continue to work closely with Tsleil-Waututh Nation on their key project priorities. The port authority remains committed to advancing the project in a way that is guided by and reflects Indigenous groups' knowledge, perspectives, experience, and input. Consultation with all Indigenous groups identified by IAAC for consultation on the Roberts Bank Terminal 2 Project continues through regular workshops, one-to-one meetings and information sharing through the online consultation portal and will continue throughout the development and implementation of the project.

The port authority has also continued and will continue to consult and collaborate with Indigenous groups regarding economic development opportunities. The 20 mutual benefit agreements finalized so far, and those under continued discussion, provide benefits to Indigenous groups, including employment and contracting, training, and funding to support each nation's priorities, such as environmental stewardship, cultural programs, educational scholarships, and capacity development.

Feedback on the draft conditions

In addition to advancements described in the IR response with respect to mitigation, IAAC has drafted comprehensive draft federal conditions, which address significance determinations made by the review panel on topics not included in the IR, in many cases going beyond the review panel's recommendations. The draft conditions also include prior commitments made by the port authority.

Important legal principles and requirements have informed the port authority's detailed feedback on the draft conditions. Our feedback on the draft conditions reflects work undertaken in response to the minister's IR, new or amended mitigation measures proposed by the port authority and stemming from ongoing consultation with Indigenous groups, IAAC, and federal authorities, and submissions to the registry made by other parties. In some cases, we have made joint submissions based on focused

consultation with Indigenous groups regarding the potential effects of incidental marine shipping on marine mammals and current use of lands and resources for traditional purposes, and monitoring oversight.

With the port authority's suggested revisions, the draft conditions are technically and economically feasible, within the care and control of the proponent, and appropriate. The work of other federal agencies to address regional-scale issues and further mitigate cumulative effects that are outside the care and control of the port authority is underway, with participation and support of the port authority as appropriate.

Whole of Government Response

Following the issuance of the review panel report, the Government of Canada prepared a draft Whole of Government Response.¹ That response outlines measures the Government of Canada can implement to further address points identified by the review panel, including regional initiatives currently underway related to marine shipping and cumulative effects.

The port authority agrees with and supports the measures described in the Whole of Government Response, which acknowledge regional cumulative effects that occur outside the care and control of the port authority. These measures, many of which are currently being implemented, mitigate the cumulative effects of all marine shipping, including existing and ongoing container vessel traffic, and will materially improve the health of the Salish Sea. The implementation of these measures by the Government of Canada will mitigate potential adverse cumulative environmental effects on SRKW.

The port authority has proposed additional measures, that go beyond those underway by the Government of Canada, in the unlikely event that the number of container vessels calling Roberts Bank Terminal 2 is higher than projected.

The port authority notes recent commitments in the federal budget to renew and further enhance the efforts of the Oceans Protection Plan a key mitigative measure for the cumulative effects of marine shipping, which includes measures to monitor its effectiveness. These enhancements will be underway well before the Roberts Bank Terminal 2 Project is operational.

Conclusion

The Roberts Bank Terminal 2 Project is in Canada's national interest, can be built in an environmentally responsible manner and will provide benefits to Indigenous groups, local communities and businesses, and provincial and national supply chain partners.

As demonstrated in the material on record to date, including the information provided by the port authority in response to the minister's IR, a comprehensive proposal for mitigation measures is in place. Through the draft conditions and the Whole of Government Response, the tools exist to address concerns raised outside the care and control of the port authority, and in collaboration with agencies and Indigenous groups, in the implementation of this important project.

The information provided in the port authority's response to the minister's IR is complete and, together with the review panel report, is sufficient for the minister to make decisions on the project. Through the additional measures and advancements described in the IR response, the draft conditions, and regional initiatives underway as proposed by the Government of Canada the potential adverse effects of the project have been further mitigated and it is in the public interest for the project to proceed

¹ IAAC provided the port authority, Indigenous groups, the provincial government, and other federal authorities with the draft Whole of Government Response to the recommendations of the review panel that were directed to the government on October 22, 2020. The whole of government response is subject to change and may be updated in the future.

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1. Introduction

1.1 Background relevant to this submission

Following a comprehensive multi-year review process, which started in 2013 and included a public hearing, the independent federal review panel issued its report regarding the Roberts Bank Terminal 2 (RBT2) Project on March 27, 2020 (Canadian Impact Assessment Registry (CIAR) Reference Number 80054, Document #2062). Since then, the Impact Assessment Agency of Canada (IAAC) has been consulting with Indigenous groups and other federal authorities on the review panel's findings. The Minister of Environment and Climate Change (the minister) determined that additional information was necessary to make decisions pursuant to section 52(1) of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012), and issued an information request (IR) to the Vancouver Fraser Port Authority (port authority) (the proponent of the project) pursuant to section 47(2) of CEAA 2012 on August 24, 2020 (CIAR #2067).

On October 20, 2020, IAAC provided to the port authority, as well as to Indigenous groups and the provincial government, draft conditions for the project for review and comment. The port authority understands that the City of Delta, the City of Richmond, and Metro Vancouver also received the draft conditions for review and comment. These 2020 draft conditions were developed by IAAC based on the recommendations in the federal review panel report, commitments made by the port authority during the environmental assessment, and input provided by other federal authorities. At the same time, IAAC also provided the port authority with the draft Whole of Government Response to the recommendations of the review panel that were directed to the government.¹ The draft Whole of Government Response was also shared with Indigenous groups, the provincial government, and other federal authorities to support IAAC's ongoing consultation with those parties.

The port authority provided IAAC with preliminary feedback on the 2020 draft conditions on January 29, 2021, and more in-depth feedback on the 2020 draft conditions, taking into account its response to the minister's IR, on September 10, 2021.

The preparation of the response to the minister's IR included additional modelling and analysis to support further assessment of potential effects, identification of modified or additional mitigation measures, including but not limited to significant design changes and substantially more offsetting, and consideration of modified or additional follow-up program elements. Drafts of the port authority's IR response were shared with other federal authorities and Indigenous groups and consultation with those parties regarding the technical analyses and draft response was undertaken from December 2020 to August 2021; feedback received from them was considered and incorporated into the port authority's final response submitted on September 24, 2021 (CIAR #2083).

Following consideration of the port authority's IR response, as well as feedback on the 2020 draft conditions provided by the port authority, Indigenous groups, the provincial government, and other parties, IAAC revised the draft conditions. IAAC posted the draft conditions (CIAR #2086) and the port

¹ IAAC provided the port authority, Indigenous groups, the provincial government, and other federal authorities with the draft Whole of Government Response to the recommendations of the review panel that were directed to the government on October 22, 2020. The whole of government response is subject to change and may be updated in the future.

authority's IR response on the Canadian Impact Assessment Registry ([CIAR #2083](#)) for the project and, on December 15, 2021, invited Indigenous groups and the public to comment on those documents ([CIAR #2085](#)). The comment period closed on March 15, 2022.

Those comments vary from standard-form letters to brief comments to extensive submissions with accompanying expert reports. The purpose of the comment period was to provide an opportunity to comment on two subjects: the port authority's IR response and the draft conditions. The port authority notes that some parties made comments about matters lying outside those two subjects. As such, those comments cannot be properly taken into account in the decisions that remain to be made in the assessment of the RBT2 Project.

As directed by IAAC, the port authority has considered the submissions of Indigenous groups, government, federal agencies, and non-government organizations, and provides its responses in this submission, after the close of the public comment period, following receipt of final submissions of others.

Several parties provided comments on the IR response and on the draft conditions with respect to biofilm and the potential impact to western sandpiper. The port authority will provide a separate submission responding to those comments. In addition, several submissions were received in April and the port authority will respond to comments that raise interests or concerns that are not already covered within this response under separate cover.

1.2 The port authority's submission

The port authority has prepared this submission in response to IAAC's invitation for comment and to support decision-making. The information in this submission, together with the port authority's response to the minister's IR, demonstrates the following:

- The additional information provided by the port authority in its IR response is complete and, together with the federal review panel report, is sufficient to enable the minister to make decisions pursuant to section 52(1) of CEAA 2012
- The project design changes (including terminal and causeway footprint reduction), the substantial increase in the amount of offsetting, the proposed implementation of a fish passage breach, and other modified and additional mitigation measures and follow-up program elements proposed by the port authority, as described in the IR response, serve to further mitigate potential adverse environmental effects of the project identified by the review panel
- Taking into account the technically and economically feasible mitigation measures that would be required by the draft conditions (including the revisions and additional conditions suggested by the port authority), adverse effects of the project have been further mitigated
- With the revisions and additional conditions suggested by the port authority, the draft conditions are technically and economically feasible, within the care and control of the proponent, and appropriate for and commensurate with the predicted effects of the project and the project's contribution to cumulative effects
- There are available measures that are being and can be implemented by other federal authorities to address regional-scale issues and further mitigate cumulative effects that are outside the care and control of the port authority
- The effects of the project and cumulative effects are therefore mitigable through both the conditions that would be imposed on the proponent and the actions that are being and/or can be taken by the Government of Canada
- The project is needed and will deliver important and significant economic benefits locally, regionally, provincially, and nationally, as well as benefits through agreements with numerous Indigenous groups

- Any potentially significant adverse environmental effects, including any cumulative effects, would be justified
- It is in the public interest to approve the project to proceed

Accordingly, this submission comprises the following:

- **Section 1. Introduction**

This introductory section of the port authority's submission provides relevant background information and describes the purpose of and structure of this submission.

- **Section 2. State of the environmental assessment**

This section of the submission documents the current state of the environmental assessment of the RBT2 Project, including updated assessment outcomes, taking into consideration ongoing work by the port authority, Indigenous groups, IAAC, and the Government of Canada to address issues identified during the review panel process. Sub-sections include the following:

- **Section 2.1 Advancements in the assessment:** A summary of the work that has been completed by the port authority in response to the minister's IR (including updated container vessel forecasts, additional mitigation and follow-up measures, and updated benefits analysis), by the Government of Canada in preparing the draft conditions and the draft Whole of Government Response, and agreements reached with Indigenous groups, all of which have contributed to further mitigate potential adverse environmental effects identified by the review panel.
- **Section 2.2 Key topics:** This section provides a high-level overview of several key topics that are relevant to understanding the port authority's view on updated assessment outcomes, its feedback on the draft conditions, and its response to the submissions of other parties.
- **Section 2.3 Response to themes raised by other parties:** This section provides the port authority's response to themes raised in submissions by other parties, including comments by other parties on the port authority's IR response, feedback by other parties on the draft conditions, and other points raised in respect of the project.
- **Section 2.4 Response to submissions of government:** This section includes responses to specific submissions of government, including Transport Canada, Fisheries and Oceans Canada (DFO), City of Delta, City of Richmond, Provincial agencies, and the State of Washington Department of Ecology.
 - § **Appendix 2.4-A Response to comments of government on draft conditions:**² This appendix consists of a table of the port authority's comments, where applicable, on the suggested revisions to specific conditions made by government. The port authority has provided feedback on these suggestions for IAAC's consideration in drafting final conditions.
- **Section 2.5 Response to submissions of Indigenous groups:** This section includes responses to specific submissions of Indigenous groups received in time for the preparation of the port authority's submission. Additional submissions will be addressed in a subsequent submission by the port authority at a later date.
 - § **Appendix 2.5-A Response to comments of Indigenous groups on draft conditions:** This appendix consists of a table of the port authority's comments, where applicable, on the suggested revisions to specific conditions made by Indigenous groups. The port authority has provided feedback on these suggestions for IAAC's consideration in drafting final conditions.

² The port authority notes that any errors in tables reflecting submissions of others are a result of direct transfer of content, and all errors and typos are retained. This pertains to **Appendix 2.4-A**, **Appendix 2.5-A**, and **Appendix 2.6-C**.

- **Section 2.6 Response to submissions of non-government organizations:** This section includes responses to specific submissions of non-government organizations, including a specific response to the submission of the coalition, and responses to themes raised by several other organizations.
 - § **Appendix 2.6-A Response to Scott Report:** The port authority's evaluation of the Scott report on salmon and productivity.
 - § **Appendix 2.6-B Response to Veirs Report:** The port authority's evaluation of the Veirs report on southern resident killer whales (SRKW), including a supporting technical memo.
 - § **Appendix 2.6-C Response to comments by non-government organizations on draft conditions:** This appendix consists of a table of the port authority's comments, where applicable, on the suggested revisions to specific conditions made by non-government organizations. The port authority has provided feedback on these suggestions for IAAC's consideration in drafting final conditions.

- **Section 3. Response to draft conditions**

This section of the submission contains information related to the port authority's feedback on draft conditions. Sub-sections include the following:

- **Section 3.1 Key principles:** This section describes key legal principles that underlie or should underlie the drafting of potential conditions for the project and that have guided the port authority's feedback on the draft conditions.
- **Section 3.2 Introduction to feedback on draft conditions:** This section explains the port authority's detailed feedback on the draft conditions, which has been informed by clarifications provided by IAAC and by the port authority's consultation with Indigenous groups. Detailed feedback on the draft conditions, including suggested revisions where necessary, supported by rationale (including reference to the key principles), is provided in tabular form in Appendix 3.2-A.
 - § **Appendix 3.2-A The port authority's feedback on draft conditions:** This appendix consists of a detailed table including all of the draft conditions, and the port authority's suggested revisions, with rationale, where applicable.
- **Section 3.3 Input to the Whole of Government Response:** This section provides the port authority's input to the Whole of Government Response, focusing in particular on additional actions that can be taken by other federal authorities to address key points related to the project, including those related to marine shipping incidental to the project.



2. State of the environmental assessment

In this section of the port authority's submission, the current state of the environmental assessment of the RBT2 Project is described.

In summary:

- On January 7, 2014, the minister referred the environmental assessment of the RBT2 Project to a review panel under section 38(1) of CEAA 2012. The review panel was constituted, conducted a hearing, and in March 2020 issued its report.
- On October 22, 2020, the Government of Canada provided its draft "Whole of Government" response to the recommendations of the review panel to the port authority and other parties.
- On August 24, 2020, having received the review panel's report, the minister asked the port authority to provide further information in accordance with section 47(2) (the minister's IR). On September 24, 2021, the port authority provided its response. Between December 15, 2021 and March 15, 2022, comments on the information were provided.
- On November 22, 2021, IAAC provided the port authority, as well as Indigenous groups, other federal authorities, and provincial agencies, with draft conditions.
- In this submission, the port authority provides its response to the draft conditions and to the comments made by others on the information provided by the port authority in response to the minister's IR.
- Consultation with Indigenous groups has continued throughout, as has engagement with federal and provincial departments and agencies, the public, and stakeholders.

The minister must now determine whether the project is likely to result in significant adverse effects. To do so, the minister must determine whether and to what extent the information provided in response to the IR issued in 2020 alters the conclusions of the review panel.

This section includes, in **Section 2.1**, a summary of the work undertaken since the close of the review panel record in August 2019 and the issuance of the review panel report in March 2020. In particular, this section considers how several aspects would further mitigate adverse effects of the project, as well as cumulative effects. These include the following:

- The substantially enhanced mitigation measures and follow-up programs developed by the port authority (in consultation with Indigenous groups and other federal authorities and documented in the IR response)
- The additional measures that would be required by the draft conditions
- The measures that are being and would be implemented by the Government of Canada (documented in the draft Whole of Government Response)

The additional information regarding economic benefits and benefits for Indigenous groups developed by the port authority in response to the minister's IR is also considered with respect to the justification of the project in the public interest.

This section also describes how the additional information serves to address several key topics identified by the review panel (**Section 2.2**), as well as points raised by other parties (**Sections 2.3 to 2.6**) in

submissions during the public comment period on the IR response and draft conditions, further supporting the updated assessment outcomes noted in **Section 2.1**.

2.1 Advancements in the assessment

Since the review panel closed its record and completed its report, considerable work has been advanced to further address the points identified by the review panel in its report and in the minister's IR:

- The port authority, in its response to the minister's IR, updated the container vessel projections to improve certainty regarding future container vessel calls to the Port of Vancouver
- The port authority, in its response to the minister's IR, and in consultation with Indigenous groups and other federal authorities, has proposed substantive additional mitigation measures, including offsetting, and follow-up programs to further mitigate potential environmental effects of the project and increase certainty regarding effect predictions and mitigation effectiveness
- IAAC has drafted potential conditions of approval, many of which go beyond the recommendations of the review panel and the prior commitments made by the port authority
- The Government of Canada, in the draft Whole of Government Response, has identified measures, including regional initiatives that it is implementing and will implement to address broader regional issues and cumulative effects
- The port authority, in its response to the minister's IR, provides further information regarding the potential economic benefits of the project, including economic opportunities for Indigenous groups
- In consultation with Indigenous groups, the port authority has signed mutual benefit agreements, and received letters of support, from 20 Indigenous groups potentially affected by the project

The information gathered in these areas of advancement are further described below. Particular emphasis is given to describing how the additional information serves to address points raised by the review panel in its report and by the minister in the IR.

Taken together, as described in this submission, the information gathered since the review panel issued its report demonstrates the following:

- Design changes, together with refined and additional measures, will further avoid, reduce, and offset the potential for significant adverse environmental effects and cumulative effects of the RBT2 Project identified by the review panel
- The project can be delivered responsibly, that any potentially significant adverse effects are justified, and that approval of the project is in the public interest

2.1.1 Increased certainty in container vessel projections

In the minister's IR, the minister called upon the port authority to confirm the projections for container vessel traffic associated with the RBT2 Project through further study.³

In response to the minister's IR, the port authority provided updated and extended projections of container vessel numbers and sizes expected to call at the RBT2 terminal and the Port of Vancouver overall (Appendix IR2020-3-B, [CIAR #2083](#)). Those updated projections indicate that, in the most realistic (i.e., likely) scenario, the number of container vessels forecasted to call at Port of Vancouver container terminals would be the same with or without RBT2 (Table IR2020-3-1; Appendix IR2020-3-B) and would

³ [CIAR #2298](#), Transport Canada submission, p. 1

be on average 16 or 17 weekly container vessel calls to the Port of Vancouver in the future, 3 to 4 of which would call at RBT2.

In its submission of February 9, 2022 ([CIAR #2298](#)), Transport Canada, with respect to the updated vessel forecasts in the most realistic scenario, which underpin the effects assessment and proposed mitigation measures, confirmed the following:

“Transport Canada has reviewed the IR2020-3-B Updated Roberts Bank Terminal 2 container vessel call forecast study and finds that it is well-constructed, that it accounts for expected future developments in the container shipping industry, the possible evolution of the global container market, and possible future trade patterns. Transport Canada’s assessment is that the forecast contains plausible projections of future vessel traffic at the Port of Vancouver.” p.2

In their report, the review panel conservatively assumed the project would result in an additional 260 container vessels transiting the marine shipping area annually. Transport Canada noted, in their recent submission, that this approach led the review panel to a number of conclusions related to potential significant cumulative effects, which Transport Canada noted were effects resulting from existing shipping:

- Significant adverse cumulative effect on SRKW
- Significant adverse cumulative effect on cultural heritage for Indigenous groups that use the marine shipping area for cultural practices

The information provided to the minister confirms the number of container vessels transiting the marine shipping area is not projected to change as a result of the project in the most realistic scenario. This means that the potential environmental effects assumed by the review panel to result from marine shipping incidental to the project, some of which they considered significant, are **not likely to occur as a result of the project**.

For example, Transport Canada went on to note the following:

“TC anticipates that marine shipping associated with the project would be unlikely to impact Indigenous communities’ right to harvest or exercise cultural practices in the marine shipping lanes beyond the impact that will exist if the project is not built.” p.5

With respect to the potential effects of incidental marine shipping on SRKW, taking into account the updated container vessel projections, the additional measures proposed by the port authority, the measures that are being or will be implemented by the Government of Canada (as outlined in Transport Canada’s submission), and the potential draft conditions, Transport Canada concluded the following:

“it is anticipated that marine shipping associated with the project is not likely to result in an increase in underwater noise.” p.3

Based on the additional information and the increased certainty it provides, the minister can now be confident in concluding that the marine shipping incidental to the project is not likely to result in any incremental significant adverse environmental effects, including on SRKW. (See **Section 2.2** of this submission for more information about marine shipping incidental to the project.)

Further, the number of container vessels projected to call weekly (three to four) at RBT2 will likely be slightly less than assumed in the environmental impact statement (EIS; which assumed five container vessel calls weekly), making the potential effects of project operations (i.e., from vessel arrival, berthing, unloading and loading containers, unberthing, and departure) also less than what was considered by the review panel.

Additional information regarding the marine shipping projections is provided in **Section 2.2** of this submission.

2.1.2 Substantially enhanced mitigation, including offsetting

In its response to the minister's IR, the port authority provided information on additional measures that contribute to further mitigating the potential effects of the project that were identified by the review panel. Should the project be approved, the port authority would implement additional, enhanced, and targeted measures resulting from the new analyses that will reduce uncertainty and further mitigate the potential adverse effects of the project. The measures proposed are feasible, reasonable, have been proven effective, and focus on key species of interest to Indigenous groups, government, and local communities. Additional measures outlined in the IR response are summarized below.

Additional measures for fish and fish habitat

In its response to the minister's IR, and based on extensive consultation with Indigenous groups and DFO, the port authority has put forward additional avoidance, reduction, and offsetting measures for fish and fish habitat, including the following:

- Reduction of the project footprint by up to approximately 14 hectares (ha), to reduce the direct effects of the project on fish and fish habitat
- A breach for fish passage (in response to interest expressed by others, the port authority also provided information about the potential for a breach on the causeway), to mitigate the potential disruption of juvenile salmon migration
- A proposed offsetting plan that fully offsets the potential effects of the project on juvenile salmon (those effects remaining after avoidance and reduction measures have been implemented), resulting in a substantial **net gain** in juvenile salmon habitat and productivity
 - The plan includes 86 ha of offsetting developed in collaboration with Indigenous groups to support key species of interest such as Chinook salmon and Dungeness crab
 - 86 ha is nearly three times the amount of habitat offsetting conceptually proposed in the EIS and considered by the review panel
 - This is also 22 ha **more** than what is required to offset the effects of the project that would remain after implementation of avoidance and reduction measures

In its submission of February 11, 2022 ([CIAR #2407](#)), in its comments on the information provided by the port authority, DFO stated the following:

“The offsetting plan identified in the Proponent's response is a **substantial improvement** to the conceptual offsetting plan presented in the Environmental Impact Statement. Additional offsetting opportunities are available that could be included in the final offsetting plan if needed to meet DFO policy goals.” p.16

“... the substantial improvement to the offsetting plan, the identification of additional available offsetting opportunities, as well as the progress made by the Proponent in evaluating offsetting equivalency, **improves DFO's confidence** that a final offsetting plan could be developed that is consistent with DFO policy.” p.24 [emphasis added]

Additional measures for southern resident killer whales

In its response to the minister's IR, and in consultation with Indigenous groups, DFO, and Transport Canada, the port authority proposed additional mitigation measures for SRKW, which, in combination with

previously proposed measures, would further reduce potential adverse effects of project construction, project operation, and marine shipping incidental to the project on SRKW.

The additional proposed measures increase confidence that project construction and operation, and marine shipping incidental to the project, will not jeopardize the survival or recovery of the species. These measures include the following:

- Avoiding noisy construction activities during the SRKW peak use period
- Applying sound dampening technologies to any impact pile driving, which will be limited to tests required to confirm infrastructure stability and safety (anticipated to be approximately four piles) to reduce underwater noise and adverse effects to SRKW, other marine mammals, and fish
- Adopting protective and conservative marine mammal exclusion zones during project construction, including an extra buffer zone for SRKW
- Using multiple measures to detect SRKW, including leveraging early detection sources, employing a team of marine mammal observers, and implementing a passive acoustic monitoring (PAM) system
- Using stop-work procedures to shut down or modify in-water construction before SRKW enter the exclusion zone

In their recent submission ([CIAR #2407](#)), DFO reviewed these additional measures and concluded the following:

“The information provided in the response increases DFO’s confidence that technically and economically feasible measures to mitigate underwater noise from Project construction have been explored and appropriate mitigation measures have been identified for further development.” p.32

The port authority also proposed additional measures to further reduce effects to SRKW from underwater noise and vessel strikes. At RBT2, with mitigation, potential lost foraging time from project operations would be further reduced to approximately 1.8 hours lost foraging time per SRKW per year. The additional measures include the following:

- Delaying container vessels from unberthing and departure, during daylight hours, when SRKW are present
- Evaluating the effectiveness of technologies to reduce underwater noise associated with tug activities (e.g., electric tugs), which, once feasible for the project, will be implemented
- Providing shore power connections for container vessels
- Contractually requiring the terminal operator to require RBT2-bound container vessels to participate in applicable initiatives of the Enhancing Cetacean Habitat and Observation (ECHO) Program (or equivalent). The ECHO Program is an internationally recognized first-of-its-kind program developed and managed by the port authority to better understand and reduce the cumulative impacts of commercial shipping on at-risk whales, with a particular focus on the endangered SRKW.
- Continuing to manage the ECHO Program and its initiatives and signing on to an additional five years of the *Species at Risk Act* (SARA) Section 11 Conservation Agreement to Support the Recovery of the SRKW, if other parties agree.

These additional measures are within the port authority’s ability to implement.

As noted earlier, taking these measures into account, as well as the measures that are being or will be implemented by the Government of Canada (as outlined in Transport Canada’s and DFO’s submission

and in the draft Whole of Government Response), the potential draft conditions, and the updated container vessel projections, Transport Canada concluded the following ([CIAR #2407](#)):

“it is anticipated that marine shipping associated with the project is not likely to result in an increase in underwater noise.” p.3

Marine shipping follow-up program

As noted in **Section 2.1.1** above, in the most realistic (i.e., likely) scenario, the number of container vessels forecasted to call at Port of Vancouver container terminals would be the same with or without RBT2. The port authority, in its IR response, identifies additional contingency mitigation measures that could be implemented, including measures that could be implemented by the Government of Canada, if additional container vessel calls were to occur. These measures include using vessel slowdowns and further reducing vessel speed and/or expanding vessel slowdown areas. The contingency mitigation measures demonstrate that there are effective options available to mitigate potential underwater noise effects to SRKW even in the unlikely event that the number of container vessel calls were to increase as a result of the project. In its recent submission, Transport Canada reviewed these measures and concluded the following:

“Transport Canada believes that these solutions will be feasible at ensuring that marine shipping-related underwater vessel noise impacts as a result of Roberts Bank Terminal 2 are mitigated or avoided throughout the operational life cycle of the project. Furthermore, these solutions, and the proposed draft conditions, are appropriate as they target the environmental impact of the vessel traffic (underwater noise) rather than the activity itself.” p.6

And further:

“These measures, in concert with proposed mitigations under *IR2020-3-E Underwater Noise Modelling of RBT2 Marine Shipping: Container Vessel Transit Exposure Model*, and proposed conditions on limiting vessel noise, should serve to address any marginal increase in underwater vessel noise if vessel projections align with vessel forecasts.” p.7

After the review panel issued its report, the port authority has proposed to develop and implement a marine shipping follow-up program element to verify the container vessel projections and predictions of potential acoustic effects on SRKW from container vessels calling at the Port of Vancouver, as well as a follow-up program element to address potential effects of incidental marine shipping on the current use of land and resources for traditional purposes by Indigenous groups. The follow-up program element would be developed and implemented in consultation with Indigenous groups, Transport Canada, DFO, and other relevant federal authorities, as described in a joint letter to IAAC on March 15, 2022, from the port authority, Tsawwassen First Nation, and Musqueam Indian Band.

Thus, the proposed mitigation measures described in **Section 2.1.2** above, combined with the marine shipping follow-up program element, increase confidence in the prediction that project operation and marine shipping incidental to the project are unlikely to interfere with SRKW's life functions within its critical habitat and will not jeopardize SRKW survival or recovery.

Additional measures for Dungeness crab and current use

In consultation with Indigenous groups, the port authority has proposed new measures to mitigate potential effects to crab during construction, including the following:

- Conducting additional crab salvage activities prior to dredging during the Dungeness crab fisheries-sensitive window, including deploying baited closed-traps to lure Dungeness crabs (including gravid females) away from the dredge area
- Collaborating with Musqueam Indian Band and Tsawwassen First Nation on a stewardship initiative identified as a priority by the nations, to retrieve and dispose of crab ghost gear (i.e., lost or discarded fishing gear), which can inadvertently harm and kill crabs and other marine life
- 12.5 ha to 14.5 ha of native eelgrass offsetting are planned at Roberts Bank for the project and will directly benefit multiple life stages of Dungeness crab, including juveniles, adults, and gravid females

Further, the port authority notes that the follow-up program element for current use of lands and resources for traditional purposes (current use) includes the identification of parameters to monitor changes in environmental components identified as important for current use, including crab, and that this is reflected in draft condition 12.4, with revisions and additions suggested by the port authority in **Appendix 3.2-A** of this submission.

Other measures

In addition to the measures described above for the project, the port authority has advanced a variety of other measures, in consultation with or based on input from Indigenous groups, including the following:

- Providing a \$30 million Prey Abundance Fund to support the availability of Chinook salmon for SRKW, which will be developed in collaboration with Indigenous groups and federal authorities
- Preparing a Biofilm Habitat Creation Guidance Manual, to document methods to create biofilm habitats that could support western sandpipers and other shorebirds
- Advancing a biofilm creation or enhancement project, an opportunity to apply techniques from the manual in a local project case study, in consultation with Indigenous groups with a focus on areas important to migratory shorebirds and Indigenous priorities

2.1.3 Legally binding and enforceable conditions

IAAC posted draft conditions for the project on the registry on December 15, 2021 ([CIAR #2086](#)). These draft conditions were developed by IAAC based on the recommendations in the federal review panel report, commitments made by the port authority during the environmental assessment, and input provided by federal authorities, including the port authority, provincial agencies, Indigenous groups, and other parties (in response to a previous draft of the potential conditions provided to those parties in October 2020).

The draft conditions include distinct conditions, including sub-conditions, that would require the port authority to develop and implement mitigation measures and follow-up programs, among other actions, to mitigate the potential adverse environmental effects of the project, to verify the accuracy of the environmental assessment, and to determine the effectiveness of mitigation measures. The conditions would require the port authority to develop and implement modified or additional mitigation measures if monitoring in the context of the follow-up program indicates an unforeseen environmental effect or if mitigation measures are not as effective as predicted.

Several of the draft conditions go beyond the recommendations made by the review panel and previous port authority commitments to address points identified by the review panel. For example, the draft conditions include a greenhouse gas management plan and follow-up program (draft conditions 3.2 and 3.3), as well as an Indigenous health follow-up program (draft condition 13.1).

The conditions include measures to address effects on air quality and climate (greenhouse gas emissions), atmospheric noise and vibration, light, the physical marine environment, fish and fish habitat, marine mammals, terrestrial vegetation and wetlands, avifauna, the current use of land and resources for traditional purposes by Indigenous peoples, health and socio-economic conditions, physical and cultural heritage, and any structure, site, or thing of historical, archaeological, paleontological, or architectural significance. The conditions also include measures to address potential effects arising from accidents or malfunctions, and measures for consultation and monitoring oversight, as well as administration requirements, such as reporting.

As noted in the preamble to the draft conditions, any conditions established by the minister under CEAA 2012 would be legally binding on the proponent. Further, “[p]ursuant to section 184 of the *Impact Assessment Act*, a Decision Statement issued by the Minister under subsection 54(1) of the *Canadian Environmental Assessment Act, 2012* is deemed to be a Decision Statement issued under subsection 65(1) of the *Impact Assessment Act*, other than for the purposes of section 70.” This means that the conditions of a decision statement for RBT2 would be fully enforceable under the new Act.

The draft conditions form a comprehensive mitigative and adaptive management framework for the project, rooted in the careful and precautionary assessment, to mitigate the potential adverse environmental effects of the project, and increase certainty in effect predictions and mitigation effectiveness.

In **Section 3.2** and **Appendix 3.2-A** of this submission, the port authority has suggested revisions and additions to the draft conditions, including new conditions focused on key points, to ensure the measures are feasible, within the port authority’s ability to implement, and focused on potential effects predicted to result from the project. The port authority’s rationale for the suggested revisions and additions is provided in **Appendix 3.2-A** for each condition as appropriate.

2.1.4 Measures to address regional and cumulative effects

Following the issuance of the review panel report, the Government of Canada has also prepared the draft Whole of Government Response, which goes further in addressing points identified by the review panel by identifying measures, including regional initiatives, that the Government of Canada is implementing or will implement to address key points such as marine shipping and cumulative effects.

The draft Whole of Government Response includes the measures that the Government of Canada has previously committed to implement in relation to the Trans Mountain Expansion (TMX) project. As further discussed in **Section 3.3** of this submission, the port authority agrees with the Governor in Council that the implementation of these measures would mitigate the cumulative effects of all marine shipping, including existing and ongoing container vessel traffic, and would materially improve the health of the Salish Sea. The port authority further agrees that implementation of these measures by the Government of Canada will mitigate potential adverse cumulative environmental effects on SRKW.

In general, the actions and initiatives outlined in the draft Whole of Government Response will serve to mitigate adverse environmental effects associated with marine shipping incidental to the project, as well as other potential project and cumulative environmental effects.

The potential effects and cumulative effects of the project will be mitigated by the conditions that would be imposed on the proponent (with revisions and additions suggested by the port authority in **Section 3.2** and **Appendix 3.2-A** of this submission) and by the actions that are being and will be taken by the Government of Canada (as outlined in the draft Whole of Government Response). Nevertheless, the port authority notes that there are **additional** available measures that can be implemented by the Government of Canada to address regional-scale issues and further mitigate cumulative effects if the federal government deems them to be appropriate. These are outlined in **Section 3.3.3** of this submission.

2.1.5 Economic benefits of the project

In its response to the minister's IR, the port authority updated the economic impact analysis for the project. That analysis confirms that the project will help support Canada's economic growth, and provide substantial benefits to local communities, the province, and the country.

The updated analysis in IR2020-7 ([CIAR #2083](#)) reflects forecasted container volumes for Canada's West Coast terminals, and refinements to the project construction and operational design, schedule, capital and operational expenditures, and labour requirements. It takes into consideration the effect of the global COVID-19 pandemic on demand for container trade and associated infrastructure requirements, and the importance of the project in supporting supply chain resiliency and efficiency in post-pandemic economic recovery. The analysis also takes into consideration updated information on the construction and transportation labour force and other economic conditions nationally, and within British Columbia, Metro Vancouver, and local municipalities.

The findings of the updated economic impact analysis confirm that the RBT2 Project would result in the following:

- Provide significant benefits to Canada, British Columbia, and Metro Vancouver by supporting economic growth
- Create tens of thousands of well-paying, family-supporting jobs during construction and operation
- Generate hundreds of millions of dollars annually in combined federal, provincial, and municipal tax revenues during operation
- Measurably support increased Canadian gross domestic product (GDP) to a degree that few projects can

In addition to supporting the minister's decision on the project, information generated from the updated economic impact analysis supports the port authority's commitments to, and ongoing engagement with, Indigenous groups on training, employment, and procurement opportunities pertaining to the project, and engagement with municipalities and other stakeholders on local and regional economic benefits and opportunities.

2.1.6 Benefits for and agreements with Indigenous groups

Throughout the environmental assessment, the port authority has been committed to environmental stewardship in consultation with Indigenous groups, local governments, and communities and stakeholder interest groups. The prioritization of a thorough and comprehensive consultation process with Indigenous communities has resulted in significant enhancements to the project, and to increased benefits and opportunities for Indigenous groups through close collaboration on key topics of interest and concern.

Ongoing consultation with Indigenous groups has played a critical role in the development of the RBT2 Project. The port authority began project-related consultation with Indigenous groups in 2011 and has since extensively consulted with 46 Indigenous groups,⁴ as directed by IAAC. The port authority's comprehensive, multi-phased consultation program has allowed for the integration of Indigenous knowledge throughout all phases of project development.

Since August 2020 (up to February 18, 2022), the port authority conducted 282 one-to-one meetings with Indigenous groups and it has organized 25 multi-group workshops to discuss the port authority's IR responses on the topics of fish and fish habitat, offsetting, juvenile salmon, SRKW, Dungeness crab, and biofilm. As part of its ongoing consultation with Indigenous groups, the port authority has continued and

⁴ Indigenous groups are listed in Appendix A11 of IR2020-5 ([CIAR #2083](#)).

will continue its collaborative work with Tsawwassen First Nation and Musqueam Indian Band as the port authority further advances planning related to their project priorities through regular technical meetings, site visits, ongoing dialogue, and other jointly planned activities. The port authority will also continue to work with Tsleil-Waututh Nation on their key project priorities. The port authority remains committed to advancing the project in a way that is guided by and reflects Indigenous groups' knowledge, perspectives, experience, and input.

The port authority has also continued and will continue to consult and collaborate with Indigenous groups regarding economic development opportunities, including training, capacity building, employment, and procurement, with a key focus on alignment between local Indigenous group's economic objectives and aspirations and compatibility with the project. The port authority's approach to working with Indigenous groups and to ensuring strong and mutually respectful relationships, which includes collaborative planning on key priority areas of the project, supports progress in moving along the continuum of economic reconciliation.

As of February 2022, the port authority has finalized mutual benefit agreements with 20 Indigenous groups for the project with letters of consent, support, or non-opposition posted to the project registry.⁵ The port authority has continued to make positive progress in benefit agreement discussions with additional Indigenous groups. The agreements provide benefits to Indigenous groups, including employment and contracting, training, and funding to support each nation's priorities, such as environmental stewardship, cultural programs, educational scholarships, and capacity development. Ongoing, positive discussions with other Indigenous groups continue regarding project benefits and agreements. As well, capacity funding continues to be offered to Indigenous groups to support their participation in project consultation activities and the environmental assessment process through regular meetings, site visits, and workshops, and groups have been supported virtually during the pandemic with fieldwork videos, virtual engagement, and development of the online RBT2 consultation portal.

2.1.7 Updated assessment outcomes

Taking into account the updated container vessel forecasts, the substantially improved mitigation measures and follow-up program proposed by the port authority, the measures that will be required by the potential conditions (with revisions and additions suggested by the port authority), and the measures that are being and will be implemented by the Government of Canada (as outlined in the Whole of Government Response), neither the project nor marine shipping incidental to the project is likely to result in any significant adverse environmental effects.

Even if, notwithstanding the considerable advancements in mitigation and the greater certainty regarding the potential effects of the project, including incidental marine shipping, the minister were to decide the project is likely to cause an incremental significant adverse environmental effect, any such effects are justified in the circumstances by the need for the project and the significant benefits that will accrue if the project were to proceed.

⁵ Letters of consent, support, or non-opposition have been provided by Cowichan Tribes ([CIAR #2045](#)), Ditidaht First Nation ([CIAR #2075](#)), Esquimalt Nation ([CIAR #2077](#)), Halalt First Nation ([CIAR #2045](#)), Lake Cowichan (Ts'uubaa-asatx) First Nation ([CIAR #1371](#)), Lyackson First Nation ([CIAR #1992](#)), The First Nations of the Maa-nulth Treaty Society, representing five First Nations ([CIAR #2073](#)), Malahat Nation ([CIAR #2045](#)), Métis Nation British Columbia ([CIAR #1722](#)), Musqueam Indian Band ([CIAR #2087](#)), Pauquachin First Nation ([CIAR #2074](#)), Penelakut Tribe ([CIAR #2078](#)), Scia'new (Beecher Bay) First Nation ([CIAR #2076](#)), Stz'uminus First Nation ([CIAR #2045](#)), T'Sou-ke Nation ([CIAR #2082](#)), and Tseycum First Nation ([CIAR #1111](#)). See Section 2.5 of this submission for further details on specific letters.

As Parliament has confirmed, Canada's interests are served by promoting and safeguarding the competitiveness, growth, and prosperity of the Canadian economy and that marine infrastructure, and ports in particular, are needed for that purpose.⁶ As stated in the *Canada Marine Act*, section 4 (a), port authorities **must**

“implement marine policies that provide Canada with the marine infrastructure that it needs and that offer effective support for the achievement of national, regional and local social and economic objectives, and will promote and safeguard Canada's competitiveness and trade objectives”

The RBT2 Project is a critical investment in marine-side port infrastructure on the West Coast of Canada to support Canadian trade. As several years of forecasts predict and increasing volumes and constrained capacity demonstrate, additional container terminal capacity is urgently needed at the Port of Vancouver to ensure Canada's supply chain can continue to move goods efficiently and reliably and, as a result, support our economy. The need for the project has been demonstrated throughout the environmental assessment and confirmed by the review panel and Transport Canada, as noted in **Section 2.3.1** of this submission. This project will help protect Canadian trade competitiveness and economic resiliency and will ensure environmental enhancement initiatives focused on key species and benefits to Indigenous groups and local communities can be realized.

The RBT2 Project is in the public interest because it is needed imminently to provide adequate container capacity and avoid impacts of inadequate capacity and supply chain congestion, will deliver important economic benefits, and is aligned with, and supports, Canada's expressed international trade objectives and economic development goals (including post-COVID recovery). The project will also support and continue the relationship Canada has with Indigenous peoples and the need for economic reconciliation, and the prioritization of environmental initiatives that support the long-term survival of critical species.

In conclusion:

- The RBT2 Project is in Canada's national interest, can be built in an environmentally responsible manner and will provide benefits to Indigenous groups, local communities and businesses, and provincial and national supply chain partners.
- As demonstrated in the material on record to date, including the information provided by the port authority in response to the minister's IR, a comprehensive proposal for mitigation measures is in place. The effects of the project and cumulative effects are mitigable both by the measures required by the conditions that would be imposed on the proponent and by the actions that are being taken, will be taken, and can be taken by the Government of Canada.
- The information provided in the port authority's response to the minister's IR is complete and, together with the review panel report, is sufficient for the minister to make decisions on the project. Through the additional measures and advancements described in the IR response, the draft conditions, and regional initiatives underway as proposed by the Government of Canada the potential adverse effects of the project have been further mitigated and it is in the public interest for the project to proceed.
- Any potentially significant adverse environmental effects, including any cumulative effects, would be justified because the project is needed and will deliver important and significant economic benefits locally, regionally, provincially, and nationally, as well as benefits to Indigenous groups, including through agreements with numerous groups
- It is in the public interest to approve the project to proceed.

⁶ *Canada Marine Act*, S.C. 1998, c. 10, section 4(a), (a.1)

2.2 Key topics

This section of the port authority's submission provides a high-level overview of several key topics that are relevant to understanding the port authority's view on updated assessment outcomes (described in **Section 2.1**), its feedback on the draft conditions (described in **Section 3.2** and **Appendix 3.2-A**), and its response to the submissions of other parties (in **Sections 2.3 to 2.6**).

2.2.1 Marine shipping / container vessel projections

An understanding of how container vessel traffic to and from the Port of Vancouver will change, with or without the RBT2 Project, is important for understanding the potential effects of the project, including marine shipping incidental to the project, and for drafting appropriate and feasible conditions.

Number of vessels projected to be the same

Updated projections prepared on behalf of the port authority demonstrate that, for the most-realistic scenario, the number of container vessels calling at the Port of Vancouver in the future will be the same with or without RBT2 (see IR2020-3 ([CIAR #2083](#))). This may seem counter-intuitive; however, this outcome is consistent with the container vessel traffic and cargo volume throughput trends in the Port of Vancouver since around 2000, as well as the trend observed in every major global trade lane over approximately the last 20 years.⁷ As the volume of cargo moving through the Port of Vancouver has steadily increased, the number of container vessels has remained relatively consistent. This is because container vessel size has increased, allowing more cargo to be moved with a similar number of vessels. It is more efficient and economical for container lines to deploy larger vessels than a greater number of smaller vessels. The updated projections show that this trend will continue in the future.

In its submission of February 9, 2022 ([CIAR #2298](#)), Transport Canada noted the following with respect to the updated vessel forecasts in the most realistic scenario:⁸

"Transport Canada has reviewed the IR2020-3-B Updated Roberts Bank Terminal 2 container vessel call forecast study and finds that it is well-constructed, that it accounts for expected future developments in the container shipping industry, the possible evolution of the global container market, and possible future trade patterns. Transport Canada's assessment is that the forecast contains plausible projections of future vessel traffic at the Port of Vancouver." p.2

Vessel and consignment sizes will increase, maintaining high terminal utilization

Once RBT2 is operational, it will provide additional land-side terminal capacity in the Port of Vancouver. The distribution of container vessel calls at Port of Vancouver container terminals is projected to re-align with this new terminal capacity, as well as with RBT2's ability to accommodate larger vessels. Some of the container vessel services that currently call on the existing Port of Vancouver terminals will call on RBT2 instead. With RBT2, there will be fewer container vessels calling at Burrard Inlet and Deltaport, but the utilization of all existing terminals will remain high. This is because carriers will be able to move more cargo into and out of the Port of Vancouver because there will be more terminal capacity. The increased cargo throughput will be accomplished using the same number of vessels because the vessels calling the Port of Vancouver will be slightly larger on average and the number of containers to be loaded and

⁷ Appendix IR2020-3-B ([CIAR #2083](#))

⁸ DFO deferred to Transport Canada in this regard, noting "DFO understands that Transport Canada is providing comments on the technical merit of the new container vessel projections provided by the Proponent." ([CIAR #2407](#), p.43)

unloaded to and from each vessel (the consignment size) will increase. This process of overall vessel size increase and consignment size increase is the most efficient and economical means of accommodating higher container volumes and is the way in which the industry has repeatedly accommodated growing volumes in all major trade lanes worldwide. This increase in average vessel size will happen whether RBT2 proceeds or not, but the increase will be slightly larger with RBT2.

In summary, by 2045, in the most realistic scenario, it is projected that the project will not change the total number of container vessels calling at the Port of Vancouver overall and will not change the number of container vessels transiting the marine shipping area between the Port of Vancouver and the 12 nautical mile limit of Canada's territorial sea, but an increase in the number of vessels calling at RBT2 and a corresponding decrease at Deltaport and Burrard Inlet terminals is projected. Higher cargo throughput in the Port of Vancouver will be achieved with the use of larger container vessels (on average, which is expected with or without RBT2, but the average size will be slightly higher if RBT2 proceeds), and larger consignment sizes per vessel.

It is important to understand that, if the RBT2 Project does **not** proceed, container vessels will continue to call at existing Port of Vancouver terminals and will still increase in size on average in the future; the environmental effects associated with container vessel traffic would therefore continue (including longer transits to Burrard Inlet terminals), but none of the significant economic benefits associated with increasing cargo throughput and enhancing trade competitiveness would be realized.

Mitigation measures to be implemented by the proponent

The potential conditions for the project must be drafted in a manner that is consistent with those predicted changes. Further, the potential conditions must be drafted taking into account the key principles outlined in **Section 3.1** of this submission; in particular, conditions must be feasible to implement and within the care and control of the proponent. This is acknowledged by DFO in its recent submission, which states "the Proponent cannot directly regulate navigation outside of the Port of Vancouver" and notes that, if additional mitigation measures are needed, "the Proponent implement modified or additional measures within its control" ([CIAR #2407](#), p.47). It is also acknowledged that the Government of Canada does and can implement measures within navigable waters to address environmental effects from marine transportation (see section below).

With respect to the predicted changes in the vicinity of RBT2, the potential conditions as currently drafted include a suite of mitigation measures and follow-up program elements aimed at addressing the potential environmental effects of the construction and operation of the marine terminal. With the revisions suggested by the port authority (see **Section 3.2** and **Appendix 3.2-A** of this submission), those conditions will be feasible, within the care and control of the proponent, and will effectively mitigate the potential effects of the project, including the changes associated with the re-distribution of container vessel traffic within the Port of Vancouver and the incremental increase in average container vessel size.

With respect to marine shipping incidental to the project in the marine shipping area, it is appropriate that the potential conditions focus on verifying the most realistic container vessel traffic projections and establish a mechanism for action to be taken (i.e., adaptive management) if marine shipping incidental to the project results in unforeseen effects. This would be commensurate with the port authority's predictions regarding container vessel traffic. Both Transport Canada and DFO, in their recent submissions, agree

with this general approach (e.g., see p.43⁹ and p.46¹⁰ of DFO's submission, p.12¹¹ of Transport Canada's submission).

Further, the conditions imposed on the port authority must clearly differentiate between actions that can and should be taken by the proponent (which should be focused on predicted effects of the project) and actions that can and should be taken by the federal government.

Measures to be implemented by the Government of Canada

The responsibility for addressing cumulative effects in the marine shipping area properly lies with the federal government, which has legislative authority over vessel traffic and fishing in the marine shipping area (which the port authority does not) and with the federal departments that administer that authority. This is consistent with the approach taken by the Government of Canada with respect to the recent approval of the TMX project, in respect of which the regulator (the then National Energy Board, now Canadian Energy Regulator (CER)) made recommendations to the Governor in Council for consideration in deciding whether to approve the project. Those included measures for the Government of Canada to "mitigate, avoid or lessen the effects of project-related marine shipping that are beyond the scope of the CER's regulatory authority and TMC's [the proponent's] control, but within the authority of the government".¹² In the Order in Council allowing that project to proceed, the Government of Canada accepted all of the National Energy Board's recommendations relating to marine shipping ([TMX Orders in Council, 2019](#)).

This approach should be applied to the RBT2 Project as well. In this regard, the port authority understands that the Government of Canada has taken and intends to take steps to address cumulative effects of concern in the marine shipping area, including the initiatives described in the draft Whole of Government Response and in the submissions by Transport Canada and DFO ([CIAR #2298](#) and [CIAR #2407](#)).

The port authority acknowledges that the Government of Canada already implements measures to address cumulative effects from marine transportation through federal programs such as the Oceans Protection Plan launched in 2016 to protect Canada's coasts and waterways and enable their safe and responsible commercial use. The federal government recently announced in its 2022 budget an ongoing and additional financial commitment over the next decade to renew and expand the Oceans Protection Plan starting in 2022-2023 to strengthen marine safety, protect marine ecosystems, and create stronger partnerships with Indigenous and coastal communities.

It is appropriate that the potential conditions for the project contemplate the participation of the proponent in those initiatives. As stated in its closing remarks to the public hearing, the port authority is prepared to actively participate as a key stakeholder in these federal initiatives and is committed to continue to collaborate and provide assistance to the other federal authorities leading those measures, when requested ([CIAR #2045](#)).

⁹ "..., DFO recommends that the Project decision statement include enforceable conditions that hold the Proponent accountable to its updated underwater noise predictions and mitigations..." [CIAR #2407](#), p.43

¹⁰ "... DFO recommends that the Project decision statement include enforceable conditions requiring additional mitigation measures be implemented should underwater noise from container vessels calling the Port of Vancouver exceed the predictions for the most realistic vessel scenario..." [CIAR #2407](#), p.46

¹¹ "...the Proponent should be required to develop and implement an Adaptive Noise Management Plan which will include monitoring, and measurement to ensure the established noise baseline is not exceeded (even at full operation)" [CIAR #2298](#), p.12

¹² "What informed the Government decision", accessed online here:

<https://www.canada.ca/en/campaign/trans-mountain/what-is-tmx/the-decision/background2.html>.

Further, the port authority has identified additional measures (see **Section 3.3** of this submission) that could be implemented by the Government of Canada to address issues related to marine shipping identified during the environmental assessment and which should be reflected in the final Whole of Government Response if the Government determines those measures are necessary to mitigate effects of marine shipping. As described in IR2020-3 ([CIAR #2083](#)), these additional measures would also serve to mitigate potential effects associated with an increase in container vessel traffic due to the project, were one to occur (although, as noted above, no increase is projected in the most-realistic scenario). In its recent submission ([CIAR #2298](#)), Transport Canada reviewed these measures and concluded the following:

“Transport Canada believes that these solutions will be feasible at ensuring that marine shipping-related underwater vessel noise impacts as a result of Roberts Bank Terminal 2 are mitigated or avoided throughout the operational life cycle of the project. Furthermore, these solutions, and the proposed draft conditions, are appropriate as they target the environmental impact of the vessel traffic (underwater noise) rather than the activity itself.” p.6

And further:

“These measures, in concert with proposed mitigations under *IR2020-3-E Underwater Noise Modelling of RBT2 Marine Shipping: Container Vessel Transit Exposure Model*, and proposed conditions on limiting vessel noise, should serve to address any marginal increase in underwater vessel noise if vessel projections align with vessel forecasts.” p.7

Transport Canada also reiterated its “commitment to continue to work with the proponent on implementing additional mitigation and/or adaptive management measures” that it listed in its submission (as required).

Transport Canada went on to note the following:

“TC anticipates that marine shipping associated with the project would be unlikely to impact Indigenous communities’ right to harvest or exercise cultural practices in the marine shipping lanes beyond the impact that will exist if the project is not built.” p.5

2.2.2 Underwater noise / SRKW

The project contribution to underwater noise and related effects to SRKW must also be understood in the context of the updated container vessel projections for the project.

No additional sources of noise in the marine shipping area

As explained in **Section 2.1.1** above, in the most-realistic scenario, the number of container vessels that will transit the marine shipping area to call on the Port of Vancouver in the future will be the same with or without the RBT2 Project.

That means the RBT2 Project is not projected to add any more sources of underwater noise in the marine shipping area in the most realistic scenario. This is in direct contrast to the approved TMX project, which is projected to add 360 additional ship calls (720 additional transits), as well as escort tugs, annually in the marine shipping area, adding new sources of underwater noise and increasing cumulative underwater noise levels in the marine shipping area.

Over time, as cargo demand grows, the average size of container vessels calling on the Port of Vancouver is projected to slightly increase both with and without the RBT2 Project. If the RBT2 Project proceeds, that average vessel size increase will be slightly greater, as the Roberts Bank terminals will be

able to handle larger ships. However, the increase in underwater noise associated with the slight increase in average container vessel size is very small in the marine shipping area. As explained in IR2020-3 (CIAR #2083), under the most-realistic vessel scenario, only small changes are predicted in the sound exposure level metrics with the project and, with project-specific mitigation, marine shipping incidental to the project is not anticipated to reduce the quality of the acoustic environment in a way that would affect SRKW's ability to forage or affect other life functions.

This finding is corroborated by Transport Canada in its recent submission (CIAR #2298):

"Given the proposed draft condition to limit underwater noise, including additional measures proposed by TC and identified in Part 4, Transport Canada's commitment to continue to work with the proponent on implementing additional mitigation and/or adaptive management measures listed above (as required), the ongoing regional efforts under the Whales Initiative, and the *IR2020-3-B Updated Roberts Bank Terminal 2 container vessel call forecast study*, it is anticipated that marine shipping associated with the project is not likely to result in an increase in underwater noise." p.3

Mitigation measures to be implemented by the proponent

With respect to the local increase in the number of ships predicted at RBT2, and the local change in underwater noise levels at the terminal, the potential conditions as currently drafted include a suite of construction and operation mitigation measures and a follow-up program aimed at addressing the potential environmental effects of the construction and operation of the marine terminal. With the revisions suggested by the port authority (see **Section 3.2** and **Appendix 3.2-A** of this submission), those conditions will be feasible, within the care and control of the proponent, and will effectively mitigate the potential effects of the project, including those on SRKW from changes in underwater noise associated with the re-distribution of container vessel traffic that is projected to occur within the Port of Vancouver and the incremental increase in average container vessel size.

Further, other feasible draft conditions for the project (with revisions suggested by the port authority in **Appendix 3.2-A** of this submission), including measures that would contractually require container vessels calling at RBT2 to participate in the port authority-led ECHO Program, or equivalent, will serve to mitigate effects on SRKW related to the underwater noise generated by the project. The port authority has also proposed revisions and/or new conditions related to the marine shipping follow-up program that would establish an adaptive management approach to monitor and mitigate any unforeseen effect on SRKW due to marine shipping incidental to the project. As noted in **Section 2.2.1** above, both Transport Canada and DFO, in their recent submissions, agree with this general approach (e.g., see p.43 and p.46 of DFO's submission, p.12 of Transport Canada's submission—see footnotes above).

Thus, the contribution of the project to underwater noise has been assessed and the related effects are mitigable through the measures proposed by the port authority and reflected in the draft conditions (with revisions suggested by the port authority in **Appendix 3.2-A** of this submission). With these measures in place, **the project will not jeopardize the survival or recovery of SRKW.**

Measures taken by the Government of Canada to address cumulative effects

The port authority recognizes the concern regarding existing and ongoing cumulative effects on SRKW due to underwater noise and other threats.

The Government of Canada is committed to “continue to work in collaboration with Indigenous groups and other stakeholders to promote activities that contribute to the survival and recovery of the SRKW.”¹³ This commitment was made in the Order in Council by the Governor in Council in November 2018. In that Order, the Governor in Council decided, not “to make an emergency order for the protection of the killer whale Northeast Pacific southern resident population”. The Order was made after considering the imminent threat assessment provided by the Minister of Fisheries and Oceans and the Minister of Environment and Climate Change. The Governor in Council decision was founded on the current protection of SRKW critical habitat¹⁴ and in consideration of measures that “have been taken, continue to be taken, and will be taken by the Government of Canada and other organizations to address” the imminent threats to the survival and recovery of SRKW. The Governor in Council concluded that the “measures, considered together, will contribute to abating the imminent threats to the survival and recovery of the SRKW.” The port authority is one of the organizations that is leading and advancing measures listed in the Order with respect to acoustic and physical disturbance. Specifically, the port authority is leading the ECHO Program, which is a multi-party initiative that includes the development and implementation of initiatives that achieve measurable noise reductions and reduced adverse effects on SRKW. Further, the suite of measures proposed by the port authority to mitigate potential project effects to SRKW reflect the measures that the Governor in Council describes in its Order. These include committing to continue to manage the ECHO Program and its initiatives and to signing on for an additional five-year term of the Conservation Agreement to support the recovery of the SRKW, if other parties agree.

Similar issues were raised in relation to the TMX project, which was approved by the Government of Canada. In that case, the Government of Canada recognized its role in implementing measures to mitigate effects of marine shipping that are beyond the scope of the proponent’s control, but within the authority of the federal government ([TMX Orders in Council, 2019](#)). Further, the Government of Canada, in approving the TMX project, expressed confidence in the effectiveness of the measures that have been and continue to be put in place by the federal government to mitigate effects of marine shipping and other threats to SRKW.¹⁵

It is important to note that the Government of Canada recognized that the impacts of the new additional marine shipping added by the TMX project represent only a small proportion of the activity that contributes to the cumulative effects on SRKW.¹⁶ The contribution of the marine shipping incidental to the RBT2 Project to cumulative effects in the marine shipping area for the most realistic scenario would be orders of magnitude smaller, given it is not projected to add any new container vessel transits.

The initiatives that the Government of Canada deemed appropriate to address underwater noise and related effects to SRKW from the TMX project—“intended to reduce cumulative effects on the whales and are designed to more than offset the impacts of project-related traffic including vessel noise and strikes”—will also serve to address those same types of effects that are already occurring in relation to existing container vessel traffic to and from the Port of Vancouver. This is reflected in the draft Whole of Government response for RBT2, as well as the submissions by Transport Canada and DFO, which

¹³ Order Declining to make an Emergency Order for the protection of the Killer Whale Northeast Pacific Southern Resident Population: SI/2018-102, accessible online here: <https://gazette.gc.ca/rp-pr/p2/2018/2018-11-14/html/si-tr102-eng.html>

¹⁴ <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2018-278/page-1.html>

¹⁵ “Trans Mountain Expansion will fund Canada’s future clean economy”, news release, Prime Minister of Canada, June 18, 2019, accessible online here: <https://pm.gc.ca/en/news/news-releases/2019/06/18/trans-mountain-expansion-will-fund-canadas-future-clean-economy>.

¹⁶ “Protecting the Southern Resident Killer Whale”, accessible online here: <https://www.canada.ca/en/campaign/trans-mountain/protecting-the-environment/background6.html>.

identify the various initiatives that the Government of Canada intends to apply to address the issues raised in relation to RBT2. These measures are addressing and will continue to address the existing and future cumulative effects associated with all marine shipping, including container vessels, in the marine shipping area, and will “make material improvements to the health of the Salish Sea” ([TMX Orders in Council, 2019](#), Explanatory Note).

Additional available measures

In IR2020-3 ([CIAR #2083](#)), the port authority identified and assessed the effectiveness of additional contingency mitigation options that could be implemented in the unlikely event that underwater noise from container vessels is higher than predicted. These measures could further mitigate existing and ongoing effects on SRKW due to cumulative underwater noise levels in the marine shipping area. The evaluation was focused on vessel slowdowns because these methods are available today and have been proven to be effective; the effective measures include further reducing container vessel speeds, increasing the duration of vessel slowdowns (i.e., number of months), and expanding the slowdown areas. In its submission ([CIAR #2407](#), p.46), DFO noted it “considers the contingency mitigation put forward by the Proponent as potential offsets for potential increases in underwater noise due to additional container vessels transiting to the Port of Vancouver.”

As these measures are outside the care and control of the proponent, they cannot be implemented by the proponent, and therefore cannot be included in conditions directed to the proponent. However, these measures are available now for implementation by the Government of Canada and could be included in the Whole of Government Response for RBT2, if the federal government determines that additional measures are needed to address underwater noise and the cumulative effects of marine shipping (see **Section 3.3** of this submission). Transport Canada concluded the following ([CIAR #2298](#)):

“These measures, in concert with proposed mitigations under *IR2020-3-E Underwater Noise Modelling of RBT2 Marine Shipping: Container Vessel Transit Exposure Model*, and proposed conditions on limiting vessel noise, should serve to address any marginal increase in underwater vessel noise if vessel projections align with vessel forecasts.” p.4

And further:

“Transport Canada believes that these solutions will be feasible at ensuring that marine shipping-related underwater vessel noise impacts as a result of Roberts Bank Terminal 2 are mitigated or avoided throughout the operational life cycle of the project.” p.3

Further, the draft conditions can and do (with revisions suggested by the port authority in **Appendix 3.2-A**) require the proponent to work with other federal authorities and Indigenous groups to identify feasible measures that can be implemented by others and to share those measures with IAAC and the other federal authorities. In their recent submissions, both Transport Canada and DFO acknowledged their intention to continue collaboration with the port authority to identify and implement effective mitigation measures for SRKW (e.g., [CIAR #2298](#) Transport Canada, p.13, [CIAR #2407](#) DFO, p.47).

Potential effects are mitigable

Taken together, the draft conditions (with revisions and additions suggested by the port authority in **Section 3.2** and **Appendix 3.2-A** of this submission), as well as measures to be implemented by the proponent, government accommodation measures and ongoing federal action (as outlined in the draft Whole of Government response and in DFO and Transport Canada’s submissions), will mitigate (including offset) the effects of the project, including marine shipping incidental to the project, on SRKW. This is consistent with the Government of Canada’s own approval of TMX, a project that would add substantially more marine shipping than RBT2 (which is projected to add none).

2.3 Response to themes raised by other parties

During the public comment period on the additional information provided by the port authority in response to the minister's IR and on the draft potential conditions, numerous submissions were made by other parties, including other federal authorities, provincial agencies, Indigenous groups, members of the public, and non-government organizations. The port authority acknowledges and appreciates the continued participation in the environmental assessment of all parties and values the constructive input received to date.

The submissions by other parties raise points that warrant a response by the port authority. This section of the port authority's submission provides the port authority's response to several common themes raised by other parties. Several key themes were identified:

- The need for the project
- Uncertainty, precaution, and the precautionary principle
- Sound and credible science
- Mitigation effectiveness
- Reliance on follow-up programs and adaptive management
- Justification of significant adverse environmental effects
- Timing of decision-making

Note that where other parties have made specific suggestions for revisions to the draft potential conditions that warrant response, the port authority's response to those suggestions is provided in:

- **Appendix 2.4-A** Response to comments of government on draft conditions
- **Appendix 2.5-A** Response to comments of Indigenous groups on draft conditions
- **Appendix 2.6-C** Response to comments of non-government organizations on draft conditions

2.3.1 Need for the project

The review panel recognized that additional container terminal capacity on the West Coast is needed. Based on additional information provided by the port authority since the review panel issued its report, Transport Canada has further concluded that "the Pacific Gateway could face structural congestion by 2027 in the absence of further container capacity expansion" and agrees with the review panel that there is a need for the project" ([CIAR #2298](#)). Further, through consultation, stakeholders, including chambers of commerce and supply chain industry stakeholders (as described further below), have reinforced the need for the project and the importance of ensuring that Canada's ports have the capacity to get Canadian goods to global markets.

However, a number of comments were made in submissions to the registry from members of the public asserting the RBT2 Project is not needed (e.g., [CIAR #2103](#), [CIAR #2142](#)) and, in the words of one person, "will never be needed" ([CIAR #2095](#)). Various reasons are given for the perceived lack of need, including that container demand is or will be lower than forecast and that other West Coast terminals and ports, including the Port of Prince Rupert, have or will have sufficient capacity to handle future demand. These same unsubstantiated assertions were made previously by various parties during the environmental assessment. These assertions are incorrect.

The RBT2 Project is needed, urgently, to provide additional container terminal capacity in the vital West Coast trade gateway to ensure Canada's increasingly challenged supply chains can continue to move

goods efficiently and reliably. The consequences if additional capacity is not added in a timely manner are discussed further below.

The port authority has demonstrated the need for the project by the following:

- The RBT2 Environmental Impact Statement (EIS), Section 2.1 Project Purpose and Objectives and Section 2.2 Project Context, CIAR #181
- The port authority's response to IR1-03 – Purpose of the Project, CIAR #897
- Port authority Undertaking #12 – Project overview and rationale 2016 (requested by the review panel at an orientation session in advance of the public hearing), CIAR #495
- Updated Project Rationale – updated container forecasts, CIAR #1341
- Port authority Hearing Undertaking #5 – Container Capacity Projections, CIAR #1834
- The port authority's closing remarks to the public hearing, [CIAR #2045](#)

The review panel was required to consider the purpose of the project, that is, the underlying rationale. As such, the review panel was required to consider container demand forecasts and existing and planned West Coast terminal capacity, critical factors that underlie the need for the project. The review panel concluded, in particular, that “the Proponent’s container traffic forecast for ports on the west coast provides a sound basis for long term planning and is reasonable,” and, further, “that increases in capacity and efficiency, some of which are already underway at ports on the west coast, will only meet short-term container demand” (Federal Review Panel Report, Section 24.1 Purpose of the Project, [CIAR #2062](#), p.452). Thus, the review panel recognized that, in fact, additional container terminal capacity on the West Coast is needed.

At the request of the minister, the port authority provided additional information relevant to the need for the project (IR2020-7, [CIAR #2083](#)). Following its review of IR2020-7, Transport Canada stated that its “advice remains consistent with the Review Panel conclusions that found there was a need for the Project. Transport Canada found the new information provided by the proponent to be reasonable and consistent with our understanding of West Coast container trade trends” ([CIAR #2298](#)).

Transport Canada considered the port authority’s container demand forecasts and found them plausible ([CIAR #2298](#)), concluding the following:

“...the reports suggest that the Pacific Gateway could face structural congestion by 2027 in the absence of further container capacity expansion.” p.12

The need for the project cannot be overstated, as explained below.

Canada’s container trade

The Port of Vancouver is Canada’s largest and most diversified port and plays an essential role in facilitating Canadian trade. As a Canada Port Authority, the port authority’s role includes planning and providing port infrastructure to support and facilitate trade, while ensuring goods are moved safely, the environment is protected, and local communities are considered.

Canada’s container terminals connect a range of small to large businesses to economies worldwide, ensuring items such as food, pharmaceuticals, and household products reach Canadian communities, and Canadian goods like wheat, specialty crops, and wood pulp can access international markets. Over the past decade, the volume of shipping containers handled by West Coast terminals has increased steadily—between 2012 and 2020, average growth was about 166,400 twenty-foot equivalent units (TEUs) each year. At the Port of Vancouver, just one container represents over \$550 in wages, almost

\$1,000 in GDP, and almost \$2,000 in economic output, demonstrating the integral role they play in Canada's economy.

In 2021, despite the global challenges presented by the COVID-19 pandemic, container trade through the Port of Vancouver has increased by 6% compared to 2020 figures to a record 3.7 million TEUs. This trend is expected to continue, with experts forecasting that Canada's West Coast ports will run out of space to handle container traffic as early as 2025. Forecasts also suggest that by 2030, 6.5 million TEUs will arrive at West Coast ports, but only 5.8 million TEUs can be accommodated with existing terminal capacity. As Canadian trade policies continue to emphasize the importance of exporting our products globally, additional container terminal capacity is urgently needed to accommodate this growth and ensure Canada's supply chain can continue to move goods efficiently and reliably.

As noted above, both the review panel and Transport Canada confirmed that the port authority's container demand forecasts are sound and reasonable/plausible.

Providing needed capacity to future-proof Canada's gateway

In the late 1990s, the port authority began studying how best to address the pending shortfall in container capacity. Since 2003, the port authority has made a series of investments to increase size and improve efficiency at existing container terminals in the Port of Vancouver. However, even with these improvements, as well as efforts underway at the Port of Prince Rupert, there still won't be enough space to accommodate needed container capacity in the next few years (EIS Section 2.1 Project Purpose and Objectives, [CIAR #181](#)).

In its report, the review panel agreed ([CIAR #2062](#)):

"...increases in capacity and efficiency, some of which are already underway at ports on the west coast, will only meet short-term container demand." p.452

Thus, extensive planning, environmental study, consultation, and engagement demonstrate that Canada needs a new marine container terminal on the West Coast. RBT2 will ensure that the long-term demand of Canada's economy for marine container terminal capacity will be met.

The proposed RBT2 Project holds tremendous generational opportunity for Canada. The project's annual design capacity of 2.4 million TEUs will add nearly 50% more container capacity to the Port of Vancouver and 33% more capacity to Canada's West Coast (IR2020-7, [CIAR #2083](#)). This new capacity would help importers meet consumer demand, support Canadian businesses shipping goods to global markets, and ensure that Canada stays open for trade with growing international economies, well into the future.

To this end, the review panel concluded that the port authority, "adequately demonstrated the purpose of the project" and concluded the following ([CIAR #2062](#)):

"the purpose of the project, as described by the proponent, is in line with the regulatory requirements under the [*Canada Marine Act*]...[to] implement policies that provide Canada with the marine infrastructure that it needs and that offer effective support for the achievement of national, regional, and local social and economic objectives, and will promote and safeguard Canada's competitiveness and trade objectives." p.452

Without Roberts Bank Terminal 2

Over the past two years, the acute need for the project has been underlined by significant global and regional supply chain challenges. The unanticipated demand during the COVID-19 pandemic has resulted in increased container dwell time, additional anchorage requirements due to terminal congestion, and a lack of empty containers available for exports. These constraints will likely become a regular

occurrence by the mid- to late-2020s due to continued growth in container demand and will have lasting impacts on local communities (IR2020-7, [CIAR #2083](#)).

Without RBT2, Canada's trade competitiveness is at stake. Increasing congestion at West Coast ports will undermine the port's reliability, weakening trade growth and forcing Canadian businesses to ship goods to and from Canada via U.S. ports. This means that Canadian exporters will be limited in their ability to move goods through the gateway efficiently, importers will face rising costs that will be passed along to consumers, and confidence in Canada as a dependable trading nation will be eroded (IR2020-7, [CIAR #2083](#)).

In its most recent submission ([CIAR #2298](#)), Transport Canada describes the impacts that will result from insufficient container capacity, including increases in freight transportation costs, shrinking profit margins of Canadian importers and exporters, and increasing prices paid by consumers, contributing to inflation, and reducing affordability. Transport Canada also describes other negative impacts on Indigenous people, local communities, and the environment that can result from terminal congestion. Increasing anchorage use has already prompted complaints from Indigenous and coastal communities particularly at Southern Gulf Islands anchorages.

Continued support for the project

Since the port authority began the environmental assessment process for the RBT2 Project in 2013, there have been continued expressions of support from industry stakeholders, which reinforces the urgent need for additional container capacity to relieve long-term supply chain challenges. Letters of support for the project have been submitted to the public registry by organizations, including Canadian Pacific Railway ([CIAR #634](#)), Retail Council of Canada ([CIAR #602](#)), Freight Management Association ([CIAR #566](#)), and BC Chamber of Commerce ([CIAR #648](#)). Local organizations including the Greater Langley Chamber of Commerce ([CIAR #668](#)), Surrey Board of Trade ([CIAR #914](#)), and Greater Vancouver Board of Trade ([CIAR #619](#)), who represent thousands of member businesses, also express support.

Western provincial governments have continued to express their support for the project on the public registry, as their economic strategies rely heavily on the Port of Vancouver to access global markets. Manitoba's Minister of Agriculture ([CIAR #1253](#)) believes the project "will allow goods from Manitoba to be moved efficiently and safely to markets around the world for the foreseeable future," while Alberta's Minister of Transportation ([CIAR #1396](#)) agrees that the project is "a strategic piece of infrastructure with national importance", and Saskatchewan's Ministry of Highways and Infrastructure ([CIAR #80054](#)) "supports this project because it helps ensure the province can meet its expanding export market demands." In addition, the port authority is pleased to have reached mutual benefit agreements and received letters of support from 20 Indigenous groups, as discuss in **Section 2.1.6** of this submission.

Canada cannot wait

The port authority has proposed RBT2 as a long-term solution that will enhance Canada's trade reliability and capacity through the West Coast and has done so in a meaningful and collaborative manner as an agent of the Crown. This includes consultation with Indigenous groups to incorporate Indigenous knowledge into development planning and support the realization of benefits for their communities. This project has been in development for over a decade and will meet the urgent and growing need, as well as Canada's trade objectives. As noted by Transport Canada, "the Pacific Gateway could face structural congestion by 2027 in the absence of further container capacity expansion" ([CIAR #2298](#)). A commitment by government is needed now to realize the benefits of decades of federally funded road and rail infrastructure and trade policy that depends on Canada's largest and most competitive West Coast gateway. This action will support tens of thousands of high-paying Canadian supply chain jobs, increase

Canadian GDP to a degree that few projects can, and provide benefits to Indigenous communities in support of economic reconciliation, providing critical support for post-pandemic economic recovery and future growth, while protecting the environment.

2.3.2 Uncertainty, precaution, and the precautionary principle

A number of comments were made in submissions to the registry from other parties expressing concern about the uncertainty associated with aspects of the environmental assessment, including effect predictions and mitigation measures, and asserting that, in light of the uncertainty and taking the precautionary principle into account, the project should not proceed. These comments reflect a misapprehension of the nature of environmental assessment as both a predictive and precautionary process.

As outlined below and elsewhere in this submission, the environmental assessment of the RBT2 Project has addressed inherent uncertainty through a conservative and precautionary approach, and technically and economically feasible and effective measures are available to manage identified risks going forward. In every respect, the assessment errs on the side of caution.

Environmental assessment is predictive in nature

Environmental assessment is a predictive exercise: it requires the consideration of the likely outcomes of a physical activity in the future. Uncertainty is inherent to prediction. As noted in IAAC's Operational Policy Statement, "Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under CEAA 2012" (2015), "all project EAs involve some level of uncertainty."

In environmental assessment, predictive uncertainty commonly arises from the inherent limitations in the available information about events in the future, such as i) current or future environmental conditions, ii) specific project design details, and iii) mitigation efficacy, and from limitations in analytical or modelling methods used to make predictions. This is addressed routinely in environmental assessment by adopting conservative approaches in the assessment, by designing follow-up programs to verify effect predictions and the effectiveness of mitigation, and by developing contingency plans and other adaptive management measures.

The Updated EIS Guidelines ([CIAR #178](#)) required the proponent to employ these approaches including, among other things, the following requirements:

- Indicate the uncertainty, reliability and sensitivity of models used to reach conclusions (Section 4.2)
- Describe the degree of scientific uncertainty related to the data and methods used within the framework of its environmental analysis (Section 13.1.1)
- Identify any proposed follow-up and monitoring activities, particularly in areas where scientific uncertainty exists in the prediction of effects (Section 10.1.1)
- Include, in the description of the follow-up program, any contingency procedures/plans or other adaptive management provisions as a means of addressing unforeseen effects (Section 11.4)

Certainty not required

That certainty in environmental assessment is not achievable has been recognized by the courts:

"By its nature the panel's exercise is predictive and it is not surprising that the statute specifically envisages the possibility of "follow up" programmes. Indeed, given the nature

of the task we suspect that finality and certainty in environmental assessment can never be achieved.”¹⁷

“[G]iven the predictive function of an environmental assessment and the existence of follow-up mechanisms envisioned by the CEAA, the Panel’s assessment of significance does not extend to the elimination of uncertainty surrounding project effects.”¹⁸

The courts have further recognized that certainty in environmental assessment is also not necessary:

“In sum, the CEAA represents a sophisticated legislative system for addressing the uncertainty surrounding environmental effects. To this end, it mandates early assessment of adverse environmental consequences as well as mitigation measures, coupled with the flexibility of follow-up processes capable of adapting to new information and changed circumstances. The dynamic and fluid nature of the process means that perfect certainty regarding environmental effects is not required.”¹⁹

Adaptive management is one of the mechanisms recognized by IAAC to provide flexibility to identify and implement new mitigation measures or to modify existing ones during the life of a project. For example, in the Operational Policy Statement, *Adaptive Management Measures under the Canadian Environmental Assessment Act*,²⁰ the Adaptive Management Strategy (AMS) implemented by the port authority for the Deltaport Third Berth Project was recognized as an example of appropriate adaptive management in the context of environmental assessment. That AMS included follow-up monitoring that verified the effects predicted in the assessment.

Environmental assessment itself is precautionary

As noted in the amended Terms of Reference for the review panel ([CIAR #1680](#)), environmental assessment is a planning tool used to ensure that projects are considered in a careful and precautionary manner in order to avoid or mitigate possible adverse environmental effects.

Indeed, the Updated EIS Guidelines (Section 2.4, [CIAR #178](#)) required the proponent to do the following, among other things:

“demonstrate that all aspects of the project have been examined and planned in a careful and precautionary manner in order to ensure that it would not cause serious or irreversible damage to the environment, especially with respect to environmental functions and integrity, system tolerance and resilience, and the human health of current or future generations. The proponent will also ensure that in designing and operating the project, priority has been and would be given to strategies that avoid adverse effects.”

RBT2 assessment was both conservative and precautionary

The port authority’s assessment, documented in the EIS, its responses to IRs, and its oral and written evidence provided during and at the close of the public hearing, met these requirements of the Updated

¹⁷ Alberta Wilderness Association v. Express Pipelines Ltd., [1996] F.C.J. No. 1016 (FCA), at para. 14.

¹⁸ Pembina Institute for Appropriate Development v. Canada (Attorney General), 2008 FC 302, at para. 23.

¹⁹ Pembina Institute for Appropriate Development v. Canada (Attorney General), 2008 FC 302, at para. 34.

²⁰ Impact Assessment Agency of Canada Operational Policy Statement – Adaptive Management Measures under the Canadian Environmental Assessment Act, accessible at: [Adaptive Management Measures under the Canadian Environmental Assessment Act - Canada.ca](#)

EIS Guidelines. As described in the executive summary to the port authority's closing remarks (Section 3(d), p.7, [CIAR #2045](#)):

"The VFPA [Vancouver Fraser Port Authority] adopted a conservative and precautionary approach throughout the assessment, in acknowledgement of the predictive nature of environmental assessment, and the associated uncertainty that is inherent. The assessment is based on the most stringent applicable standards for intermediate and valued components. Where the VFPA has applied modelling to its assessment, it has incorporated a number of conservative assumptions and estimates into that modelling, ensuring that modelled outcomes are more conservative than measured and observed results are likely to be. Where possible, the VFPA has confirmed this conservative modelling through actual observation and measured data."

Further, as described in Chapter VII Effects Assessment Methodology, Section 2 Overview, p. 131 of the port authority's closing remarks:

"There is inherent uncertainty in making predictions as part of environmental assessment, and to manage this, the VFPA incorporated a precautionary approach throughout the assessment. In many cases, the VFPA built conservative assumptions into the technical analyses and within the predictions themselves so as not to underestimate potential Project effects. The VFPA has also proposed a comprehensive suite of mitigation measures to avoid, reduce, control, and offset Project effects—even if the VFPA predicted the potential environmental effect would not be significant.⁵⁴³ The VFPA has also committed to an extensive follow-up program to verify selected effects predictions and evaluate effectiveness of mitigation, and to adaptively manage adverse effects that depart from predictions made in the EIS.⁵⁴⁴

⁵⁴³ CEAR Doc 2001, Updated Project Commitments.

⁵⁴⁴ CEAR Doc 2001, Updated Project Commitments, at Appendix A, Commitment #81."

The precautionary principle

In considering the application of precaution, it is important to account for the distinction with the "precautionary principle".

In its publication, "A Framework for the Application of Precaution in Science-Based Decision Making About Risk" (the Framework),²¹ the Government of Canada sets out its guiding principles for the application of precaution to science-based, federal decision-making. An assessment of the RBT2 Project under CEAA 2012 ensures that the precautionary principle is applied in accordance with those principles:

- The Government of Canada, the minister, the Agency (IAAC), federal authorities and responsible authorities must exercise their powers in a manner that protects the environment and human health and applies the precautionary principle²²
- In conducting an assessment in accordance with section 19(1) of CEAA 2012, a sound scientific basis for applying precaution is developed²³

²¹ Government of Canada, 2003, "A framework for the application of precaution in science based-decision making about risk."

²² CEAA 2012, section 4(2).

²³ Framework, p.7.

- The relevant scientific data is evaluated in a transparent process mechanism that leads to conclusions about the possibility and magnitude of harm²⁴
- Participation by the public²⁵ and by Aboriginal groups²⁶ is provided for
- Any “threats of serious or irreversible damage” are identified
- Cost effective measures to prevent environmental degradation are identified^{27,28}

The precautionary principle is a narrower concept encompassed in the final principle identified in the Framework. It is defined in the *Federal Sustainable Development Act*²⁹ as follows:

“precautionary principle” means the principle that where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Application of the precautionary principle does not mean that the project should not proceed in the face of uncertainty. Rather, it calls for appropriate consideration of relevant and sound scientific information in a transparent and inclusive process that evaluates potential risks and identifies effective measures to manage that risk, such as follow-up programs, contingency plans, and adaptive management measures. The environmental assessment of the RBT2 Project has done just that: inherent uncertainty has been addressed through a conservative and precautionary approach, relying on best available scientific information. Feasible and effective measures are available to manage identified risks going forward and those measures have been appropriately captured in the draft potential conditions, with revisions and additional conditions suggested by the port authority in **Appendix 3.2-A** of this submission.

2.3.3 Sound and credible science

A number of comments have been made in submissions to the registry from other parties regarding the science underlying the environmental assessment, the review panel’s conclusions and recommendations, and the draft potential conditions. For example, it has been suggested that “the only science that counts is that which results from peer-reviewed science published in recognized science journals” ([CIAR #2095](#)) and that the scientific evidence provided by the port authority during the environmental assessment should be disregarded in decision-making and the drafting of conditions.

Such assertions are antithetical to the legislative purpose, process, and practice of environmental assessment and to the principles outlined in the Framework. As outlined below, specialized knowledge and information has been provided by federal authorities and taken into account. The scientific evidence provided in accordance with the requirements set by IAAC and the review panel throughout the environmental assessment constitutes the best available science with respect to the project and its potential environmental effects, which must be considered in decision-making and the drafting of conditions. It would be unlawful for the government to disregard the findings of the review panel and the information provided in response to the minister’s IR for further information.

²⁴ Ibid.

²⁵ CEAA 2012, section 19(1)(c).

²⁶ CEAA 2012, section 19(1)(c), 19(3).

²⁷ CEAA 2012, section 19(1)(d), (e).

²⁸ Framework, page 5.

²⁹ *Federal Sustainable Development Act*, SC 2008, c 33, at section 2; it is described in the *Canadian Environmental Protection Act 1999*, SC 1999, c 33, in the preamble and in section 2(1)(a), in the same terms.

Scientific evidence in environmental assessment

Every environmental assessment relies heavily on scientific evidence. The statute imposes the burden of acquiring that information on the proponent. In the case of the RBT2 Project, the Updated EIS Guidelines specified the information the proponent was required to provide in the EIS, which included a wide range of scientific evidence regarding existing and predicted conditions of the physical, biological, and human environment. Additional scientific information requirements were subsequently identified in IRs issued by the then Canadian Environmental Assessment Agency (now IAAC), the review panel, and most recently, the minister.

In meeting its obligation to obtain and provide the required information, the port authority turned to existing available published literature, including peer-reviewed scientific literature and other objectively reliable sources, such as the results of studies undertaken in relation to other environmental assessments. Importantly, numerous original site-specific and project-specific scientific studies and scientific modelling and analyses were conducted by qualified experts. In some cases, these comprised state-of-the-art approaches and advanced the scientific understanding of a wide range of topics. As stated in the port authority's closing remarks to the review panel ([CIAR #2045](#)):

“Building on decades of environmental study of Roberts Bank, in 2011 the VFPA commenced a program that included 77 individual studies, resulting in over 35,000 hours of fieldwork with contributions from Indigenous groups, regulators, and over 100 professional scientists... “ p.7

Since that time, the port authority has conducted 20 additional site- and project-specific scientific studies at Roberts Bank in relation to the project.

The results of these scientific studies are documented in the many reports submitted by the port authority during the environmental assessment by the review panel and subsequently in response to the minister's IR. That body of work was subject to comprehensive examination and review by the independent review panel and continues to be available for scrutiny on the public registry for the project. This is typical of environmental assessments carried out in Canada: most scientific studies undertaken to support environmental assessment are project- and site-specific and produced to meet project-specific information requirements set out in the EIS Guidelines (or comparable terms of reference), within the timeline of an environmental assessment, and are rarely published in peer-reviewed academic journals while the environmental assessment is still underway.

Quality assurance

The quality of the science-based evidence used in the environmental assessment of the project has been assured in several ways, including the following:

- Adherence to legislated professional standards and codes of ethics and conduct
- Adherence to applicable methodological guidelines and standards
- Solicitation of expert advice from qualified technical experts
- Public scrutiny

The environmental assessment of the RBT2 Project was conducted by a large team of scientists and technical experts across many disciplines, including port authority staff, independent consultants, and technical experts from academia and industry, each bound by the codes of ethics and conduct established by their respective professional associations and employers. The authorship and professional credentials of the qualified professionals who contributed to the EIS (including the Marine Shipping Addendum) and appendices were transparently documented and include many professionals registered

to practice in B.C. Registered professional biologists, geoscientists, engineers, and other scientists in particular are held to a very high standard of professionalism. For example, Engineers & Geoscientists British Columbia (EGBC) notes that “ethical standards of conduct go beyond what is necessary to comply with the law, and they are in effect whether or not a specific law or regulation exists. They are based on values such as honesty, integrity, respect, responsibility, trustworthiness and concern for others in all actions and decisions.” Professional registration by EGBC “instills certitude” that registered professional geoscientists and engineers will conduct themselves “according to the values of truth, honesty, and trustworthiness, placing the safety, health, and welfare of the public and the protection of the environment before all else.”³⁰ Similarly, the College of Applied Biology requires registrants (i.e., registered professional biologists, R.P.Bio.) to adhere to and meet the College’s Code of Ethics and Professional Conduct, Principles of Stewardship³¹ (of aquatic and terrestrial ecosystems and biological resources), and Professional Practice Standards of Conduct and Competence.³² The scientists, engineers, and other experts that supported the studies and work required for the EIS recognize their legal responsibility to act in the best interests of their profession, the environment, and the public.

During the public hearing, the review panel addressed this point directly, asking one of the port authority’s expert witnesses how scientists can ensure their work is independent and professional, while under a financial agreement with the proponent (as opposed to anonymous peer review methods in academia). Dr. Nicole Wright responded:

“As a professional wetland scientist and professional generally, I live by a code of ethics and I work by a code of ethics that ensures that I will not sign off on a report unless I believe every aspect of that report. ... I feel I am ethically bound by my own principles.”

Panel member Steyn responded: “Thank you. That of course is the best and only answer and a much stronger one than mere anonymity.” (Hearing Transcript May 24, 2019, [CIAR #1807](#)).

In its report, the review panel stated, “We appreciate the professional and respectful participation offered by the Proponent and its team” ([CIAR #2062](#), p.3).

The methods used for scientific data collection, analysis, modelling, and assessment followed applicable established discipline-specific guidelines and standards, as documented in each discipline-specific chapter of the EIS and Marine Shipping Addendum and supporting reports, as appropriate. Information sources and references cited were also transparently documented for each discipline.

Throughout the assessment, the port authority sought advice from leading technical experts and federal and provincial departments and agencies regarding the scope of studies, the methods and models to be used, and the results of studies. As an example, the following was outlined in the port authority’s closing remarks to the review panel ([CIAR #2045](#)):

“Prior to submitting the Project Description for the Project, the VFPA established a technical advisory group (TAG) process to engage and consult with leading technical experts and federal and provincial regulators and agencies with respect to four key topics: coastal geomorphology, productive capacity, biofilm and shorebirds, and southern

³⁰ Engineers and Geoscientists of BC, Code of Ethics. Available at: <https://www.egbc.ca/Complaints-Discipline/Code-of-Ethics/Frequently-Asked-Questions>

³¹ The College defines stewardship as “the management of impacts on ecological systems and their components with the goal of maintaining healthy resilient ecosystems that provide ecological services into the future”.

³² College of Applied Biology, Standards of Practice. Available here: <https://www.cab-bc.org/standards-practice>

resident killer whales (SRKW). The TAGs provided recommendations for the assessment of these key topics, including identifying appropriate valued components, intermediate components, sub-components, and indicator species as well as recommending environmental assessment methodologies. The TAGs also recommended key environmental models to assist in the prediction of potential environmental effects. This included, for example, the recommendation to use the Ecopath with Ecosim and Ecospace model, a locally developed and world leading productivity modelling tool capable of considering an ecosystem in its entirety, including individual species, their food web linkages, net changes in productivity, and their habitat and environmental preferences, to build a site-specific Roberts Bank productivity model.” p.6

Through the review panel process, the evidence provided by the port authority was subject to a high degree of scrutiny by the independent review panel, comprised of highly qualified individuals selected by the minister for their relevant expertise and experience.

The reliability of the scientific information provided in this assessment will be discussed further in the port authority’s submission in response to submissions about biofilm.

Multiple lines of evidence

Multiple lines of evidence were taken into account in the environmental assessment, as described in the responses to IR5-29 ([CIAR #1185](#)) and IR11-20 ([CIAR #1179](#)). In addition to the site- and project-specific scientific studies, review of published peer-reviewed and other literature (such as studies and reports in relation to other environmental assessments), modelling, and Indigenous knowledge has been incorporated. Section 7.2.1.7 of the EIS ([CIAR #181](#)) described the process for collecting Indigenous knowledge, including literature reviews, meetings, and workshops with Indigenous groups, questions and interviews, and sponsorship of additional studies. In the response to completeness IR #8 ([CIAR #314](#)), the port authority provided a description of where and how Indigenous knowledge had been used to support the selection of valued components, descriptions of existing conditions, the assessment of effects, and identification of mitigation measures. The port authority continues to integrate Indigenous knowledge received through consultation in the development of follow-up program design and the offsetting plan, as well as environmental management plans and other specific mitigation, such as the crab salvage.

Credible authority

Some submissions by other parties suggest, implicitly or explicitly, that the science provided by the port authority is inherently not credible or is less credible than other evidence simply **because** it was prepared by the port authority. This is not true.

Much of the investigation and analysis required for the assessment has been conducted by independent qualified professionals.

To the extent port authority staff have been involved in the RBT2 Project, they are qualified professionals with relevant expertise in a variety of disciplines related to the environmental assessment. Moreover, the port authority has a legislated mandate—a statutory responsibility—to enable Canada’s trade through the Port of Vancouver, while protecting the environment and considering local communities. There is no basis for suggesting that the port authority is acting in breach of its statutory duty.

The port authority proposes the RBT2 Project in furtherance of its legislated mandate. Meeting its legal obligations does not and cannot be a basis for doubting its credibility nor the credibility of the many qualified professionals who competently prepared the scientific evidence provided by the port authority in accordance with applicable professional standards, relevant guidelines, and sound scientific methods.

The available scientific evidence must be judged on the **quality** of the science, not on its source.

The port authority has been carrying out environmental studies at Roberts Bank for decades, and, in support of the RBT2 environmental assessment in particular has supported, funded, and facilitated 97 site- and project-specific scientific studies pertaining to a wide range of disciplines.

The Framework emphasizes that precautionary decision-making must be based on the evaluation of sound and credible scientific information. The scientific evidence provided by the port authority is the **best available science** related to the project and the specific environment in which it would be located and provides an appropriate basis for decision-making and drafting of potential conditions that would be included in a Decision Statement, if the project is approved to proceed.

Review panel considered all available relevant scientific evidence

The review panel considered the available relevant scientific evidence, including the specialist and expert information and knowledge provided by federal authorities consistent with section 20 of CEAA 2012, as well as Indigenous knowledge, provided by parties during the environmental assessment. That the review panel in fact did so is evident in their summaries of the views of the port authority and participants throughout their report.

2.3.4 Mitigation effectiveness

A number of comments were made in submissions to the registry from other parties asserting, variously, that there is no mitigation for certain potential environmental effects, mitigation is not at all or seldom effective, and mitigation is “even less frequently followed through on” (CIAR #2103) due to lack of capacity on the part of regulatory agencies. These assertions are inconsistent with the body of evidence provided during the environmental assessment, with the statutory requirement for follow-up programs, and with the scheme of enforcement.³³

Throughout the environmental assessment, including in the additional information provided in response to the minister’s IR, the port authority has identified feasible measures to mitigate every identified potential environmental effect. The review panel recommended additional mitigation measures. The measures to be implemented by the proponent, specified in the draft conditions, together with the measures to be implemented by other federal authorities, as described in the draft Whole of Government Response, will serve to mitigate—that is, avoid, reduce, and offset—the potential adverse environmental effects of the project.

Mitigation applied along the effect pathway for all potential effects

Assertions that there is no mitigation for certain potential effects are not correct. The assertions misapprehend how mitigation is accounted for in environmental assessment and how the suite of mitigation measures for the RBT2 Project was developed.

As described in Section 8 of the EIS (CIAR #181):

“The cause-effect linkage between a project and a [valued component] is referred to as an effect pathway, which typically comprises one or more physical media, such as water or air, through which an effect is transmitted to a receptor, such as wildlife or people. An effect pathway may also include different components of natural or socio-economic systems upon which receptors, such as people or a wildlife species of concern, depend. For example, an effect pathway may extend from a project to water quality to fish that

³³ Conditions in a decision statement will be subject to enforcement under the *Impact Assessment Act*.

depend on water quality, to larger marine mammals that prey on fish, or to humans that harvest fish for commercial, recreational, or Aboriginal purposes.”

Mitigation may be applied at any point along an effect pathway and is often most effective if applied early in an effect pathway. For example, to mitigate potential adverse effects on human health, mitigation measures are usually applied ‘at source’ to avoid or reduce air or noise emissions that may contribute to human health effects. Thus, the mitigation for the RBT2 Project must be considered as a comprehensive suite of measures that, though individual measures may be applied at specific points along effect pathways, effectively work together to mitigate potential adverse environmental effects. Mitigation measures have been proposed or recommended, and through the potential conditions would be required, to address all identified adverse environmental effects of the project.

Application of the mitigation hierarchy supports mitigation effectiveness

As noted in the port authority’s closing remarks to the review panel ([CIAR #2045](#)):

“In selecting mitigation measures for the Project, the VFPA adopted a hierarchy. First, the VFPA considered measures that would avoid potential adverse effects. Second, the VFPA considered measures that would reduce and control potential adverse effects. Third, the VFPA considered measures that would offset potential adverse effects.” p.8

Application of the mitigation hierarchy is considered a best practice to prioritize the most effective means of mitigation.

Mitigation effectiveness was evaluated in the assessment

The effectiveness of proposed mitigation measures was described at length during the environmental assessment. In particular, in its response to completeness IR #12 ([CIAR #314](#)), the port authority provided a summary of the anticipated effectiveness of each mitigation measure. For each valued component, relevant information is provided in Appendix IR12-A, including the following:

- A list of adverse measurable potential effects for which mitigation measures are proposed
- The relevant phase of the project when mitigation would be applied
- Actions or measures (including environmental management plans) that are proposed to mitigate the potential effect
- A description of how mitigation is intended to reduce the potential for significant adverse effects
- The anticipated effectiveness of the mitigation measure, as well as the risks (if any) to the environment should the mitigation not be effective

Further, Appendix IR12-B includes, for each measurable potential effect related to the project, other mitigation measures that were considered but not applied to reduce the potential for significant adverse effects. The information includes a rationale for each measure that was rejected on the basis of technical or economic feasibility or effectiveness of the mitigation measure.

This information demonstrates that the mitigation measures with proven effectiveness are prioritized over measures that are not feasible or not likely to be effective. In the few cases where an unproven mitigation measure has been proposed, the port authority has initiated pilot studies to test the effectiveness, for example in the case of sea pen transplants and crab salvage measures.

Mitigation measures to be further developed

Mitigation measures must be further developed as required by and in accordance with the conditions prior to the commencement of activities to which they pertain. The development of follow-up programs will also involve the identification of additional feasible mitigation measures that could be implemented if determined through monitoring to be necessary (i.e., if monitoring indicates that adverse environmental effects are worse than predicted or mitigation is not as effective as predicted). This ongoing refinement of mitigation measures during detailed design and in response to the results of ongoing follow-up monitoring is appropriate in environmental assessment:

“The jurisprudence establishes that a Screening Report and decisions under CEAA can describe general mitigation measures which will be detailed and resolved in the future when the exact project design is determined. This is consistent with the preliminary and predictive nature of an environmental assessment.”³⁴

Ongoing refinement of mitigation measures is also a typical element of regulatory permitting following the environmental assessment. For example, this is confirmed by DFO in their recent submission ([CIAR #2407](#)).

Mitigation measures will also be developed in consultation with Indigenous groups and other relevant authorities as required by the conditions. This ongoing work will continue to improve the certainty regarding the effectiveness of the measures.

Follow-up to determine mitigation effectiveness

As indicated in **Section 2.3.2** of this submission, where a degree of uncertainty exists with respect to mitigation effectiveness, follow-up programs have been proposed to determine the effectiveness of the measures once implemented, and to identify additional or modified mitigation measures that could be implemented if necessary, if, for example, a measure proves to be less effective than predicted.

The mitigation measures and follow-up programs have been appropriately captured in the draft potential conditions, with revisions and additional conditions suggested by the port authority in **Appendix 3.2-A** of this submission. The matter of follow-up programs is addressed further in **Section 2.3.5** below.

Enforcement

All of the conditions included in a decision statement issued pursuant to CEAA 2012, as made applicable by the *Impact Assessment Act*, are legally binding on the proponent and enforceable by IAAC. IAAC is responsible for promoting, monitoring, and enabling compliance with the legislation and any decision statements issued by the minister. IAAC's enforcement officers also apply a number of compliance, promotion, and enforcement activities to encourage compliance with legislation and avoid adverse effects on the environment. These activities include carrying out site inspections and investigations.³⁵

Potential effects of the project are mitigable

The potential adverse environmental effects of the project are mitigable.³⁶ As stated in the port authority's closing remarks to the review panel ([CIAR #2045](#)):

³⁴ Canadian Transit Company v. Canada (Transport), 2011 FC 515, at para. 214.

³⁵ <https://www.canada.ca/en/impact-assessment-agency/corporate/compliance-promotion-enforcement.html#pr>

³⁶ Assertions that potential effects on biofilm cannot be mitigated will be addressed in the port authority's response to the submission by ECCC to come under separate cover.

“VFPA has committed to adopting all technically and economically feasible mitigation measures within the VFPA's care and control to reduce the environmental effects of the Project.” p.8

Throughout the environmental assessment, including in the additional information provided in response to the minister's IR, the port authority has identified feasible and effective mitigation measures to address potential environmental effects of the project. The review panel recommended additional mitigation measures. It is reasonable and appropriate—indeed it is required by sections 19(1)(d), 52(1), and 53(4) of CEAA 2012—to consider the mitigation measures in decision-making and drafting of conditions.

The measures to be implemented by the proponent, specified in the draft conditions, together with the measures to be implemented by other federal authorities, as described in the draft Whole of Government Response, will serve to mitigate—that is, avoid, reduce, and offset—the potential adverse environmental effects of the project.

2.3.5 Reliance on follow-up programs and adaptive management

A number of comments were made in submissions to the registry from other parties asserting the draft conditions lack provisions to require action to be taken, including stopping work, in the event mitigation is not as effective as predicted.

These assertions are incorrect and inconsistent with the statutory framework and potential conditions as drafted, which, through extensive follow-up program requirements, provide for action to be taken to address any unforeseen environmental effects and to implement modified or additional mitigation measures if necessary.

Conditions require action to be taken

The draft conditions currently require the port authority to develop 25 follow-up programs (referred to as follow-up program elements by the port authority).

Every follow-up program must, pursuant to draft condition 2.5.3, identify the following:

“the levels of environmental change relative to baseline that are caused by the Designated Project and that would require the Proponent to implement modified or additional mitigation measure(s), including *instances where the Proponent may require Designated Project activities causing the environmental change to be stopped*”
(emphasis added)

In addition, some conditions specify additional requirements to stop work under certain conditions (e.g., draft conditions 6.10.5, 7.10.2.1, 8.2.8, and 8.2.9).

Further, every follow-up program must, pursuant to draft condition 2.5.4, identify the following:

“technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.5.4 have been reached or exceeded.”

Finally, for every follow-up program that is required by the conditions, the port authority would be required to implement the following:

2.8.2 conduct monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition and/or to determine the effectiveness of any mitigation measure

2.8.3 determine whether modified or additional mitigation measure(s) are required based on the monitoring and analysis undertaken pursuant to condition 2.8.2

2.8.4 if modified or additional mitigation measures are required pursuant to condition 2.8.3, develop and implement these technically and economically feasible mitigation measure(s) as soon as feasible and monitor them pursuant to condition 2.8.2

Taken together, these conditions establish robust provision for action to be taken, including, if appropriate, stopping work, in the event mitigation is not as effective as predicted.

Follow-up is appropriate and required

The purpose of a follow-up program is to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures. Every environmental assessment pursuant to CEAA 2012 must consider the requirements of the follow-up program (per section 19(1)(e)), and the conditions included in a decision statement must include the implementation of a follow-up program (per section 53(4)).

The courts have recognized the appropriateness of follow-up and adaptive management in the context of environmental assessment:

“[32] An approach that has developed in conjunction with the precautionary principle is that of “adaptive management”. In *Canadian Parks and Wilderness Society v. Canada (Minister of Canadian Heritage)*, 2003 FCA 197, [2003] F.C.J. No. 703, at para. 24, Evans J.A. stated that “[t]he concept of “adaptive management” responds to the difficulty, or impossibility, of predicting all the environmental consequences of a project on the basis of existing knowledge” and indicated that adaptive management counters the potentially paralyzing effects of the precautionary principle. Thus, in my opinion, adaptive management permits projects with uncertain, yet potentially adverse environmental impacts to proceed based on flexible management strategies capable of adjusting to new information regarding adverse environmental impacts where sufficient information regarding those impacts and potential mitigation measures already exists.

[33] Accordingly, the scope of the duties incumbent upon a panel must be viewed through the prism of these guiding tenets: the precautionary principle and adaptive management. As an early planning tool, environmental assessment is tasked with the management of future risk, thus a review panel has a duty to gather the information required to fulfill this charge.

[34] In sum, the CEAA represents a sophisticated legislative system for addressing the uncertainty surrounding environmental effects. To this end, it mandates early assessment of adverse environmental consequences as well as mitigation measures, coupled with the flexibility of follow-up processes capable of adapting to new information and changed circumstances. The dynamic and fluid nature of the process means that perfect certainty regarding environmental effects is not required.”³⁷

As noted in **Section 2.3.2** above, adaptive management is one of the mechanisms recognized by IAAC to provide flexibility to identify and implement new mitigation measures or to modify existing ones during the life of a project.

³⁷ *Pembina Institute for Appropriate Development v. Canada (Attorney General)*, 2008 FC 302, at paras. 32-34.

As noted in the port authority's closing remarks to the review panel ([CIAR #2045](#)):

“VFPA has also committed to a Follow-up Program to address any uncertainty in either the effects predictions or the effectiveness of mitigation. The Follow-up Program will provide greater confidence in environmental management and also ensure that unexpected environmental consequences that may result from uncertainty are corrected in a timely fashion. If the Follow-up Program results indicate an adverse effect, and if evaluation has confirmed that the cause for the detected adverse effect is Project-related, the VFPA will initiate adaptive management.” p.9

The port authority has demonstrated expertise in follow-up and adaptive management; the adaptive management strategy for the Deltaport Third Berth Project is included as an example in IAAC's operational policy statement *Adaptive Management Measures under the Canadian Environmental Assessment Act*.³⁸

The extensive follow-up program requirements included in the potential conditions would ensure that action is taken, if and as required, to implement modified or additional mitigation measures to address unforeseen adverse environmental effects.

2.3.6 Any significant adverse environmental effects will be justified

A number of comments were made in submissions to the registry from other parties asserting that the project should not be approved to proceed because those parties consider it is likely to result in significant adverse environmental effects.

As described in **Section 2.1** of this submission, considerable work has been advanced since the review panel prepared its report to address points identified by the review panel and to further mitigate the potential for significant adverse environmental effects of the project. However, even if the minister concludes that, notwithstanding all of the advancements and substantial improvements in mitigation, the project is likely to cause any significant adverse environmental effects, that does not mean the project cannot or should not proceed.

In fact, the legislative framework clearly contemplates that a project that is likely to cause significant adverse environmental effects **can** proceed if the Governor in Council determines those effects to be justified in the circumstances. As explained in the port authority's closing remarks to the review panel ([CIAR #2045](#)):

“Under section 47 of *CEAA 2012*, after receiving the Review Panel's report, the Minister of Environment and Climate Change must make a decision on the Project. As outlined in section 52 of *CEAA 2012*, the Minister must decide if, taking into account the implementation of any mitigation measures the Minister considers appropriate, the Project is likely to cause significant adverse environmental effects referred to in either subsections 5(1) or 5(2) of *CEAA 2012*. If the Minister decides that the Project is likely to cause significant adverse environmental effects, the Minister must then refer the decision to the Governor in Council on the matter of whether those effects are justified in the circumstances.” p.324

In making its decision, the Governor in Council must weigh any potential significant adverse environmental effects the minister considers likely against other relevant matters, including, for example,

³⁸ IAAC Operational Policy Statement Guidelines: Adaptive Management under the Canadian Environmental Assessment Act, available at: [Adaptive Management Measures under the Canadian Environmental Assessment Act - Canada.ca](#)

the urgent need for the project, the significant benefits to be realized if the project proceeds, and the serious impacts that may occur if the project does not proceed.

This legislated process of decision-making was reflected in the review panel's mandate, which, as outlined in section 3.4 of the review panel's Terms of Reference ([CIAR #1680](#)), included the mandate to "receive and take into account information with respect to whether any significant adverse environmental effects are justified in the circumstances." While the review panel was not mandated to make a decision with respect to the justifiability of any significant adverse environmental effects, it was mandated to receive information on the justifiability of any significant adverse environmental effects. The review panel did so and reported what it heard in its report.

Since the review panel report, the port authority provided additional information relevant to the justifiability of the project in its response to the minister's IR, particularly updated information regarding the significant economic benefits to be realized if the project proceeds, including lasting benefits to Indigenous and local communities (IR2020-7, [CIAR #2083](#)). Additional relevant information regarding the need for the project is provided in **Section 2.3.1** of this submission. Additional relevant information regarding the serious impacts that may occur if the project does not proceed was provided by the port authority in the response to IR2020-7 and by Transport Canada in their recent submission to the registry ([CIAR #2298](#)).

In short, a project that the minister considers likely to cause significant adverse environmental effects **can proceed and should proceed** if the Governor in Council, after weighing the relevant information, considers those effects to be justified. As described in **Section 2.1** of this submission, the port authority has demonstrated the following:

- The effects of the project and cumulative effects are mitigable through both the conditions that would be imposed on the proponent and the actions that are being taken, will be taken, and can be taken by the Government of Canada
- The project is needed and will deliver important and significant economic benefits locally, regionally, provincially, and nationally, as well as benefits to Indigenous groups, including through agreements with numerous groups
- Any potential significant adverse environmental effects, including any cumulative effects, would be justified
- It is in the public interest to approve the project to proceed

2.3.7 Timing of decision-making

A number of comments were made in submissions to the registry from other parties asserting that a decision regarding the project should be delayed.

The RBT2 Project is urgently needed to provide additional container capacity on the West Coast of Canada. In its submission during the public comment period ([CIAR #2298](#)), Transport Canada agrees, as did the review panel, that the project is needed. As noted in **Section 2.3.1**, the need for the project has only increased in the years since the review panel carried out its work. In its submission, Transport Canada notes that it is "of the view that additional container capacity on Canada's West Coast is needed before 2030. Container demand is projected to increase, and the Vancouver Fraser Port Authority projects that the Port could begin to experience structural congestion by 2027" ([CIAR #2298](#), p.8). Transport Canada describes the impacts of continued container capacity constraints ([CIAR #2298](#), pp.9-10); in order to avoid the worst consequences of continued capacity constraints and supply chain congestion, the time to approve the RBT2 Project is now.

The port authority emphasizes that decision-making for the RBT2 Project is not dependent on the completion or outcomes of other regional initiatives or assessments, and, as noted in the port authority's closing remarks to the review panel, the minister "need not wait until such regional initiatives are completed prior to recommending Project approval" (CIAR #2045, p.11). "In the event that additional mitigation measures are identified through these regional initiatives in the future, regardless of whether they are Project-related mitigation measures, the Review Panel and the Minister can reasonably expect that additional measures adopted will also apply to Project-related activities" (CIAR #2045, p.11).

2.3.8 Project financing

A number of comments were made in submissions to the registry from other parties asserting that the project will be funded with public dollars.

This assertion is incorrect. The RBT2 Project will be funded by the port authority and private investment, not tax dollars. This is in line with other major port authority-led marine container terminal projects at the Port of Vancouver, such as DP World's Centerm Expansion Project in Vancouver and GCT's Deltaport Third Berth Project in Delta. As a Canada Port Authority, the port authority's federal mandate is to enable Canada's trade objectives. That includes planning and building infrastructure in and around the Port of Vancouver, while protecting the environment and considering local communities. As the port authority works in the interest of all Canadians, it is in the best position to plan for port development.

2.4 Response to submissions of government

This section of the submission provides the port authority's response to specific submissions of DFO, Transport Canada, provincial departments and agencies, the City of Delta, the City of Richmond, and the State of Washington Department of Ecology. The port authority would like to thank those parties who participated in the environmental assessment by providing constructive input and feedback on the project and proposed mitigation measures.

2.4.1 Response to Fisheries and Oceans Canada and Transport Canada

Fisheries and Oceans Canada and Transport Canada are each a "federal authority" within the meaning of section 20 of CEAA 2012. As such, each is required to provide specialist or expert information or knowledge with respect to a designated project that is subject to an environmental assessment upon request.

In its submission on February 9, 2022, Transport Canada commented on the sufficiency and technical merit of the port authority's IR response, the potential effects of the project taking the additional information into consideration, and the draft conditions ([CIAR #2298](#)). Similarly, on February 11, 2022, DFO provided a submission to IAAC ([CIAR #2407](#)). In their submissions, Transport Canada and DFO both provide information that is relevant to the assessment of the potential effects of the project and of incidental marine shipping on marine mammals. The port authority is therefore responding to these submissions together; statements attributed to either party are clearly noted.

Updated container vessel projections

With respect to the technical evaluation of the updated container vessel projections provided in the IR response (Appendix IR2020-3-B, [CIAR #2083](#)), DFO deferred to Transport Canada, noting "DFO understands that Transport Canada is providing comments on the technical merit of the new container vessel projections provided by the Proponent" ([CIAR #2407](#), p.43). Transport Canada is the federal authority with the expertise to provide a technical evaluation of the updated container vessel projections.

Transport Canada found that the information provided regarding the port authority's technical forecasts to be reasonable and to have technical merit. Transport Canada confirmed the following ([CIAR #2298](#)):

"Transport Canada has reviewed the IR2020-3-B Updated Roberts Bank Terminal 2 container vessel call forecast study and finds that it is well-constructed, that it accounts for expected future developments in the container shipping industry, the possible evolution of the global container market, and possible future trade patterns. Transport Canada's assessment is that the forecast contains plausible projections of future vessel traffic at the Port of Vancouver." p.2

Taking into account Transport Canada's view, the scenarios provided in Appendix IR2020-3-B, including the determination that the most realistic scenario is that there will be no change in number of container vessel transits in marine shipping area with or without the project, provides a reliable basis upon which to assess the potential effects of the project and of the marine shipping incidental to the project.

Transport Canada also concluded that "the vessel movements are *unlikely* to be as high as the additional 260 vessel movements (+5 weekly vessel calls) relied on by the Review Panel" ([CIAR #2298](#), p.3; emphasis added). The review panel concluded that marine shipping incidental to the project was likely to cause adverse effects, some of which they considered significant. However, as Transport Canada notes, the information provided in Appendix IR2020-3-B demonstrates that the conservative assumption made by the review panel that the project would result in additional 260 vessel movements is unlikely to occur.

The basis upon which the effects likely to result from the project and from marine shipping incidental to the project should be assessed is the information provided in IR2020-3.

Adaptive management approach

Transport Canada, in consultation with DFO, recommends ([CIAR #2298](#), pp.12-13) that the conditions (particularly those in Part 8 pertaining to underwater noise and SRKW) be updated to reflect a performance-based adaptive management approach, which would require identified feasible mitigation measures to be implemented to address unanticipated effects identified through monitoring. In general, the port authority agrees with this approach. In its detailed feedback on the draft conditions, provided in **Appendix 3.2-A** to this submission, taking Transport Canada's and DFO's specific recommendations into account, the port authority suggests revisions and additional conditions that would clarify and reinforce the requirements to monitor and verify the updated container vessel projections and predicted effects and to collaborate with Transport Canada, DFO, and other parties to identify and implement feasible mitigation measures.

Focus on effects, not activity

Transport Canada notes that the feasible mitigation measures identified by the port authority in Appendix IR2020-3-E and the draft conditions are appropriate as they target the environmental impact of the vessel traffic rather than the activity itself ([CIAR #2298](#), p.3). The port authority agrees with this principle. In keeping with this important point, the port authority further notes that the conditions should not be focused narrowly or solely on mitigating underwater noise but rather should focus on mitigating the potential effects on sensitive receptors, such as SRKW, which would broaden the scope of feasible measures available to include measures that reduce SRKW exposure to underwater noise.

Avoiding jeopardy collaboratively

DFO "recommends that Project decision statement conditions require the Proponent to fully avoid and mitigate effects to SRKW from Project construction, operation, and marine shipping in order to increase DFO confidence that the Project will not jeopardize the survival and recovery of SRKW" ([CIAR #2407](#), p.42). The port authority agrees that measures to avoid jeopardizing the survival and recovery of SRKW are warranted. However, the port authority notes that effects on SRKW cannot be fully mitigated by the port authority alone. The port authority also notes that where the assessment demonstrates that taking into account feasible mitigation, a component of the project is likely to result in an effect, a simple requirement that there be "no effect" is not physically possible. The port authority does not understand DFO to be suggesting that the port authority be required to do what cannot be done. Further, under the legal principles that govern the minister's authority to impose conditions described in **Section 3.1** of this submission, a condition requiring a proponent to cause no effect or prohibiting any effect cannot be imposed. Lastly, as noted in the Recovery Strategy for SRKW,³⁹ an anthropogenic activity does not "inevitably result in the destruction of critical habitat. Every proposed activity must be assessed on a case-by case basis and site-specific mitigation will be applied where it is reliable and available" (Recovery Strategy, p.54).

Both Transport Canada and DFO acknowledge that the responsibility to implement mitigation measures is shared. DFO acknowledges "the Proponent cannot directly regulate navigation outside of the Port of

³⁹ DFO. 2018. Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada. Species at Risk Act Recovery Strategy Series, Fisheries & Oceans Canada, Ottawa, x + 84 pp. Available at: https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/Rs-ResidentKillerWhale-v00-2018dec-Eng.pdf.

Vancouver” and supports conditions that would require “the Proponent implement modified or additional measures within its control” (CIAR #2407, p.47). Transport Canada acknowledges feasible mitigation measures and/or adaptive management measures that would require Canada’s implementation on a regional basis, and reiterates its “commitment to continue to work with the proponent on implementing additional mitigation and/or adaptive management measures” (CIAR #2298, p.3). In addition, in 2018, by the Order by the Governor in Council, the Government of Canada acknowledged the measures that “have been taken, continue to be taken, and will be taken by the Government of Canada and other organizations to address” the imminent threats to the survival and recovery of SRKW and noted that these measures, “considered together, will contribute to abating the imminent threats to the survival and recovery of the SRKW”.⁴⁰

Transport Canada also describes its leadership in addressing effects of marine shipping and identifies a number of regional initiatives underway or planned to address cumulative effects on SRKW and effects on Indigenous peoples. The port authority agrees that its participation in these initiatives is appropriate and notes this is already addressed in the draft conditions.

In its detailed feedback on the draft conditions, provided in **Appendix 3.2-A** to this submission, the port authority has suggested revisions and additional conditions to further clarify and reinforce the proponent’s responsibility to implement mitigation measures within its care and control and also to collaborate with other federal authorities regarding measures to be implemented by them to ensure SRKW will not be jeopardized by the project.

Effectiveness of marine shipping mitigation measures

DFO expresses some uncertainty regarding the mechanisms by which underwater noise may be mitigated (including offset). However, Transport Canada notes it has “led the effort to understand and address the impacts on whales that result from vessel traffic. Since 2018, Transport Canada, in cooperation with partners, (including the VFPA) has put in place a suite of mandatory and voluntary measures that aim to address the physical and acoustic disturbance from vessels that impact the Southern Resident Killer Whales. These measures include vessel slowdowns, displacement of vessel traffic away from coastal foraging areas, the establishment of interim sanctuary zones, an increased approach distance on killer whales, slowing down when in the presence of whales, and disabling echosounders and underwater transducers when not in use. These measures, in concert with proposed mitigations under *IR2020-3-E Underwater Noise Modelling of RBT2 Marine Shipping: Container Vessel Transit Exposure Model*, and proposed conditions on limiting vessel noise, **should serve to address any marginal increase in underwater vessel noise if vessel projections align with vessel forecasts**” (CIAR #2298, p.4).

Further, “Transport Canada believes that these solutions will be feasible at ensuring that marine shipping-related underwater vessel noise impacts as a result of Roberts Bank Terminal 2 are mitigated or avoided throughout the operational life cycle of the project” (CIAR #2298, p.3).

The port authority agrees that feasible measures are available to be implemented by both the port authority and other federal authorities. The measures to be implemented by the port authority are outlined in more detail in the port authority’s detailed feedback on the draft conditions in **Appendix 3.2-A** of this submission. Measures to be implemented by other federal authorities are discussed in **Section 3.3** of this submission. The port authority notes that the port authority-led ECHO Program complements the regional initiatives undertaken by other federal authorities in addressing the effects of existing and ongoing

⁴⁰ Order Declining to make an Emergency Order for the protection of the Killer Whale Northeast Pacific Southern Resident Population: SI/2018-102, accessible online here: <https://gazette.gc.ca/rp-pr/p2/2018/2018-11-14/html/si-tr102-eng.html>

container vessel traffic and other commercial marine shipping. The port authority also notes that these are the very measures that the Government of Canada is implementing or committed to undertake as a condition of approving the TMX project, the construction of which is advancing.

Substantial improvement in mitigation measures

In its submission, DFO explained that the additional information provided by the port authority has increased DFO's confidence "that technically and economically feasible measures to mitigate underwater noise from Project construction have been explored and appropriate mitigation measures have been identified for further development" (CIAR #2407, p.32). As noted in the response to the minister's IR, IR2020-2.3 (CIAR #2083), the port authority shares the concern for the status of SRKW and understands the need to align with the Recovery Strategy and Action Plan for the species. The port authority has proposed and would be required by the draft conditions to identify and implement measures to address potential project effects (aligned with Action Plan measure #17) and to support the communication and coordination needed to identify the potential effects and implement appropriate and feasible measures (aligned with Action Plan measure #43). In its detailed feedback on the draft conditions, provided in **Appendix 3.2-A** to this submission, the port authority proposes additional sub-conditions that would require the proponent to consider the objectives of the Recovery Strategy and the measures within the Action Plan.

DFO also acknowledged the substantial improvement to the conceptual offsetting plan (CIAR #2407, p.16,⁴¹ p.23,⁴² p.24⁴³) and the progress made by the port authority in evaluating offsetting equivalency (p.24). The port authority appreciates its collaboration with DFO to realize these advancements and shares DFO's confidence that a final offsetting plan consistent with DFO policy can and will be developed.

The information requested by the minister, including the additional measures described in the IR response update the assessment outcomes, including conclusions with respect to residual effects on Dungeness crab, Pacific sand lance, and surf smelt:

- In IR2020-2.1, the port authority described a reduction in direct and indirect effects to Pacific sand lance associated with a reduction in the project footprint. Specifically, the footprint reduction will avoid 9.7 ha of overlap of the project footprint with predicted suitable Pacific sand lance burying habitat, increasing the habitat that will remain available to Pacific sand lance to perform important life functions, including burying and overwintering.
- In IR2020-1.1, the port authority describes 9-10 ha of on-site native eelgrass offsetting (i.e., part of the onsite marsh-eelgrass offsetting complex planned for north of the proposed terminal) and 3.5-4.5 ha of offsite native eelgrass offsetting (i.e., the South Causeway Eelgrass Project; formerly the Tsawwassen Eelgrass Project), for a total of 12.5-14.5 ha of proposed native eelgrass offsetting. This 12.5-14.5 ha represents a four-fold plus increase in native eelgrass offsetting compared to the conceptual offsetting proposed in the EIS (which involved 3 ha of native eelgrass offsetting). Native eelgrass directly benefits multiple life stages of Dungeness crab (including juveniles, adults, and gravid females) and also directly benefits juvenile and adult life stages of sand lance and surf smelt. Juvenile and adult life stages of sand lance and surf smelt use native eelgrass habitat to feed on

⁴¹ "The offsetting plan identified in the Proponent's response is a substantial improvement to the conceptual offsetting plan presented in the Environmental Impact Statement." CIAR #2407, p.16.

⁴² "As previously stated, the Proponent's response includes a substantially improved plan to offset impacts to fish and fish habitat." CIAR #2407, p.23.

⁴³ "However, the substantial improvement to the offsetting plan, the identification of additional available offsetting opportunities, as well as the progress made by the Proponent in evaluating offsetting equivalency, improves DFO's confidence that a final offsetting plan could be developed that is consistent with DFO policy." CIAR #2407, p.24.

invertebrates; juvenile stages in particular find refuge from predation. These measures will further mitigate the potential adverse environmental effects on Dungeness crab, Pacific sand lance, and surf smelt identified by the review panel.

Improved certainty

In its review, DFO identified a few areas of uncertainty, including uncertainty with respect to the areal extent of the proposed footprint reduction and land access/tenure. Some of these uncertainties are addressed by information of which DFO may not have been aware.

With respect to the footprint reduction, the port authority notes that it has, through ongoing discussion with IAAC, confirmed the full extent of the footprint reduction, which is now integrated into the Designated Project Description posted on the registry at the same time as the IR response ([CIAR #2084](#)).

With respect to land access/tenure, the British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD), in a letter dated July 30, 2021, to “provid[e] a level of comfort to Fisheries and Oceans Canada and other agencies as they participate in the Environmental Assessment process on the Roberts Bank Terminal 2 Project,” described the status of the land tenure applications at that time (see Appendix IR2020-1.1-D, [CIAR #2083](#)). Of note, FLNRORD confirmed that the tenure applications for three of the six off-site offsetting projects, which together constitute the majority of the off-site offsetting habitats, over 42 ha in area, were “well advanced, and the land within the application areas is available, and not currently designated or granted in any way that would preclude approval of these applications.” FLNRORD also noted there were no outstanding concerns from Indigenous groups on those applications. Since that time, the port authority has continued its work to secure land tenure and remains confident land tenure for the off-site offsetting projects will be achieved.

Future work to finalize measures, including offsetting

DFO notes that work will be required to finalize project design and develop the final offsetting plan, including further discussion during DFO’s regulatory review of the port authority’s future application for a *Fisheries Act* Authorization. Transport Canada also points to the need for collaboration to develop and implement mitigation measures. The port authority agrees that details of mitigation measures, including offsetting, can be finalized during the permitting phase and is committed to continuing to work with Transport Canada and DFO, as well as with Indigenous groups, in this regard. In particular, as noted in IR2020-1.1, “The port authority and TFN [Tsawwassen First Nation] are working collaboratively on the RBT2 offsetting plan. This collaboration is guided by TFN’s Offsetting Vision which expresses the importance of reflecting TFN perspectives and traditional knowledge in offsetting planning. It addresses both the physical needs of the environment as well as TFN members’ access to and use of lands, waters, and resources consistent with their Treaty rights and in a way that benefits the holistic health and well-being of the TFN community.” As well, as noted by Musqueam Indian Band in their submission ([CIAR #3340](#)),

“The Port Authority has made a commitment to advance the Project in a way that is guided by and reflects Musqueam’s knowledge, perspectives, experience and input. As a component of the Project’s consultation processes, the Port Authority has committed to aligning the offsetting plan with Musqueam’s vision of creating a mosaic of habitat enhancement (e.g., for increased feeding, rearing, and refuge for a range of priority species and life stages throughout the Fraser River estuary). This aligns with Musqueam’s responsibility to be stewards of their traditional territory and ensure there are adequate ecological and cultural resources to support the cultural continuity of future generations of Musqueam people.”

DFO states that the technical feasibility of any causeway breach should be determined. The port authority notes the draft conditions already contemplate an evaluation of the technical and economic feasibility of a causeway breach and would require implementation of a breach if feasible. DFO also alludes to the prospect that both a causeway breach and the marine terminal breach should be implemented if feasible and beneficial to juvenile Chinook salmon ([CIAR #2407](#), p.11). However, DFO does not propose a condition to achieve this nor will it be appropriate to impose one. Regardless of the extent to which the existing causeway has altered fish habitat, the project will have no impact. The port authority has proposed a measure—the marine terminal breach—to directly mitigate the potential of the project to impair juvenile salmon migration. There is a suggestion that an alternative, a causeway breach, may be preferable from an ecological perspective. If so, that will require a public policy choice to mitigate non-project effects instead of project effects. As noted by Tsawwassen First Nation in their submission ([CIAR #3502](#)), further discussion regarding the draft conditions relating to a causeway breach is warranted, including clarification of Crown commitments in this regard. In the meantime, there is no basis for imposing a requirement on the proponent to mitigate effects that the project will not cause.

Engagement with indigenous groups

As described by Transport Canada in its submission ([CIAR #2298](#), pp.5-8), the Government of Canada has committed to, and has launched, several regional initiatives and programs to reduce adverse effects of marine shipping. The draft conditions already contemplate the port authority's participation as a key stakeholder in regional initiatives and the port authority agrees with this approach. The port authority also intends to coordinate its own consultation with Indigenous groups on marine shipping incidental to the project in alignment with those initiatives. In particular, the port authority intends to collaborate with the relevant federal authorities and Indigenous groups to support a) the provision of real-time information regarding the movement of marine shipping incidental to the project through the marine shipping area and b) the identification of measures that may reduce the impact of international shipping lanes to fishing by Indigenous groups. In its detailed feedback on the draft conditions, provided in **Appendix 3.2-A** of this submission, the port authority suggests revisions and additional conditions that would also require the port authority to develop and implement, in consultation with Indigenous groups, measures, including a follow-up program element, to address the potential effects of the incidental marine shipping on current use of lands and resources for traditional purposes.

The need for the project

Transport Canada also confirms its view that the RBT2 Project is needed, and notes that, in the absence of further container capacity expansion, the Pacific Gateway could face structural congestion by 2027 ([CIAR #2298](#), p.9). Transport Canada goes on to describe the serious impacts of insufficient container capacity on Canadian importers and exporters, producers, consumers, and Indigenous and coastal communities, impacts that are already occurring and could worsen if container capacity constraints and supply chain congestion are not addressed ([CIAR #2298](#), pp.9-10). The port authority agrees with Transport Canada's assessment of the need for the project and the serious consequences that would occur if the RBT2 Project is not approved to proceed.

The information provided by Transport Canada provides further justification of any adverse environmental effects the minister may decide are likely to result from the project.

2.4.2 Response to provincial agencies

The submission during the public comment period by the B.C. Environmental Assessment Office (EAO) ([CIAR #3218](#)) included consolidated comments from several provincial agencies, including the following:

- B.C. Ministry of Environment and Climate Change Strategy (ENV) and B.C. Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) (joint feedback)
- B.C. Ministry of Health (MOH)
- B.C. Ministry of Agriculture, Food and Fisheries (AFF)
- B.C. Ministry of Indigenous Relations and Reconciliation (MIRR)
- B.C. Ministry of Transportation and Infrastructure (MOTI)
- B.C. Railway Company (BC Rail)

This section of the port authority's submission responds to several points raised by provincial agencies.

In addition, some provincial agencies made specific suggestions to revise or add to the draft conditions. The port authority has evaluated the technical and economic feasibility of suggested conditions/revisions in consideration of relevant factors, including the key principles, provided in **Section 3.1** of this submission, that must underlie the conditions. The port authority's responses to specific suggestions by provincial agencies are provided in **Appendix 2.4-A**.

Follow-up program development

In its comments on draft conditions 3.6.3 and 3.6.4, MOH highlighted matters to be discussed during the development of the follow-up program but did not suggest that the conditions be revised to include such details. The port authority has noted these matters and will consider them in consultation with MOH during development of the air quality follow-up program that would be required by draft condition 3.6.

In contrast, in their submission, a number of suggestions were made by ENV/FLNRORD to add specific details, including specific methods, locations, frequencies, and other parameters to a variety of follow-up program elements that the draft conditions would require the port authority to develop. The port authority notes that these details are properly determined during the development of the follow-up program, as contemplated by draft condition 2.5, which lists the information that must be determined during follow-up program development.

Further, the port authority notes that the draft conditions that would require the port authority to develop follow-up program elements also specify the parties to be consulted during follow-up program development, including relevant federal, provincial, and/or municipal authorities and Indigenous groups. Specifying details of the follow-up program in the conditions would preclude these aspects of the follow-up program from being developed in consultation with all the specified parties, potentially undermining the benefit of collaboration, and is therefore premature.

Non-project effects

Several comments from provincial agencies pertain to changes or effects that are not predicted to be caused by the project, including natural changes, such as sea level rise (which the project will not alter), effects of past developments, such as the existing causeways and terminals, and effects of other physical activities that are outside the scope of the project, such as traffic outside the area for which the port authority has jurisdiction. While the port authority understands the interest of provincial agencies in these

matters, the conditions must nevertheless remain focused on the effects of the project as scoped for the purpose of environmental assessment.⁴⁴

The port authority notes that the potential effects of the project, including the project's contribution to cumulative effects, were fully assessed during the environmental assessment. Further, the draft conditions include, with revisions and additions suggested by the port authority in **Appendix 2.5-A** of this submission, appropriate measures to mitigate the predicted effects of the project, including the project's contribution to cumulative effects, and to verify the effect predictions and the effectiveness of mitigation. In keeping with the key legal principles that underlie or should underlie the drafting of conditions, outlined in **Section 3.1** of this submission, the conditions should not impose any requirement on the proponent to assess, mitigate, or monitor non-project effects.

The port authority also notes that the Government of Canada has, in the draft Whole of Government Response, outlined the many regional initiatives underway or planned that serve to address regional issues. As noted in its closing remarks to the review panel ([CIAR #2045](#), e.g., p.10, p.17, p.27, p.82, p.83, p.116, p.171, p.198, p.202, p.210, p.212, p.215, .216, p.221, p.223, p.297, p.298, p.325), the port authority agrees with the importance of and is committed to continue its participation in regional initiatives to address regional cumulative issues. Numerous draft conditions would require the port authority to participate in relevant regional initiatives.

Causeway breach

Both MOTI and BC Rail provide comments on a potential breach of the causeway for fish passage.

In its submission, BC Rail refers to the causeway breach as mitigation for the effects of the project. Further, MOTI states that "it is not satisfied that VFPA has demonstrated a need for the causeway breach option as opposed to a terminal breach." These statements do not accurately reflect the outcome of the assessment nor what the port authority states regarding the breach in its response to IR2020-2.1. The concept of a potential breach to facilitate fish passage was initially put forward by the minister (in the minister's IR) as a potential measure to mitigate the potential effect of the project on juvenile salmon migration. That effect can be mitigated by a marine terminal breach. As stated in the port authority's response to IR2020-2.1:

"the port authority proposes a terminal breach as a technically and economically feasible mitigation measure that would directly reduce the potential to disrupt migration resulting from the placement of the terminal."

The port authority also acknowledges the interest of other parties, notably DFO and Indigenous groups, in a causeway breach to potentially mitigate the disruption of movement by juvenile salmon by the existing causeway. In response to the minister's IR, the port authority investigated the feasibility of a causeway breach. However, in providing the information requested by the minister, the port authority is not proposing a causeway breach to mitigate project effects. Further, in the IR response, the port authority emphasized that implementation of a causeway breach instead of a marine terminal breach would be a public policy decision to choose to mitigate existing impacts of the existing causeway, which should be made by government.

In its submission, BC Rail suggests that draft conditions 7.1 and 7.2 should be revised to "simply require the construction of the marine terminal breach." The port authority notes that the draft conditions already

⁴⁴ The scope of the project for the purposes of the federal environmental assessment is specified in section 3.1 of the Updated EIS Guidelines ([CIAR #1680](#)). The scope of the project for the purposes of the provincial environmental assessment is specified in Schedule A to the Section 14 Order and "is the same as the scope determined by the Agency as described in the Guidelines."

would require the port authority to implement the marine terminal breach if the causeway breach is determined to be not feasible. As noted in the response to IR2020-2.1, the port authority acknowledges that further work to evaluate the feasibility of a causeway breach is warranted in response to the interests expressed by DFO and Indigenous groups.

Both MOTI and BC Rail identify potential impacts that may arise from the construction of a causeway breach, including operational disruption, financial impacts, safety risks, potential liabilities, land access and tenure, and their legal rights as land owners, as well as operational considerations, including future maintenance concerns, ownership, utility installation, and infrastructure integrity. Both MOTI and BC Rail note these impacts would have to be considered before any causeway breach option could proceed. In its response to IR2020-2.1, the port authority similarly noted that if the minister wishes to proceed with a causeway breach, further work would be required to evaluate its feasibility, and acknowledged the need for that evaluation to consider, among other things, the potential for operational disruption to parties who use the causeway, the legal rights of those parties, the need for agreement from those parties, and potential financial impacts.

These are matters that would be accounted for in an evaluation of technical and economic feasibility that would be required pursuant to draft condition 7.1. However, it is important to note that the feasibility evaluation would not include reaching agreements with land owners or users of the causeway, including MOTI and BC Rail, and matters such as financing, ownership, control, and maintenance responsibilities would not be decided in an evaluation of feasibility. Rather, such matters would have to be resolved if the Government of Canada determines it is in the public interest to pursue a causeway breach. It is appropriate for the conditions to require an evaluation of feasibility but not to require resolution of these matters outside of the port authority's care and control.

In its submission, MOTI also suggests certain design requirements, including a "design review process" and life cycle performance assessment of the box culvert(s) that may be used to create the breach. To be clear, an evaluation of the technical and economic feasibility of a causeway breach would appropriately not include the detailed design. Detailed design will be undertaken later, if and when the Government of Canada decides to pursue a causeway breach.

Stormwater management

In its submission, MOTI also refers to the completion of "a full hydraulic assessment of the entire surface area of the causeway (both existing and proposed) to determine what must be considered for storm water management as part of any exploration of a causeway breach and causeway expansion." The port authority is aware of concerns raised by Indigenous groups regarding stormwater management and has integrated appropriate stormwater management measures into the design of the marine terminal and widened causeway. The port authority notes that the draft conditions address management of stormwater from the project (including the widened causeway), and, following consultation with Indigenous groups, the port authority has suggested further revisions to the draft conditions to better reflect the stormwater management measures (see **Appendix 2.5-A** of this submission for the port authority's suggested revisions).

The port authority emphasizes the existing causeway is owned largely by other parties. The responsibility for management of stormwater on the existing causeway lies with the owners of the causeway. A hydraulic assessment of the existing causeway is not required to evaluate the feasibility of a causeway breach. If a causeway breach is determined to be feasible and the Government of Canada chooses to implement a causeway breach to mitigate impacts of the existing causeway, the detailed design of a breach would consider stormwater management. As noted above, the feasibility evaluation would not

include detailed design; that would be undertaken later, if and when the Government of Canada decides to pursue a causeway breach.

2.4.3 Response to the City of Delta

The City of Delta (Delta) provided comments on the additional information provided in the port authority's IR response on March 9, 2022 ([CIAR #3049](#)). The port authority's response to some of the points raised by Delta is provided below. The port authority has built an open and productive working relationship with Delta over the past 20 years. Ongoing dialogue on matters of mutual interest take place at the executive, council, staff, and community levels through regular leadership meetings, delegations to council, the Port Community Liaison Committee, a port authority community office, and through financial contributions to Delta charitable organizations. The port authority is committed to its important relationship with Delta, and to continuing to work together on matters of interest or concern to the Delta community regarding the project. In its submission, Delta acknowledges the "significant further engagement and technical work" undertaken by the port authority and concludes the additional measures proposed by the port authority would help to further mitigate potential adverse effects of the project.

Port-wide issues

Delta asserts that certain concerns related to potential project effects have not been substantially addressed, including concerns regarding multi-jurisdictional port policing, the need for more Canada Border Services Agency resources, increased pressure on Delta's agricultural land, and traffic impacts beyond the project footprint.

Issues related to port policing and Canada Border Services Agency resourcing arise from port-wide activity and are addressed by the port authority through collaboration with security and emergency services partner agencies, including Transport Canada, the Canada Border Services Agency, the Canadian Coast Guard, the Marine Security Operations Centre, U.S. Customs and Border Protection, and policing agencies, including the Royal Canadian Mounted Police, Canadian National and Canadian Pacific railway police forces, the Vancouver Police Department, the Delta Police Department, and the New Westminster Police Department. These are not related to the project. Policing and resourcing issues are appropriately addressed through these existing partnerships, not via requirements that would apply only to a single specific port project.

With respect to the potential effects of the project on agricultural land, the project is predicted to affect only a very small area of port land (0.2 acres) that is currently leased for agricultural use; the review panel concluded that this project effect would not be significant. The draft conditions include requirements for the port authority to evaluate the feasibility of and implement feasible land use options related to or in support of agriculture, and to participate, at the request of a relevant authority, in any regional initiative related to managing project-related effects on adjacent Agricultural Land Reserve properties. These measures are appropriate and commensurate with the predicted project effect. The pressure on agricultural land in Delta arises from urban, commercial, and industrial development in general, not the project specifically. Such matters are properly addressed through a regional approach to agricultural land management led by other relevant authorities.

With respect to traffic impacts in the upland area beyond the project footprint, the port authority notes that road and rail traffic outside the port authority's jurisdiction was determined to be outside the scope of the environmental assessment,⁴⁵ but were taken into account in the cumulative effects assessment as

⁴⁵ The scope of the project for the purposes of the federal environmental assessment includes, as stated in Section 3.1 of the Updated EIS Guidelines ([CIAR #1680](#)), "marine, road and rail transportation within

appropriate. Further, the port authority notes there are several specific improvements that have been completed, and future improvements that are already planned for the provincial public highway system that the province has anticipated would facilitate future traffic demand, including future demand driven from the operation of RBT2. Those improvements include the following:

- Construction of the South Fraser Perimeter Road (Completed 2013)
- Planned construction of an interchange at Tilbury intersection, the junction between Highway 17 and 80th Street
- Planned widening of a portion of Deltaport Way from a two-lane road to a four-lane road
- Planned construction of an interchange along Deltaport Way at either Arthur Drive or 41B Street overpass

The review panel heard evidence regarding concerns related to upland traffic and, consistent with the scope of the environmental assessment of the project, concluded that “the province, the City of Delta, and the Tsawwassen will need to collaboratively address local traffic issues” (CIAR #2062, p. 341). The port authority also notes that regional transportation issues are being addressed to accommodate growing trade through the Gateway Transportation Collaboration Forum, established in summer 2014, which includes Transport Canada, the B.C. Ministry of Transportation and Infrastructure, the port authority, TransLink, and the Greater Vancouver Gateway Council.

Regional assessment

In its submission, Delta calls on the federal and provincial governments to undertake a regional environmental assessment of the Fraser River estuary and Salish Sea and develop a long-term environmental management plan for the region, consistent with recommendations of the review panel. The port authority notes that the Government of Canada has addressed these recommendations in the draft Whole of Government Response, outlining the many regional initiatives underway or planned that serve to address regional issues. As noted in its closing remarks to the review panel (CIAR #2045, e.g., p.10, p.17, p.27, p.82, p.83, p.116, p.171, p.198, p.202, p.210, p.212, p.215, .216, p.221, p.223, p.297, p.298, p.325), the port authority agrees with the importance of and is committed to continue its participation in regional initiatives to address regional cumulative issues. The port authority emphasizes that decision-making for the RBT2 Project is not dependent on the completion or outcomes of these regional initiatives, and the minister “need not wait until such regional initiatives are completed prior to recommending Project approval” (CIAR #2045, p.11). “In the event that additional mitigation measures are identified through these regional initiatives in the future, regardless of whether they are Project-related mitigation measures, the Review Panel and the Minister can reasonably expect that additional measures adopted will also apply to Project-related activities” (CIAR #2045, p.11).

Decision-making

Delta’s suggestion that a decision regarding the RBT2 Project be postponed is addressed in **Section 2.3.7** of this submission. Delta alternatively suggests that the RBT2 Project should be denied because it may result in adverse environmental effects, some of which may be significant. As explained in **Section 2.3.6** of this submission, if the minister decides, taking the substantial additional mitigation and follow-up measures proposed by the port authority and described in the draft conditions and the draft Whole of Government Response, the project is likely to cause significant adverse environmental effects, that does

the areas for which the proponent has jurisdiction.” The scope of the project for the purposes of the provincial environmental assessment is specified in Schedule A to the Section 14 Order and “is the same as the scope determined by the Agency as described in the Guidelines.”

not mean the project cannot or should not proceed. Rather, the legislative framework of CEAA 2012 provides for consideration by the Governor in Council of whether such effects are justified in the circumstances. As discussed in **Section 2.1**, the potential residual adverse effects of the project are justified, and approval of the project is in the public interest.

Potential conditions

In its submission, Delta provides comments regarding specific draft conditions. The port authority's response to these comments is provided in **Appendix 3.2-A** of this submission.

2.4.4 Response to the City of Richmond

The City of Richmond (Richmond) provided comments on the additional information provided in the port authority's IR response and the draft conditions on March 16, 2022 ([CIAR #3504](#)). The port authority's response to some of the issues raised by Richmond is provided below.

Scope of the project and of the assessment

The scope of the project for the purpose of the federal environmental assessment, the factors to be considered, and the scope of those factors were originally specified in the *Guidelines for the Preparation of an Environmental Impact Statement* (EIS Guidelines) issued November 8, 2013 ([CIAR #9](#)). With respect to the issues raised by Richmond, the scope of the project specified in the original EIS Guidelines did not include road and rail transportation outside the areas for which the proponent (the port authority) has jurisdiction, nor did it include other operational or industrial activity not proposed by the port authority. The EIS Guidelines did require an assessment of the cumulative effects of the project. Under the EIS Guidelines, the effects of road and rail traffic travelling to and from the terminal outside the areas for which the port authority has jurisdiction had to be accounted for. The assessment of cumulative effects also included consideration of measures to mitigate potential effects on human and environmental health and safety.

The EIS Guidelines were updated twice. On April 17, 2015 ([CIAR #177](#)), they were updated to amend the scope of the assessment to include, among other things, broader consideration of the potential economic, social, heritage, and health effects of the project, including cumulative effects, to support the provincial environmental assessment. In April 2019, the EIS Guidelines were updated to amend how marine shipping incidental to the project would be considered in decision-making. The port authority was not required to amend the scope of the project on either occasion, confirming that the project does not include road and rail transportation outside the areas for which the proponent (the port authority) has jurisdiction or other operational or industrial activity not proposed by the port authority.

The scope of the project for the purpose of the federal environmental assessment is specified in section 3.1 of the Updated EIS Guidelines ([CIAR #1680](#)) and appropriately reflects the fact that the port authority has not proposed to conduct road or rail transportation in areas outside of the port authority's care and control.

The scope of the required assessment for the purposes of the provincial environmental assessment and the procedures and methods for conducting the assessment were originally specified in Schedule A to the Order issued December 19, 2014, by the provincial Minister of Environment pursuant to section 14 of the B.C. *Environmental Assessment Act* (the Section 14 Order)⁴⁶ and "is the same as the scope determined by the Agency as described in the Guidelines." That is, the provincial minister considered the scope of the project and the scope of the assessment established for the purpose of the federal environmental

⁴⁶ [Section 14 Order dated Dec 19, 14.pdf \(gov.bc.ca\)](#)

assessment and determined that it was appropriate for the purpose of the provincial environmental assessment. After the federal scope was amended in April 2019, as noted above, the B.C. EAO reviewed those amendments and determined that certain aspects of the scope, procedures, and methods of the provincial assessment required modification. Accordingly, the provincial Minister of Environment and Climate Change Strategy, through an Order pursuant to section 15(1)(a) of the B.C. *Environmental Assessment Act* issued August 8, 2019, revised Schedule A of the Section 14 Order to incorporate amendments in the federal Updated EIS Guidelines. The provincial minister did not, either in the original Section 14 Order or when amending it, determine that the project should include road and rail transportation outside the areas for which the port authority has jurisdiction or other operational or industrial activity not proposed by the port authority.

In short, in determining the scope of the project and of the assessment, and taking into consideration the views and information received from participants in the assessment, including Richmond, both the federal and provincial governments determined that, with respect to the issues raised by Richmond, the project does not include road and rail transportation outside the areas for which the proponent (the port authority) has jurisdiction or other operational or industrial activity not proposed by the port authority but the assessment does include consideration of cumulative effects of the project and measures to account for human and environmental health and safety.

Regional cumulative effects

Given the scope of the project and of the assessment outlined above, local transportation and operational and industrial activity are not project components or activities proposed by the port authority. The effects of these activities, specifically upland road and rail movements of trucks and trains associated with the project, were considered as required in the cumulative effects assessments for relevant components, such as air quality and noise and vibration.

As indicated in its response to Delta (**Section 2.4.3** above), the port authority notes there are several specific improvements that have been completed, and future improvements that are already planned for the provincial public highway system that the Province has anticipated would facilitate future traffic demand, including future demand driven from the operation of RBT2. Those improvements include the following:

- Construction of the South Fraser Perimeter Road (Completed 2013)
- Planned construction of an interchange at Tilbury intersection, the junction between Highway 17 and 80th Street
- Planned widening of a portion of Deltaport Way from a two-lane road to a four-lane road
- Planned construction of an interchange along Deltaport Way at either Arthur Drive or 41B Street overpass

The review panel heard evidence regarding concerns related to upland traffic and, consistent with the scope of the environmental assessment of the project, concluded that “the province, the City of Delta, and the Tsawwassen will need to collaboratively address local traffic issues” (review panel report, [CIAR #2062](#), p.341). The port authority also notes that regional transportation issues are being addressed to accommodate growing trade through the Gateway Transportation Collaboration Forum, established in summer 2014, which includes Transport Canada, MOTI, the port authority, TransLink, and the Greater Vancouver Gateway Council.

The port authority also notes the Government of Canada has, in the draft Whole of Government Response, outlined the many regional initiatives underway or planned that serve to address regional issues. As noted in its closing remarks to the review panel ([CIAR #2045](#), e.g., p.10, p.17, p.27, p.82, p.83,

p.116, p.171, p.198, p.202, p.210, p.212, p.215, .216, p.221, p.223, p.297, p.298, p.325), the port authority agrees with the importance of and is committed to continue its participation in regional initiatives and notes that a numerous draft conditions would require the port authority to do so.

Consultation

The port authority has an ongoing engagement with Richmond staff. Consultation takes place through regular leadership meetings and staff-to-staff liaison on individual projects and initiatives. The port authority has consulted with the Richmond regarding the project since 2011, and during the IR response development consulted specifically on offsetting projects within Richmond's jurisdiction.

In its submission, Richmond indicates its interest in being consulted with respect to certain topics, including air quality, emergency spill response planning, and impacts to the environment, transportation, and socio-economics. The port authority notes that, in the context of the development of mitigation measures and plans that would be required by the draft conditions, it is willing to consult, as appropriate, with relevant authorities, which is defined in the draft conditions as "federal and/or provincial and/or municipal authorities that are in possession of specialist or expert information or knowledge, or that have a responsibility for the administration of a law or regulation, with respect to the subject matter of a condition set out in this document."

Alternatives

In its submission, Richmond suggest that further assessment of project alternatives is needed. The port authority notes that alternatives to the project, including other West Coast terminal plans and concepts, were considered in the EIS (Volume 1, Section 5) ([CIAR #181](#)). No other alternatives were identified that would fulfil the purpose of the RBT2 Project. Further, as described in **Section 2.3.1** of this submission, there is a need for the project to meet the growing demand for container terminal capacity while being able to avoid the likely economic and environmental impacts associated with structural congestion and further supply chain disruption.

2.4.5 Response to State of Washington Department of Ecology

The State of Washington Department of Ecology provided comments on the additional information provided in the port authority's IR response and the draft conditions on March 14, 2022 ([CIAR #3082](#)). The port authority's response to the issues raised by the State of Washington Department of Ecology is provided below.

Southern resident killer whales

In its submission, the State of Washington Department of Ecology suggests additional measures related to SRKW in part 8 of the draft conditions. However, the port authority notes that the elements suggested by the department are already addressed in the draft conditions. Specifically, draft condition 8.7 would require the port authority to distribute educational materials to enhance mariners' awareness with respect to SRKW, draft condition 8.10 would require the port authority to sign on to an additional five-year term of the Conservation Agreement, and draft condition 8.3 addresses the need to require container vessels calling at RBT2 to participate in the ECHO Program (or future equivalent), which includes the initiatives listed by the State of Washington Department of Ecology. (The port authority notes that it suggests further revisions and additions to the conditions in part 8 of the draft conditions; see **Appendix 3.2-A** of this submission.)

The State of Washington Department of Ecology also makes suggestions with respect to consideration of International Maritime Organization guidelines. As noted in IR2020-3, the port authority is supporting the

Government of Canada in building global awareness of underwater noise mitigation strategies through the input and support of the ECHO Program. In June 2021, the Government of Canada was successful in securing a commitment from the International Maritime Organization's Marine Environment Protection Committee to review the 2014 guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life (MEPC.1/Circ.833, April 2014) and to identify next steps. The ECHO Program has shared data and input toward the development of the Government of Canada's proposal to the International Maritime Organization and will continue to support these efforts.

The State of Washington Department of Ecology suggests container vessels calling at RBT2 and tugs serving RBT2 be required to meet certain standards. This is not a feasible measure. It would not apply equally to all vessels calling at the Port of Vancouver and other West Coast terminals, including those in Puget Sound, which would distort competition among container terminals. This will tend to cause vessels to call at other terminals to avoid the requirements, limiting the effectiveness of the measure. Instead, the port authority promotes improved environmental performance of all vessels calling at and operating in the Port of Vancouver through voluntary programs, such as [EcoAction](#). The port authority also notes that draft condition 3.1 would require the port authority to provide shore power connections at RBT2, which would further encourage container vessels calling at the terminal to reduce environmental effects. Further, the port authority notes that DFO has suggested an additional condition to require tugs supporting container vessels at RBT2 to slow down and the port authority has, in response, suggested revisions and additions to the draft conditions in part 8 to reduce the effects of tugs (see **Appendix 2.5-A** of this submission for the port authority's suggested revision and additions).

The State of Washington Department of Ecology also describes initiatives it has taken to manage risks of accidental oil spills and suggests similar initiatives be required in the conditions. The lead federal authority with responsibility for developing and implementing response plans for accidents and malfunctions resulting in marine pollution in the marine environment, both within and outside the Port of Vancouver, is the Canadian Coast Guard. The port authority notes that the Government of Canada (including the Canadian Coast Guard) has described initiatives it has taken, is taking, and/or will take to address potential effects of the project and cumulative effects in the draft Whole of Government Response. If the Government of Canada determines that initiatives like those described by the department are warranted, it should address those initiatives in the Whole of Government Response.

Indigenous rights and resources

The port authority acknowledges the State of Washington Department of Ecology's comments on Indigenous rights and resources. See **Section 2.5** of this submission for further discussion of that matter in the context of submission from Indigenous groups, including groups based in the United States.

Cumulative and transboundary effects

In its submission, the State of Washington Department of Ecology asserts "there is no mention of cumulative impacts from this project, current, and expected future projects." This statement is not accurate. The project's contribution to cumulative effects have been predicted in the environmental assessment of the project. In the cumulative effects assessment, the potential effects of other projects and activities that have been or will be carried out, including two projects in the Northwest Seaport Alliance, were taken into consideration. Information on the assessment of cumulative effects can be found in the EIS ([CIAR #181](#)), Marine Shipping Addendum ([CIAR #316](#)), and responses to information requests as follows:

- EIS Environmental Assessment Methods (Section 8.1.9) describe methods applied for assessment of cumulative effects, including identification of certain and reasonably foreseeable projects and activities (Table 8-8)

- EIS effects assessment sections each include a cumulative effects assessment, as a separate sub-section:
 - Physical and atmospheric component assessments (Sections 9.2 through 9.8)⁴⁷
 - Biophysical valued component assessments (Sections 11 through 15)⁴⁸
 - Social and economic component assessments (Sections 19 through 28)⁴⁹
- Marine Shipping Addendum assessment sections also each include a cumulative effects assessment, as a separate sub-section (CIAR #316)⁵⁰
- Response to Additional Information Request #13 (CIAR #314, and CIAR #412), comprising a consolidation and additional information on the cumulative effects assessment for all components

The cumulative effects assessment takes into account other reasonably foreseeable projects and activities that will be carried out that were in the public domain at the time; at the time of the assessment, that did not include other proposed terminal expansions at Roberts Bank. If the Deltaport Expansion – Berth Four Project proceeds through an environmental assessment, it will be required to consider cumulative effects of other past, present, and reasonably foreseeable projects and activities, including RBT2.

The State of Washington Department of Ecology also suggests ongoing collaboration in CANUSPAC, a joint marine pollution contingency plan, and notification requirements in the event of a marine spill. As noted above, these matters are within the purview of the Government of Canada, specifically the Canadian Coast Guard, and should be addressed as appropriate in the Whole of Government Response.

Community air monitoring

In its submission, the State of Washington Department of Ecology suggests the need for a community air monitoring plan. The port authority notes that the draft conditions for the project already would require the development of a follow-up program to monitor the effect of project emissions during construction and operation of the project, as well as the development and implementation of a communication plan in the event of an accident or malfunction. These draft conditions are appropriately focused on and commensurate with the predicted effects of the project on air quality. Broader community air monitoring is

⁴⁷ Topic specific cumulative effects assessments for physical and atmospheric components are provided in sub-sections 9.2.9 Air quality; 9.3.10 Noise and vibration; 9.4.9 Light; 9.5.9 Coastal geomorphology; 9.6.9 Surficial geology and marine sediment; 9.7.9 Marine water quality; and 9.8.8 Underwater noise.

⁴⁸ Topic specific cumulative effects assessments for biophysical valued components are provided in sub-sections 11.10 Marine vegetation; 12.10 Marine invertebrates; 13.10 Marine fish; 14.10 Marine mammals; and 15.11 Coastal birds.

⁴⁹ Topic specific cumulative effects assessments for social and economic valued components are provided in sub-sections 19.10 Labour market; 20.9 Economic development; 21.11 Marine commercial use; 22.9 Local government finances; 23.10 Services and infrastructure; 24.9 Outdoor recreation; 25.10 Visual resources; 26.10 Land and water use; 27.10 Human health; and 28.10 Archaeological and heritage resources; 32.2.9 Potential or established Aboriginal and treaty rights and related interests, including current use of lands and resources for traditional purposes.

⁵⁰ Assessments of cumulative effects for environmental and social components in the Marine Shipping Addendum are provided in sub-sections 7.1.6 Air quality; 7.2.6 Wave environment; 7.3.6 Marine water quality; 7.4.6 Atmospheric noise; 7.5.6 Light; 8.1.9 Marine fish and fish habitat; 8.2.9 Marine mammals; 9.1.8 Human health; 9.2.8 Marine commercial use; 9.3.8 Outdoor recreation; 9.4.9 Archaeological and heritage resources; and 9.5.8 Current use of lands and resources for traditional purposes and Aboriginal and treaty rights.

not the responsibility of the port authority and, if deemed by the government to be necessary, should be addressed in the Whole of Government Response.

Tug escort

In its submission, the State of Washington Department of Ecology recommends tethered tug escort be required for the container vessels calling at RBT2. This is not feasible, nor is there any basis for imposing such a requirement. The port authority notes that tug and tethering requirements for vessels calling at the Port of Vancouver are specified by the Pacific Pilotage Authority and would not be restricted to vessels calling at RBT2. In any case, to do so would create an unfair and uncompetitive constraint on RBT2 relative to other container terminals. As discussed above, this will tend to undermine the effectiveness of the requirement. Further, the port authority notes the addition of tug escort to all container vessels transiting the marine shipping area would likely increase underwater noise associated with those transits, resulting in increased adverse effects on SRKW.

Vessel safety

In its submission, the State of Washington Department of Ecology recommends additional vessel safety measures, including pilotage and participation in regional vessel safety and engagement forums. The port authority notes that pilotage requirements are specified by the Pacific Pilotage Authority, not by the port authority, and such requirements would not be restricted to vessels calling at RBT2. As noted above, the lead federal authority with responsibility for developing and implementing response plans for accidents and malfunctions resulting in marine pollution in the marine environment, both within and outside the Port of Vancouver, is the Canadian Coast Guard. If the Government of Canada determines that initiatives like those described by the State of Washington Department of Ecology are warranted, it should address those initiatives in the Whole of Government Response.

The State of Washington Department of Ecology also recommends that the port authority should participate in vessel safety and engagement forums, including the Pacific Coast Marine Review Panel (PACMAR). The port authority notes that it is currently a member/representative of the PACMAR committee, and would be willing to make special presentations to the committee about the RBT2 Project as requested.

Other spill and emergency response recommendations

The State of Washington Department of Ecology also recommends that container vessels calling at RBT2 have Reciprocal Arrangement Agreements with Western Canada Marine Response Corporation. As described in **Section 3.1** of this submission, the conditions for the project cannot be imposed on third parties and also cannot make compliance by the proponent dependent on the action of a third party. A requirement for container vessels calling at RBT2 to have agreements with another third party cannot be imposed on the proponent. Further, the port authority notes that, under the *Canada Shipping Act, 2001* all vessels are already required to have an agreement with a shore-based response organization.

The port authority agrees with the State of Washington Department of Ecology that transboundary collaboration with respect to spill response planning and effective emergency response is appropriate and notes that, as the responsibility for spill response planning lies with the Canadian Coast Guard, as noted above, this matter should be addressed in the Whole of Government Response as appropriate.

The State of Washington Department of Ecology also suggests that container vessels calling at RBT2 be required to provide financial assistance to the Neah Bay Emergency Response Towing Vessel (ERTV). The port authority notes that, as described in the response to IR2020-3 and supporting appendix IR2020-3B Updated Roberts Bank Terminal 2 Container Vessel Call Forecast Study ([CIAR #2083](#)),

container vessels that call at RBT2 and other terminals in the Port of Vancouver also almost always call at U.S. ports in Puget Sound on the same trip and would therefore already be contributing to ERTV funding. Further, establishing a project-specific requirement for container vessels calling at RBT2 to provide financial assistance to the Neah Bay ERTV would create an unfair and uncompetitive constraint on RBT2 relative to other container terminals in the Port of Vancouver and Puget Sound.

2.5 Response to Indigenous groups

2.5.1 Preface

Overview of the section

Following the submission of comments by Indigenous groups to IAAC as part of the public comment period on the port authority's IR response and the draft conditions, the port authority has prepared responses.

Sections 2.5.2 through **2.5.10** of this section of the port authority's submission includes the port authority's responses to nine submissions representing 22 Indigenous groups listed in the Updated EIS Guidelines for the project. These Indigenous groups are as follows:

- Tsawwassen First Nation
- Musqueam Indian Band
- Tsleil-Waututh Nation
- Pacheedaht First Nation
- Malahat Nation
- Halalt First Nation (representing Halalt First Nation, Lyackson First Nation, and Cowichan Tribes)
- Ts'uubaa-asatx First Nation
- Tsartlip First Nation
- S'ólh Téméxw Stewardship Alliance (representing Scowlitz First Nation, Soowahlie Band, Kwaw'Kwaw'Apilt First Nation, Chawathil First Nation, Cheam Indian Band, Aitchelitz First Nation, Skawahlook First Nation, Skowkale First Nation, Shxwha:y Village, Squiala First Nation, Tzeachten First Nation, and Yakweakwioose Band)

Section 2.5.11 includes the port authority's responses to three submissions representing five Indigenous groups not listed in the Updated EIS Guidelines for the project. These Indigenous groups are as follows:

- Adams Lake Indian Band
- Hwlitsum First Nation
- Swinomish Indian Tribal Community, Suquamish Tribe, and Tulalip Tribes

For the reasons noted in **Section 1.1** of this submission, the focus of the port authority's responses in this section is on Indigenous group comments regarding the port authority's IR response and the draft conditions. In **Sections 2.5.2** through **2.5.11** below, the port authority provides an overall response to each submission, with specific responses to comments on specific draft conditions provided in **Appendix 2.5-A**.

Indigenous group comments on specific draft conditions

Submissions from most Indigenous groups included specific suggestions to revise or add to the draft conditions. The port authority has reviewed these suggestions to evaluate the technical and economic feasibility of any suggested changes, in addition to considering other relevant factors, such as the key principles that must underlie the conditions, as described in **Section 3.1** of this submission. The port authority's responses to suggestions by Indigenous groups on specific draft conditions are included in nation-specific tables within **Appendix 2.5-A** to this submission.

The port authority notes that it has only included in **Appendix 2.5-A** comments from Indigenous groups where the port authority felt a response would be helpful to IAAC. The port authority has not included Indigenous group comments or responses on specific conditions for which the port authority has no comment, or for which the port authority takes no position.

For comments included in **Appendix 2.5-A** (where a response may be helpful to IAAC), the port authority has either a) provided a specific response; b) indicated the matter is best addressed through ongoing consultation; or c) indicated the matter is for consideration by IAAC, as the Indigenous group comment is not within the port authority's purview to address.

Other port authority responses and information

Section 2.1.6 of this submission describes the port authority's thorough and comprehensive consultation process with Indigenous groups on the project. As reflected in that section, the port authority has worked collaboratively with Indigenous groups on RBT2 for more than a decade to address concerns, incorporate interests, provide opportunities, and reach mutual benefit agreements. This consultation program included 282 one-on-one meetings and 25 multi-group workshops with Indigenous groups between August 2020 and February 2022 to discuss the port authority's IR response on the topics of fish and fish habitat, offsetting, juvenile salmon, SRKW, Dungeness crab, and biofilm.

Consultation progress and outcomes have been documented by the port authority since 2011 and shared back with Indigenous groups for review at various points over that time. This documentation has included interests and issues tracking tables and consultation summaries, as well as IR comment tables that detail the port authority's responses to feedback from Indigenous groups on the port authority's draft IR responses on the topics noted above, including providing clarifications, answering questions, and describing how the IR responses were adjusted prior to final submission based on feedback received. The issues tracking tables, consultation summaries, and IR comment tables are complementary to the port authority's responses to Indigenous groups provided below in **Sections 2.5.2** through **2.5.11** and **Appendix 2.5-A**.

2.5.2 Response to Tsawwassen First Nation

Tsawwassen First Nation (TFN) submitted a joint letter with Musqueam Indian Band and the port authority supporting the port authority's suggested revisions to draft conditions 12.3 through 12.5 relating to the current use of lands and resources for traditional purposes ([CIAR #3499](#)).

TFN also submitted a separate letter outlining TFN's feedback on the port authority's IR response and four draft conditions related to fish and fish habitat (7.1-7.3, 7.11), principally in relation to the fish passage breach and TFN's Offsetting Vision ([CIAR #3502](#)). See Table 1 of **Appendix 2.5-A** for TFN's comments on specific draft conditions and the port authority's responses to those comments.

TFN noted in its submission that it continues to work collaboratively with the port authority on the development of plans and mitigation measures identified in the draft conditions, including those for which TFN has provided specific comments. TFN has noted the need for further discussions in relation to those conditions after the public comment period and prior to finalization of the conditions. The port authority is supportive of this approach.

In relation to the port authority's IR response, TFN noted its appreciation of the work undertaken by the port authority to engage with TFN during the preparation of the IR response and the port authority's support of TFN's Community Health and Food Security Study, which the port authority referenced in the response to IR2020-5. TFN made no further comments on the IR response itself in their submission but noted their understanding of ongoing opportunities to engage with the port authority and government on

matters linked to the IR response. The port authority looks forward to continued collaboration with TFN and to supporting TFN's ongoing discussions with government, as appropriate.

The port authority notes that it has a relationship agreement in place with TFN that provides a framework for effective collaborative engagement between TFN and the port authority with respect to projects and operational procedures in the Port of Vancouver.

2.5.3 Response to Musqueam Indian Band

Musqueam Indian Band (Musqueam) submitted a joint letter with TFN and the port authority supporting the port authority's suggested revisions to draft conditions 12.3 through 12.5 relating to the current use of lands and resources for traditional purposes ([CIAR #3499](#)). Musqueam also made a separate submission pertaining to draft condition 12.1 on the current use of lands and resources for traditional purposes ([CIAR #3339](#)). See Table 2 of **Appendix 2.5-A** for Musqueam's comments on specific draft conditions and the port authority's responses to those comments.

In an additional submission ([CIAR #3340](#)), Musqueam presented an overview of Musqueam's collaborative work with the port authority on a number of initiatives related to the project of priority to Musqueam, including Musqueam's involvement in current and future studies and follow-up planning, offsetting and habitat enhancement, and crab-related measures.

The port authority notes that, while Musqueam has made no further direct reference to the port authority's IR response in this set of submissions, there are supportive linkages between the initiatives outlined by Musqueam, the draft conditions, and the port authority's IR response, particularly in relation to IR2020-1.1 and IR2020-1.2 on offsetting, IR2020-2.3 on additional crab-related measures, and IR2020-5 (i.e., Part 1 on current use of lands and resources for traditional purposes and incidental marine shipping, and Part 3 on harvesting crab for consumption in the vicinity of the project area). The port authority looks forward to continued collaboration with Musqueam on these and other initiatives.

The port authority notes that it has a mutual benefits agreement in place with Musqueam in relation to the project as well as a broader relationship agreement. Musqueam has also provided a letter of support for the project ([CIAR #2087](#)).

2.5.4 Response to Tsleil-Waututh Nation

Tsleil-Waututh Nation (TWN) submitted a table of comments on the draft conditions ([CIAR #3500](#)). TWN's comments on the draft conditions pertain to definitions related to heritage value and pre-construction surveys (1.20, 1.35); greenhouse gas reduction programs (3.2.4); fish and fish habitat (7.6, 7.10, 7.17); marine mammals (8.2, 8.6); reliance on no net loss for wetlands (9.2.5); current use of lands and resources for traditional purposes (12.1, 12.3, 12.4), with reference to TWN's use of the project area for fishing, crab harvesting, bird hunting, and cultural practices; human health follow-up program (13.1); and the name of the management plan for archaeological resources (14.1).

Several of TWN's comments on the above-noted draft conditions pertain to requests for additional information or clarification, including the rationale for the removal of draft conditions contained in the set of draft conditions issued by IAAC in October 2020, or suggest specific revisions. See Table 3 of **Appendix 2.5-A** for TWN's comments on specific draft conditions and the port authority's responses to those comments.

2.5.5 Response to Pacheedaht First Nation

Pacheedaht First Nation (Pacheedaht) submitted two letters, one containing Pacheedaht's comments on the port authority's IR response, specifically to IR2020-3 (CIAR #3359), and the other containing Pacheedaht's comments on specific draft conditions (CIAR #3358).

Pacheedaht's comments on specific draft conditions pertain to marine mammals (8.1, 8.4); communication plan (11.1); current use of lands and resources for traditional purposes (12.3); and accidents and malfunctions (19). The port authority has included responses to Pacheedaht's comments on these draft conditions in Table 4 of **Appendix 2.5-A** except for those regarding marine mammals, in relation to which Pacheedaht have not made any recommended changes but speak to broader concerns regarding SRKW in more detail in their letter pertaining to IR2020-3.

Pacheedaht's comments on IR2020-3 focus on three key matters regarding the additional information provided in the port authority's IR response pertaining to SRKW: (1) reliance on the 2021 Mercator International report; (2) sufficiency of mitigation for the marine shipping portion of the project; and (3) immediate measures to address existing underwater noise. The port authority notes that Pacheedaht previously provided comments on a draft version of the port authority's response to IR2020-3 and that the port authority responded to those comments at the time of the IR response submission.

The port authority has noted in other sections of this submission that, while the responsibility for mitigating the effects of existing and ongoing commercial vessel traffic in the marine shipping area lies with the Government of Canada, both the port authority and Government of Canada have already taken steps to address underwater noise and SRKW (see **Section 2.2** for details). The port authority has also noted in **Section 2.1.4** of this submission that the potential effects and cumulative effects of the project are mitigable both by the measures required by the conditions that would be imposed on the proponent and by the actions that are being taken, will be taken, and can be taken by the Government of Canada, as outlined in the draft Whole of Government Response.

The port authority acknowledges Pacheedaht's comments regarding the inclusion of, within the conditions, a requirement for capacity funding from the port authority and continuing opportunities for engagement with IAAC, particularly in relation to reporting or information provided pursuant to any follow-up programs. The port authority defers to IAAC on the request regarding continuing opportunities for engagement with IAAC. With regard to capacity funding from the port authority, the port authority notes it has offered capacity funding to Pacheedaht throughout project development and in the post-review panel period to facilitate Pacheedaht's continued participation in the review of the project.

2.5.6 Response to Malahat Nation

Malahat Nation (Malahat) submitted a letter with their comments on the port authority's IR response and the draft conditions.

Malahat's comments on specific draft conditions pertain to general conditions on consultation timelines (2.3.2); reduction targets for greenhouse gas emissions (3.2.5); and biofilm (10.2, 10.13, and 10.14). See Table 5 of **Appendix 2.5-A** for Malahat's comments on specific draft conditions and the port authority's responses to those comments. The port authority notes that matters related to biofilm are being considered in a separate submission and a response to Malahat's comments on biofilm will be included in that submission.

Malahat's specific comments on the port authority's IR response were largely focused on the minister's questions posed within IR2020-5 regarding the current use of lands and resources and human health. The port authority notes that Malahat has not requested specific changes to the draft conditions based on

that feedback and the port authority is of the view that the information provided by Malahat would not require changes to the draft conditions.

The port authority acknowledges other comments by Malahat regarding concerns with existing and potential project-related impacts on Malahat, specifically with regard to interruptions in the ability to access sites and places of cultural importance that support transfer of knowledge to younger generations, connections to other sites and places of cultural importance, kinship ties, social and trade networks, and the integrity of the cultural landscape. The port authority has addressed the matter of existing effects in other sections of the submission (e.g., **Section 2.1.4** and **Section 2.2**), where it is noted that the responsibility for mitigating these effects lies with the Government of Canada. The port authority has also noted in **Section 2.1.4** that the potential effects and cumulative effects of the project are mitigable both by the measures required by the conditions that would be imposed on the proponent and by the actions that are being taken, will be taken, and can be taken by the Government of Canada, as outlined in the draft Whole of Government Response.

The port authority also acknowledges Malahat's comment regarding the carrying capacity of the environment and the appropriate timing for determining thresholds of acceptable change and measurable targets, which the port authority notes has also been referenced in Malahat's specific comments on draft conditions related to biofilm. As noted above, those comments will be addressed in the forthcoming biofilm submission.

Regarding Malahat's comment on the need for capacity funding to support the review of project referrals, including the port authority's IR response and the draft conditions, the port authority notes that it has provided funding to Malahat throughout project development and in the post-review panel period to facilitate their continued participation in the review of the project.

The port authority notes that it has a mutual benefits agreement in place with Malahat in relation to the project. Malahat have also provided a letter of consent for the project ([CIAR #2045](#)).

2.5.7 Response to Halalt First Nation, Lyackson First Nation, and Cowichan Tribes

Halalt First Nation (Halalt) submitted two tables of comments, one on IAAC's draft conditions ([CIAR #3221](#)) and the other on the port authority's IR response ([CIAR #3221](#)). Halalt advised IAAC that their comments had been adopted by Lyackson First Nation (Lyackson) and Cowichan Tribes (Cowichan).

Halalt provided several comments across most sections of the draft conditions in a table of numbered comments, including those related to definitions for construction, construction activity, Designated Project, and qualified individuals (1.3, 1.4, 1.7, 1.37); general conditions (2.1, 2.2, 2.3, 2.5, 2.8, 2.10.3, 2.17), primarily in relation to consultation and follow-up program requirements; air quality and greenhouse gas emissions (3.2.6, 3.4.1); atmospheric noise (4.1.5, 4.2); marine environment (6.1-6.6, 6.8, 6.9.2.1, 6.11); fish and fish habitat (7.2-7.4, 7.6, 7.8, 7.11); marine mammals (8.2-8.3, 8.11-8.12); terrestrial vegetation and wetlands (9.2, 9.4); communication plan (11); current use of lands and resources for traditional purposes (12.3-12.4); human health follow-up program (13.1); Indigenous monitors (15), particularly regarding equitable access among, and coordination between, Indigenous groups; independent environmental monitor (16); Indigenous Advisory Committee (17), specifically the funding of participation in such a committee; Environmental Monitoring Committee (18), and its coordination with the Indigenous Advisory Committee; participation funding in relation to planning for potential accidents and malfunctions (19); and consultation timelines related to schedules (20).

Halalt's comments on the above-noted draft conditions generally comprise suggestions for revision and questions for clarification. Halalt also made a general comment on the draft conditions as a whole

regarding the naming of specific Indigenous groups in conditions (comment #46 in [CIAR #3221](#), as well as specific comments on draft condition 4.2, 13.3, and 14.8), in relation to which the port authority takes no position. See Table 6 of **Appendix 2.5-A** for Halalt's comments on specific draft conditions and the port authority's responses to those comments.

Halalt's comments on the port authority's IR response were provided in a table of numbered comments and pertain specifically to IR2020-1.1, IR2020-1.2, IR2020-2.1, IR2020-2.2, IR2020-2.3, IR2020-5, and IR2020-6. The port authority notes that Halalt previously provided comments on draft versions of the port authority's responses to IR2020-1.1, IR-2020-1.2, IR2020-2.1, IR2020-2.2, and IR2020-3, while Lyackson previously provided comments on draft IR responses IR2020-1.1, IR2020-2.1, and IR2020-3. The port authority responded to those comments at the time of the IR response submission.

Halalt and Lyackson also provided information to support the response to the minister's questions on current use of lands and resources for traditional purposes and human health within IR2020-5; this information was appended verbatim to the port authority's response to IR2020-5. The port authority acknowledges Halalt's clarifications to IAAC with regard to the summary of Halalt's content included within the port authority's response to IR2020-5 (see comment #24 through #26 in [CIAR #3221](#)), as well as Halalt's suggestion regarding verbatim reporting of Indigenous group views (see comment #16 regarding draft condition 2.10.3 in [CIAR #3221](#)).

The port authority also acknowledges Halalt's comment on IR2020-6 (see comment #29 in [CIAR #3221](#)), and similar comments on draft conditions 17 and 19 (see comment #59 and #61 in [CIAR #3221](#) and in Table 6 of **Appendix 2.5-A**), relating to consultation capacity and funding and the aspects of that comment directed to the port authority. These comments, in the port authority's view, would not require changes to the draft conditions. The port authority notes that it has provided or offered funding to Halalt, Lyackson, and Cowichan throughout project development and in the post-review panel period to facilitate their continued participation in the review of the project.

The port authority further notes that it has mutual benefits agreements in place with Halalt, Lyackson, and Cowichan in relation to the project. Moreover, Halalt and Cowichan (with Stz'uminus First Nation) have provided two joint letters of consent for the project ([CIAR #2045](#)) and Lyackson has provided a letter of consent and support ([CIAR #1992](#)). By way of these letters, Halalt, Lyackson, and Cowichan have consented to the granting of any authorization or permit necessary for the project. Lyackson has further acknowledged and agreed that they are satisfied with the mitigation measures proposed by port authority in addressing the potential effects of the project and associated marine shipping. Lyackson also further agreed that they have been adequately consulted and accommodated with respect to their Aboriginal rights, title, and interests in respect of the project and associated marine shipping.

2.5.8 Response to Ts'uubaa-asatx First Nation

Ts'uubaa-asatx First Nation (Ts'uubaa-asatx) submitted a letter regarding the port authority's IR response and the draft conditions ([CIAR #3543](#)). Ts'uubaa-asatx also asked IAAC to submit, on their behalf, minutes of a meeting between Ts'uubaa-asatx, IAAC, and B.C. EAO on socio-economic considerations in relation to the project ([CIAR #3543](#)).

In their letter, Ts'uubaa-asatx noted that they have a mutual benefits agreement with the port authority and acknowledged their meaningful and intensive collaboration with the port authority on every aspect of the review, especially regarding fish and fish habitat offsetting and biofilm. The port authority acknowledges Ts'uubaa-asatx's comments that this collaboration has helped Ts'uubaa-asatx feel assured that their concerns are being heard and respected and looks forward to further collaboration with Ts'uubaa-asatx.

The port authority notes that Ts'uubaa-asatx provided no comments on specific draft conditions in their submission. As such, there are no comments from Ts'uubaa-asatx included in **Appendix 2.5-A**.

Ts'uubaa-asatx noted that they had previously commented extensively on the minister's IR and the port authority's responses and therefore have not reiterated those comments in their submission; however, Ts'uubaa-asatx did reiterate their ongoing interest in having the management of stormwater on the existing causeway treated as an offset credit by DFO. Ts'uubaa-asatx states that they are leading that stormwater discussion with all parties to ensure that the Crown attends to this matter (refer to **Section 2.4.3** of this submission for further information on stormwater management).

The port authority acknowledges Ts'uubaa-asatx's comments to IAAC and the B.C. EAO on project-related training and employment opportunities. The port authority has committed to developing, prior to construction, an Indigenous Training, Employment, and Procurement Plan (ITEPP). As part of the development of the ITEPP, the port authority will consult with Indigenous groups identified in the Updated EIS Guidelines to determine interest in participation, the scope of the plan with respect to their group, and whether and how they may want data regarding the implementation of ITEPP for their group reported. The port authority notes that the implementation of the ITEPP will involve third parties. As discussed further in **Section 3.1** of this submission, conditions cannot be imposed on third parties and the proponent cannot be dependent on actions of third parties. The port authority will continue to work closely with Ts'uubaa-asatx regarding their aspirations for the ITEPP as it relates to their community.

The port authority also notes Ts'uubaa-asatx's previous letter of non-opposition to the project ([CIAR #1371](#)).

2.5.9 Response to Tsartlip First Nation

Tsartlip First Nation (Tsartlip) submitted a letter regarding the port authority's IR response and the draft conditions ([CIAR #3137](#)). The port authority acknowledges that Tsartlip's submission has several subsections regarding existing and potential project-related impacts on Tsartlip's rights, fish and fish habitat, SRKW, and human health, as well as another subsection containing comments on specific draft conditions, and a penultimate subsection describing potential accommodation measures.

Tsartlip's comments on specific draft conditions (as outlined in the "Draft Potential Conditions" section of their submission) pertain to general conditions on changes to the Designated Project (2.10.7, 2.16); air quality and greenhouse gas emissions (3.1, 3.4.2); current use of lands and resources for traditional purposes (12.1, 12.4); cultural heritage (14.8-14.9); and the Indigenous Advisory Committee (17.1). See Table 7 of **Appendix 2.5-A** for Tsartlip's comments on specific draft conditions and the port authority's responses to those comments.

Tsartlip's broader submission contains comments that largely pertain to the additional information provided by the port authority in the IR response regarding the effectiveness of offsetting for fish and fish habitat, timing of a determination on breach feasibility (draft conditions 7.1 and 7.2), and concerns regarding mitigation measures for SRKW (draft conditions 8.1-8.7).

With regard to Tsartlip's concern that a project approval could occur before the feasibility of a fish passage is determined, the port authority notes that, in response to the minister's request (IR2020-2.2), a marine terminal breach would be technically and economically feasible. The port authority understands that, as drafted, draft conditions 7.1 and 7.2 would require the implementation of the marine terminal breach if the causeway breach is determined to be not feasible (refer to **Section 2.4.3** of this submission for further information on the causeway breach).

The port authority acknowledges that Tsartlip does not agree with the adequacy or effectiveness of the measures to prevent further impacts to fish and fish habitat, including offsetting, and SRKW as a result of

the project, but notes that Tsartlip has not proposed specific changes to draft conditions related to these measures, principally draft conditions 7 and 8. The port authority notes that draft conditions 7 and 8 require consultation with Indigenous groups in the development of measures for fish and fish habitat, including offsetting, and SRKW and that this requirement will provide the opportunity for Tsartlip to provide specific input on mitigation measures.

The port authority has addressed the matter of mitigation effectiveness in other sections of this submission (refer to **Section 2.2.2** pertaining to underwater noise and SRKW specifically, and to **Section 2.3.4** on mitigation effectiveness in general). As part of this discussion, the port authority indicates that responsibility for mitigating existing effects lies with the Crown, and explains that the measures that have been, are being, and will be implemented by the Government of Canada are outlined in the draft Whole of Government Response. The port authority also identifies additional mitigation measures that could be implemented by the Government of Canada in **Section 3.3** of this submission.

The port authority notes that Tsartlip also provided information that speaks to the minister's questions posed within IR2020-5 regarding the current use of lands and resources and human health (pp.10, 14-15). The port authority is of the view that the information provided by Tsartlip would not result in required changes to related draft conditions.

The port authority acknowledges that Tsartlip has noted in their submission that they do not endorse the project, have no benefits agreement in place with the port authority, and suggest that the port authority's consultation with Tsartlip has been inadequate. The port authority also acknowledges the examples of accommodation that Tsartlip might find acceptable should the project be approved.

The port authority notes that, as part of its consultation efforts, it has provided funding throughout project development and offered funding in the post-review panel period to Tsartlip to facilitate their participation in the review of the project.

2.5.10 Response to S'ólh Téméxw Stewardship Alliance

The People of the River Referrals Office prepared a submission on behalf of 12 Stó:lō First Nations represented by the S'ólh Téméxw Stewardship Alliance (STSA; see list of represented groups in **Section 2.5.1**). In the submission, STSA provides comments on the draft conditions and the conclusions and recommendations of the review panel. The port authority notes that STSA, in response to a request from the port authority, previously provided comments on IR2020-5 in relation to the minister's questions relating to current use of lands and resources for traditional purposes and human health.

STSA's comments on the draft conditions are contained in an appendix to their submission. The port authority notes that the majority of comments are observations, expressions of concern, or questions for clarification that pertain to a range of conditions rather than specific conditions. These comments are arranged by theme and associated draft condition numbers, as follows: current use of lands and resources for traditional purposes (12.1-12.5); physical and cultural heritage resources (14.1-14.9); greenhouse gas emissions (3.1-3.6); environmental offsetting (7.11-7.13, 9.1-9.2, 9.4, 10.7); wetlands and biodiversity protection (9.2-9.4); bivalve shellfish (7.3, 7.6-7.7, 11.1, 12.1, 12.4, 13.4-13.6); orange sea pen (7.8-7.9); fish and fish habitat (7.11, 7.13); Pacific salmon (5.2-7.5, 7.14); SRKW (6.8-6.9, 8.1, 8.2-8.4, 8.6-8.13); barn owls and other raptors (10.3-10.5, 10.15-10.16); and birds species with listed conservation status (10.7, 10.12, 10.16, 10.19). See Table 8 of **Appendix 2.5-A** for STSA's comments on specific draft conditions and the port authority's responses to those comments.

The STSA submission identifies three key concerns and recommendations regarding the draft conditions: (1) the adequacy or effectiveness of the offsetting approach to achieve no-net-loss, suggesting that like-for-like offsets and habitat acquisition would be most effective and reliable; (2) replacing conditions that differentiate between classes of Indigenous groups with a single definition; and (3) adding a condition that

would require the drafting of “First Nations specific conditions” that would complement but not displace the draft conditions.

The port authority has addressed the matter of mitigation effectiveness, including offsetting, in other areas of this submission (see **Section 2.3.4**; see also the port authority’s response to STSA’s comment on no-net-loss in relation to draft conditions 7.11 and 7.13 in Table 8 of **Appendix 2.5-A**). With regard to the other two points raised by STSA in the main body of their submission, the port authority is of the view that these points speak to governance matters that are best addressed by the Crown.

2.5.11 Response to other Indigenous groups

Comments from five Indigenous groups not identified in the Updated EIS Guidelines for the project, including three U.S.-based groups, had been posted on the registry in time for inclusion in this submission. These Indigenous groups are as follows:

- Adams Lake Indian Band (Adams Lake)
- Hwlitsum First Nation (Hwlitsum)
- Swinomish Indian Tribal Community, Suquamish Tribe, and Tulalip Tribes (Swinomish, Suquamish, and Tulalip)

Please see the subsections below for further details on the nature of the feedback included within these submissions.

Adams Lake and Hwlitsum

The port authority notes that the submissions from Adams Lake ([CIAR #2806](#)) and Hwlitsum ([CIAR #3347](#)) did not include feedback on specific draft conditions. As such, there are no comments from either group included in **Appendix 2.5-A**.

The port authority acknowledges the comments by Adams Lake and Hwlitsum regarding existing and potential project-related effects to fish and fish habitat, including salmon migrating through the Fraser River estuary, as well as to the communities that depend on those resources. Of particular note to the comments regarding migrating salmon, refer to **Section 2.1.2** of this submission for a discussion of additional measures for fish and fish habitat, including a breach for fish passage to mitigate the potential disruption of juvenile salmon migration. With regard to the mitigation of existing effects, as discussed in other sections of this submission, such as **Section 2.1.4**, **2.4.5**, and **3.3**, it is within the responsibility of government to address these effects, and there are measures that have been, are being, and will be implemented by the Government of Canada pertaining to these matters that are outlined in the draft Whole of Government Response. The port authority has also addressed in other sections of this submission the matter of mitigation effectiveness, for both measures to be implemented by the port authority and the Government of Canada (refer to **Section 2.3.4**).

The port authority also acknowledges the comments by Hwlitsum regarding the scope of Indigenous group consultation for the project. As the port authority does not determine the scope of consultation for the project, the port authority defers to IAAC on these comments.

Swinomish, Suquamish, and Tulalip

The port authority notes that the joint submission from Swinomish, Suquamish, and Tulalip, submitted on their behalf by Earthjustice, did not include feedback on specific draft conditions, except a reference regarding the definitions of Indigenous groups in draft conditions 1.22 through 1.24, and specifically their exclusion from these definitions (p.2). The port authority has not included this specific comment in

Appendix 2.5-A but acknowledges the comments by Swinomish, Suquamish, and Tulalip in their submission regarding the scope of Indigenous group consultation for the project. As the port authority does not determine the scope of consultation for the project, the port authority defers to IAAC on these comments.

The port authority acknowledges the comments of Swinomish, Suquamish, and Tulalip that reiterate concerns previously raised directly to the review panel regarding existing and potential project-related effects, including as a result of marine shipping incidental to the project, on their harvesting of marine resources and on SRKW from underwater noise and other threats. The port authority acknowledges that the comments from Swinomish, Suquamish, and Tulalip also raise concerns regarding the effectiveness of mitigation to address existing and potential project-related effects, including transboundary effects.

As discussed in other sections of this submission, such as **Section 2.1.4**, **2.4.5**, and **3.3**, mitigation of existing effects is within the responsibility of government to address, and there are measures that have been, are being, and will be implemented by the Government of Canada pertaining to these matters that are outlined in the draft Whole of Government Response. **Section 3.3.3** also discusses additional initiatives and measures recommended by other parties, including the State of Washington Department of Ecology, that pertain to transboundary matters that would be more appropriately addressed by the Government of Canada in the draft Whole of Government Response. The port authority has also addressed in other sections of this submission the matter of mitigation effectiveness, for both measures to be implemented by the port authority and the Government of Canada (refer to **Section 2.2.2** pertaining to underwater noise and SRKW specifically, and to **Section 2.3.4** on mitigation effectiveness in general). Together, these measures will serve to mitigate—that is, avoid, reduce, and offset—the potential adverse environmental effects of the project, including transboundary effects.

2.6 Response to submissions of non-government organizations

2.6.1 Response to the coalition – David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation, and Wilderness Committee

2.6.1.1 Introduction and summary of the port authority's response

As described in **Section 1.0** of this submission, from December 15, 2021 until March 15, 2022, IAAC conducted a public comment period with respect to the following:

- A set of draft conditions (the “draft conditions”) prepared by IAAC
- The response (the “IR response”) of the port authority to a set of requests for information (the “IR”) issued pursuant to CEAA 2012, section 47(2) by the Minister of Environment on August 24, 2020 ([CIAR #2067](#))

On March 15, 2022, the David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation, and Wilderness Committee (“the coalition”) submitted a written submission (the “coalition submission”) consisting of the following:

- A 100-page argument dated March 15, 2022 signed by the coalition's lawyers, Ecojustice
- An undated report by David Scott (the “Scott Report”).⁵¹ In the Scott Report, the author discusses juvenile salmon migration, salmon habitat productivity, and offsetting.
- A report dated March 4, 2022, by Scott Veirs, Ph.D., and Val Veirs, Ph.D. (the “Veirs Report”).⁵² In the Veirs Report, the authors discuss the potential for acoustic effects on SRKW and the effectiveness of measures to mitigate those effects.

In its submission, the coalition briefly describes the process to date, and properly acknowledges the following:

- The assessment is being conducted by a review panel
- The panel conducted a public hearing
- The coalition participated fully in the public hearing
- Having the benefit of evidence and final argument from the coalition, the review panel issued its report

In its submission, the coalition summarizes its position, as follows:

“To summarize, the Conservation Coalition’s position on the new information is that nothing in VFPA’s IR Responses – including new information regarding offsetting – alters the validity and gravity of the Panel’s findings that the Project will have significant adverse effects on and contribute to cumulative significant adverse effects on Fraser River Chinook salmon and the Southern Residents, even after taking proposed mitigation into account.”⁵³

In summary, the response of the port authority is as follows:

⁵¹ [CIAR #3322](#), Appendix 1: Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions

⁵² [CIAR #3322](#), Appendix 2: Conservation Coalition review of “Agency conditions and VFPA responses to Minister’s Information Requests”

⁵³ [CIAR #3322](#), p.3, para 9: the coalition goes on to summarize 7 specific grounds upon which this position rests.

- a) The position of the coalition is underpinned by two expert reports. As described below, the reports contain some unsubstantiated scientific points and some errors.
- b) Similarly, the legal position of the coalition is misconceived. If CEAA 2012 and the *Species at Risk Act* (SARA) were interpreted as the coalition advocates, compliance would not be feasible. Those statutes recognize that the public interest is served not only by environmental protection but also by development.⁵⁴ Conditions that are not feasible will improperly undermine the public interest served by the project.
- c) The minister received the review panel's report and then issued the IR. At the request of the minister, the port authority provided additional information with respect to, among other matters, i) the potential for the RBT2 Project to adversely affect salmon and SRKW, ii) the amount and efficacy of mitigation for SRKW and salmon, and iii) the need for and benefits of the RBT2 Project.
- d) The information provided in the IR response, demonstrates that measures recommended by the review panel are being taken—in particular, the recommendation to develop an offsetting strategy⁵⁵—and that the extent and certainty of the information available to minister has been enhanced.
- e) Contrary to the submission of the coalition, the minister and, if required, the Governor in Council, now have available a substantial, compelling record upon which to conclude that, subject to appropriate conditions, any potentially significant adverse effects are justified and that it is in the public interest to authorize the RBT2 Project to proceed.

The coalition makes specific comments on the draft conditions. The port authority responds to those suggestions in **Appendix 2.6-C**.

Structure of port authority's response to the submission of the coalition

In this section, the port authority provides a response to the legal arguments of the coalition in **Section 2.6.1.2**. This is followed by a response to the seven specific grounds listed by the coalition in summarizing its overall position. Two of the grounds are with respect to Chinook Salmon:⁵⁶

- Loss and conversion of fish habitat
- Mitigation for the potential to impact juvenile salmon migration

Five of the grounds are with respect to SRKW:

- Impact to Chinook salmon and SRKW
- Impact to SRKW
- Vessel traffic projections
- Lethal vessel strike of SRKW

⁵⁴ CEAA 2012 imposes a duty on the Governor in Council to determine whether significant adverse effects are justified. The courts recognize that in making that determination, the Governor in Council must balance the public interest in environmental protection with the public interest that will be served by project. See, for example, *Conseil des innus de Ekuanitshit c. Canada (Procureur general)*, 2013 FC 418, (decision affirmed 2014 FCA 189), citing *Pembina Institute for Appropriate Development v Canada (Attorney General)*, 2008 FC 302

⁵⁵ [CIAR #2062](#), p.142

⁵⁶ [CIAR #3322](#) Coalition submission, paras 9(a) – 9(g)

- Additional mitigation for SRKW

The responses of the port authority to each of these topics are set out in **Sections 2.6.1.3** (response regarding Chinook salmon) and **2.6.1.4** (response regarding SRKW) of this response. As the coalition's submission relies on expert reports related to juvenile Chinook salmon (the Scott Report) and SRKW (the Veirs Report), the port authority has similarly provided an expert technical analysis and response to each of these, provided in **Appendix 2.6-A** and **Appendix 2.6-B** for the Scott Report and the Veirs Report, respectively. The conclusions of the port authority's response are provided in **Section 2.6.1.5**.

2.6.1.2 Response to legal arguments of the coalition

The position of the coalition is premised on the following assertions about environmental impact and on certain legal propositions. In particular, the coalition states the following:

- a) Under section 58 of SARA, the significant adverse effects on SRKW and Chinook Salmon found by the review panel cannot (as opposed to 'are not') be justified within the meaning of CEEA 2012
- b) Under sections 79(2) and 77(1) of SARA, if offsetting is not in place, the project cannot be "approved" under CEEA 2012

Underlying the legal positions asserted by the coalition are misconceptions about the following:

- a) The nature of the determinations made pursuant to section 52 of CEEA 2012
- b) The wording of sections 58, 77, and 79 of SARA
- c) The decisions made by the courts

The nature of the determinations made under section 52 of CEEA 2012

Provisions of SARA limit the authority of statutory decision makers to "approve" activity in certain circumstances. However, the assertion that SARA similarly prevents the minister and Governor in Council from "approving" the RBT2 Project is based on a misconception about the nature of the determinations made pursuant to section 52 of CEEA 2012.

In making determinations under section 52 of CEEA 2012, neither the minister nor the Governor in Council "approves" a project within the meaning of the provisions of SARA. Rather, as the coalition notes in its submission:⁵⁷

- a) The minister determines whether significant adverse effects are likely to result from the project.⁵⁸ This determination is based on a technical analysis (in this case, provided within the review panel report and in the IR response) and is conducted outside the realm of government policy.⁵⁹
- b) If significant adverse effects are likely, the question of whether those effects are justified must be referred to the Governor in Council.⁶⁰

⁵⁷ CIAR #3322, p.7, para 30-32

⁵⁸ CEEA 2012, s. 52(1)

⁵⁹ *Conseil des Innus de Ekuaniitshit c. Canada (Procureur general)*, 2013 FC 418, (decision affirmed 2014 FCA 189), citing *Pembina Institute for Appropriate Development v Canada (Attorney General)*, 2008 FC 302

⁶⁰ CEEA 2012, s. 52(2)

- c) The Governor in Council must then decide whether the significant adverse effects are justified.⁶¹ In doing so, it must take into account "...wider public policy factors...".⁶² The proposition that an activity must have a permit or be "permissible" **before** the Governor in Council can make its determination would deprive it of an opportunity to meet its legal obligation to make a determination in the public interest.
- d) If the Governor in Council concludes that any significant adverse effects are justified or, if significant adverse effects were unlikely, the minister must then set conditions that must be complied with and issue a decision statement.⁶³

The misconception in the position of the coalition is this: when a decision statement is issued, it confirms that, subject to the conditions, public policy weighs in favour of lifting the prohibitions imposed by sections 6 and 7 of CEAA 2012 and approving the project to proceed. A decision statement is not a "permit" in the conventional sense. Specific permits would be obtained in future stages of project development following a decision statement.⁶⁴

SARA, section 58 does not prohibit justification

The coalition argues that the RBT2 Project cannot be justified because, they say, a SARA permit cannot be issued. In particular, the coalition cites section 58 of SARA and a court decision,⁶⁵ and asserts the following:

"Under SARA, no agreements, permits, or authorizations can issue for the harming of a listed marine species or its critical habitat that would the [sic] jeopardize survival or recovery of the species."⁶⁶

In response, the port authority notes the following:

- a) In the case cited by the coalition, the question of whether a permit for activity that might impact designated critical habitat was not in issue. As a result, the court's statements are not legally binding.⁶⁷ This is important because the court's analysis does not take into account the definition of "critical habitat":⁶⁸
 - i. ...critical habitat means the habitat that is **necessary for the survival or recovery** of a listed wildlife species **and** that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species. (habitat essential) (emphasis added)
 - ii. Habitat is not "critical" simply because it has been identified in a recovery strategy or action plan. The habitat must also be **necessary** for the survival or recovery.
- b) The assertion of the coalition is inconsistent with one of the statutory preconditions for a permit under section 73(3) of SARA:

⁶¹ CEAA 2012, s. 52(4)

⁶² *Conseil des Innus de Ekuanitshit c. Canada (Procureur general)*, 2013 FC 418, (decision affirmed 2014 FCA 189), citing *Pembina Institute for Appropriate Development v Canada (Attorney General)*, 2008 FC 302

⁶³ CEAA 2012, s. 52

⁶⁴ Although unnecessary, the draft conditions prepared by IAAC contain a provision stating this expressly.

⁶⁵ *Canada (Fisheries and Oceans) v. David Suzuki Foundation*, 2012 FCA 40, paras. 121-122 and 124-125 of

⁶⁶ Conservation Coalition Submissions at para. 74.

⁶⁷ The statements are *obiter dicta*

⁶⁸ SARA, section 2(1), "critical habitat"

- i. b) all feasible measures will be taken to **minimize the impact** of the activity **on** the species or **its critical habitat** or the residences of its individuals; (emphasis added)
- ii. This condition contemplates that critical habitat—which only exists if it has been designated—**can** be impacted. Moreover, this provision confirms that the question of whether any particular portion of critical habitat is “necessary” will be determined in the permitting process.

Measures required under sections 77 and 79 of SARA do not have to be in place before a decision statement can be issued

The coalition submits that as result of section 77 of SARA,⁶⁹ the Governor in Council must ensure that measures are taken to minimize the impact of the contemplated activity on the species’ critical habitat “before” it can approve the project.⁷⁰ Neither judicial authority nor the language of section 77 support this proposition.

On its express terms, section 77 of SARA authorizes the issuance of permits if the statutory authority concludes not that measures “have been taken” but that measures “will be taken”:

Licences, permits, etc., under other Acts of Parliament

77 (1) Despite any other Act of Parliament, any person or body, other than a competent minister, authorized under any Act of Parliament, other than this Act, to issue or approve a licence, a permit or any other authorization that authorizes an activity that may result in the destruction of any part of the critical habitat of a listed wildlife species may enter into, issue, approve or make the authorization only if the person or body has consulted with the competent minister, has considered the impact on the species’ critical habitat and is of the opinion that

(a) all reasonable alternatives to the activity that would reduce the impact on the species’ critical habitat have been considered and the best solution has been adopted; and

(b) all feasible measures **will be taken** to minimize the impact of the activity on the species’ critical habitat.

(emphasis added)

In its submission, the coalition also cites a decision of the Federal Court of Appeal⁷¹ and asserts that section 79 of SARA⁷² requires the following:

“...the Minister or Governor in Council must not approve the Project until all technically and economically feasible measures within federal jurisdiction are in place”

In making this submission, the coalition misconception is with respect to the court’s reasoning in *Tsleil-Waututh Nation*. The passage cited by the coalition is as follows:

[456] Because marine shipping was beyond the Board’s regulatory authority, it assessed the effects of marine shipping in the absence of mitigation measures and did not recommend any specific mitigation measures. Instead it encouraged other regulatory authorities “to explore any such initiatives” (report, page 349). While the Board lacked

⁶⁹ Conservation Coalition Submissions at paras. 70-72.

⁷⁰ Conservation Coalition Submissions at para. 146.

⁷¹ Conservation Coalition Submissions at para. 66, citing to *Tsleil-Waututh Nation v. Canada (Attorney General)*, 2018 FCA 153 [*Tsleil-Waututh Nation*] at para. 456.

⁷² S.C. 2002, c. 29.

authority to regulate marine shipping, the final decision-maker was not so limited. In my view, in order to substantially comply with section 79 of the *Species at Risk Act* the Governor in Council required the Board's **exposition of all technically and economically feasible measures that are available** to avoid or lessen the Project's effects on the Southern resident killer whale. **Armed with this information the Governor in Council would be in a position to see that, if approved, the Project was not approved** until all technically and economically feasible mitigation measures within the authority of the federal government were in place. Without this information the Governor in Council lacked the necessary information to make the decision required of it.

(emphasis added)

It is apparent that this passage is not meant to require that all mitigation be in place prior to issuance of a decision statement. This is demonstrated by the decision in that case itself, the subsequent determination by the Governor in Council, and the legal challenge to the second determination:

- a) In *Tsleil-Waututh Nation*, the decision cited by the coalition, the court set aside the determination by the Governor in Council. However, it did not do so on the basis that measures had not yet been taken. Rather, it did so on the basis that the Board had failed to “**recommend** any specific mitigation measures.”
- b) The project was sent back to the National Energy Board (which was conducting the environmental assessment under CEAA 2012) for reconsideration. In its reconsideration report, the Board made 16 recommendations for measures for marine shipping.
- c) The Governor in Council received that report and concluded that the significant adverse effects were justified. In its Order in Council, the Governor in Council did **not** confirm that the measures had already been implemented. Rather, it was promised “to implement” the recommendations moving forward:

“Whereas, the Governor in Council, having reviewed the Recommendations of the Board to the Governor in Council contained in the Reconsideration Report, **undertakes to implement** all the Recommendations;”

(emphasis added)

- d) The second Order in Council was challenged by member of the coalition. The court refused to allow a challenge based on very argument the coalition is making here:⁷³

[38] In *Tsleil-Waututh Nation*, many arguments about the environmental effects of the project either were made or could have been made but were not. Most of the environmental points the applicants now raise are not fairly arguable because they fall into one of these categories. They are barred by the doctrines against relitigation.

[39] A couple of examples will suffice to illustrate this. **Some applicants submit that the Governor in Council had no jurisdiction to make a decision without ensuring the requirements of the *Species at Risk Act*, S.C. 2002, c. 29 were met. This point is not fairly arguable because this Court specifically rejected it in *Tsleil-Waututh Nation* at para. 464.**

⁷³ *Raincoast Conservation Foundation v. Canada (Attorney General)*, 2019 FCA 224, The Federal Court of Appeal granted leave to appeal on the ground of adequacy of consultation; reasons on judicial review are indexed as 2020 FCA 334.

(emphasis added)

In summary, the courts have confirmed that the provisions of SARA do not impose an obligation to ensure that measures are “in place” before the Governor in Council can determine whether significant adverse effects are justified.

2.6.1.3 Response regarding coalition comments on Chinook salmon

In the port authority’s response to the minister’s IR, the port authority describes additional measures to mitigate the potential to adversely affect Chinook salmon. The measures consist of the following:

- Additional offsetting that will result in a net increase in valuable habitat and in habitat productivity
- A largely open channel breach of the terminal that will directly mitigate the potential to disrupt juvenile salmon migration

In recognition of the interest of Tsawwassen First Nation and other Indigenous groups, as well as DFO, in the potential for a breach of the existing causeway, an initial investigation of the prospect of a causeway breach is provided. While challenges exist, the port authority supports a condition requiring further investigation of the feasibility of a causeway breach.

Predictions of the residual effect on Chinook salmon are provided in the IR response. Those predictions are based on the review panel’s findings, input from Indigenous groups and regulators, and multiple lines of evidence, including field data, site-specific modelling, scientific literature, and professional opinion.

In its submission, the coalition criticizes the analysis presented in the IR response. However, the port authority notes the following:

- The coalition has not provided a new analysis nor evidence to support their assertions
- Various factors identified by the coalition, for example, uncertainty and time-lag in developing offsetting, have in fact been taken into account in the analysis presented in the IR response
- The coalition relies on the experience of one of its members with jetty breaches. When reviewed carefully, their work is consistent with the analysis presented in the IR response.
- The coalition ignores the extensive consultation, collaboration, and supportive comments from Indigenous group as documented within the IR response and further reinforced by submissions of Indigenous groups provided in the public comment period

In summary, despite criticism by the coalition, the additional mitigation and analysis described in the IR response demonstrates that impacts to fish habitat and the potential to disrupt migration can be mitigated and that the project will result in a net benefit to juvenile Chinook salmon and net gain in habitat productivity.

The coalition raises two grounds in its submission regarding Chinook salmon:

- Loss and conversion of habitat
- Mitigation for potential impacts to juvenile salmon migration

Each of these is addressed below, following a brief clarification of project scope, specific to project components, and a summary of the technical report relied upon by the coalition in its position on juvenile Chinook salmon.

Clarification of project scope

The coalition's position on the project's effects on Chinook salmon is based on a misconception regarding the project components versus the existing infrastructure. In its submission, the coalition fails to properly distinguish the existing Roberts Bank causeway and marine terminal land mass from the RBT2 Project. As discussed below, this distinction is important in considering the submissions of the coalition on the potential for the project to adversely affect juvenile salmon migration and the effectiveness of mitigation.

Response to the Scott Report

The port authority's responses to these topics are included in the sub-sections that follow. The coalition makes assertions with respect to juvenile Chinook Salmon use of the lower Fraser River estuary and breaches on the basis of the undated Scott Report.⁷⁴

The Scott Report presents Mr. Scott's opinions on salmon migration and the effectiveness of proposed fish passage, the proposed RBT2 fish and fish habitat offsetting plan, and the project's potential effect on salmon productivity and Chinook salmon use of the lower Fraser River estuary (see **Appendix 2.6-A**). Mr. Scott provided comments on draft conditions that are addressed in **Appendix 2.6-C** of this submission. The port authority analyzed Mr. Scott's criticisms regarding preliminary fish passage design (IR2020-2.2, **CIAR #2083**) and demonstrated that a single breach at any of the potential locations would effectively reduce the potential for disruption of juvenile salmon migration attributable to the project (**Appendix 2.6-A**, Table 2.6-1). Nonetheless, the detailed design of a fish passage breach will be undertaken following a decision to allow the project to proceed, confirmation of feasibility, and DFO's direction per draft condition 7.2. The port authority evaluated Mr. Scott's concerns with the project's proposed offsetting plan and reconfirms that the productivity of the offsetting projects has been appropriately evaluated, taking into account concerns regarding habitat value, offsetting effectiveness and uncertainty, as well as time lag (**Appendix 2.6-A**, Table 2.6-1). The port authority's work to address potential effects to Pacific salmon, specifically Chinook salmon, since the public hearing, as described in its responses to the minister's IR (IR2020-1.1, 1.2, 2.1 and 2.2, **CIAR #2083**), demonstrate that the effect to Pacific salmon, including Chinook salmon, will be less than that assessed by the review panel and that mitigation, including offsetting, will result in a net gain in productivity (**Appendix 2.6-A**, Table 2.6-1).

Loss and conversion of habitat

As explained above, construction of the RBT2 terminal and widened causeway will result primarily in the loss of subtidal sand and mud habitat. The port authority proposes to offset that loss of less productive subtidal sand and mud with more productive intertidal salt marsh and eelgrass, as well as other valuable habitat types.

In order to replace the lost subtidal sand and mud habitat, it would be necessary to destroy higher value intertidal habitat by transforming it into less productive subtidal sand and mud. Doing so would be contrary to DFO policy.⁷⁵

⁷⁴ **CIAR #3322**, Appendix 1

⁷⁵ DFO (Fisheries and Oceans Canada). 2021. Policy for applying measures to offset adverse effects on fish and fish habitat under the *Fisheries Act*. Available at <https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/policies-politiques-eng.html>. Accessed April 2022.

Mitigation for the potential to impact juvenile salmon migration

Underlying the coalition's concern about migration of juvenile salmon is the suggestion that constructing the additional land mass will effectively lengthen the distance that juvenile salmon would have to "migrate" to reach the inter-causeway area.

In accordance with the mitigation hierarchy (avoid, then reduce, then offset), the port authority proposes to establish a breach in the terminal land mass, directly mitigating any impact by creating a short cut, leaving the distance about the same as it is now.

Tsawwassen First Nation and other Indigenous groups, as well as DFO have expressed interest in an alternative: a breach of the existing causeway. The port authority has been responsive to this interest, conducting technical analysis and additional consultation to inform the response to the IR, and supports a condition requiring a breach feasibility study.

It is important to bear in mind that any impact of the existing causeway on juvenile migration is not a project effect. Consequently, a breach of the causeway would amount to an **offset** of any potential for the RBT2 Project to interfere with juvenile salmon migration.

The purpose of the terminal breach or a causeway breach would be the same: to mitigate an impact of the project. Consequently, the effectiveness of a breach is to be measured against the impact of the project—the incremental increase in distance due to the terminal land mass—not the impact of the existing causeway.

In the IR, the minister asked for any additional terminal and causeway design options to mitigate habitat loss and potential disruption of juvenile salmon migration. In the IR response, the port authority provided the information requested. That information demonstrates that, even on the basis of effectiveness on the assumptions made by the coalition's own scientists, a breach of either the terminal or the causeway will mitigate any potential for the project to interfere in juvenile salmon migration.

Conclusions regarding Chinook salmon

In its review panel report, the review panel sets out its conclusion on the potential for the RBT2 Project to adversely affect Chinook Salmon:

"The Panel concludes that the Project would result in a residual adverse effect and an adverse cumulative effect on ocean-type juvenile Chinook salmon populations from the Lower Fraser and South Thompson Rivers. The effects would be significant."

In its response to the minister's IR, and consistent with the review panel's recommendation,⁷⁶ after extensive consultation with Indigenous groups and DFO, the port authority has put forward additional avoidance, reduction, and offsetting measures for fish and fish habitat, as summarized in **Section 2.1.2** of this submission.

2.6.1.4 Response regarding coalition comments on Southern Resident Killer Whales

In the port authority's IR response, an expanded analysis of vessel projections is provided. The analysis confirms that in the most likely scenario, the number of container vessels calling at the Port of Vancouver will be the same, with or without RBT2, though the average vessel size may increase. The port authority also provides an analysis demonstrating that acoustic effects of the project will be offset. The measures, expanded slowdowns in particular, that will mitigate the impact are described. The analysis also

⁷⁶ [CIAR #2062](#), p.188, recommendation #25

demonstrates that feasible measures are available to the Government of Canada to mitigate acoustic effects should container vessel traffic be greater than predicted.

In its submission, the coalition criticizes the analysis presented in the IR response. However, the port authority notes the following:

- The coalition has not provided a new analysis nor evidence
- Rather, the coalition criticizes the analysis and certain assumptions made. Technical experts have investigated those assumptions and respond to them. Some of the criticism is simply incorrect. Technical experts tested some of the areas of uncertainty described by the coalition's experts with additional analysis. That analysis supports the assumptions used to predict acoustic effects.
- The coalition also proposes additional mitigation. However, some of the proposed measures are not feasible, some are premature, and some would conflict with other measures.

In summary, taking into account criticism by the coalition, the additional mitigation and analysis provided in the IR response demonstrates that the impact of the project and of marine shipping incidental to project on SRKW can be mitigated.

The specific grounds asserted by the coalition

The coalition raises five specific grounds regarding SRKW:

- Impact to Chinook salmon and SRKW
- Impact to SRKW
- Vessel traffic projections
- Lethal vessel strike of SRKW
- Additional mitigation for SRKW

Each of these is addressed below, following a clarification of the scope of the project related to marine shipping, and a summary of the technical report relied upon by the coalition in its submission.

Clarification of project scope

Underlying the coalition's position regarding effects of the project on SRKW is a misconception about the scope of the project with regard to marine shipping. In its submission, the coalition states:

"The Project would also include the vessel traffic to and from the terminal ('Project Related Shipping')." ⁷⁷

The port authority clarifies that the RBT2 Project does **not** include marine shipping. The navigation of vessels to and from the RBT2 terminal has been deemed to be an activity incidental to—not part of—the RBT2 Project. As stated in the April 2019 updated EIS Guidelines ([CIAR #1680](#)):

"...marine shipping associated with the Project within the 12 nautical mile limit of Canada's territorial sea is **incidental to** the marine container terminal and therefore part of the description of the Project for the purposes of the environmental assessment. As a result, the Minister's decision under CEAA 2012 will consider whether marine shipping **associated with** the Project is likely to cause significant adverse environmental effects."
(emphasis added)

⁷⁷ [CIAR #3322](#), p.1, para 3

Subject to compliance with the laws of Canada,⁷⁸ including the laws governing marine navigation,⁷⁹ the operators of all types of ocean-going vessels that call at the Port of Vancouver have a legal right⁸⁰ to navigate in Canadian waters, including to, from, and within the Port of Vancouver.

The port authority has no authority to prohibit vessels from operating outside its territorial jurisdiction, and defined authority to regulate navigation within the port. Rather, the statutory role of the port authority is to advance the public interest served by those vessels, an interest identified in the *Canada Marine Act*⁸¹:

- 4 In recognition of the significance of marine transportation to Canada and its contribution to the Canadian economy, the purpose of this Act is to:
 - a) implement marine policies that provide Canada with the marine infrastructure that it needs and that offer effective support for the achievement of national, regional and local social and economic objectives and will promote and safeguard Canada's competitiveness and trade objectives; ...

When operation of the RBT2 terminal begins, should the project be approved, a subset of the vessels calling at the Port of Vancouver will be redistributed within the port. In the most likely scenario, the total number of container vessels will stay the same, though the average size will be larger (CIAR #2083, IR2020-3). Those changes, and the potential for those changes to adversely affect SRKW have been assessed.

Response to the Veirs Report

In IR2020-2.3 and IR2020-3 (CIAR #2083), the port authority provides information regarding mitigation for SRKW. The coalition makes submissions in response. In support of those submissions, the coalition relies on the report, Conservation Coalition review of "Agency conditions and VFPA responses to Minister's Information Requests," dated March 4, 2022, by Scott Veirs, Ph.D. and Val Veirs, Ph.D. (the "Veirs Report").

The Veirs Report focuses on uncertainty, and criticizes assumptions applied to estimates of potential acoustic effects to SRKW from the proposed Designated Project (see **Appendix 2.6-B**). The port authority's experts evaluated the alternative assumptions presented in the Veirs Report, which are founded on professional opinion or incorporate technical bases that are sometimes incorrect or unsubstantiated (**Appendix 2.6-B**). The port authority can confirm from the evaluation that the assumptions used to respond to the minister's IR (IR2020-2.3 and IR2020-3, CIAR #2083) are valid and based on the best-available science. Hence, the conclusions presented in the IR response from the port authority remain unchanged. The Veirs Report also recommends modified or additional mitigation measures that are considered and addressed by the port authority, when reasonable, feasible and applicable (see and **Appendix 3.2-A**).

Impact to Chinook salmon and SRKW

The coalition states that any significant adverse effects on Chinook Salmon "...are also significant adverse effects on SRKW..." In response, the port authority notes the following:

⁷⁸ Including the laws governing entering and exiting Canada

⁷⁹ These include marine security laws, special navigation rules enacted under the *Canada Shipping Act, 2001* and, within the Port of Vancouver, under the *Canada Marine Act*.

⁸⁰ The public right of navigation

⁸¹ S.C. 1998, c. 10

- a) The port authority acknowledges that Chinook salmon are the most important source of food for SRKW. Acoustic effects are important to consider because they can interfere with foraging. As there are fewer Chinook salmon, each foraging opportunity is more important.
- b) That said, a “significant adverse effect” on Chinook salmon is not, by definition, a “significant adverse effect” on SRKW. Whether an effect is “significant” is to be determined objectively. The submission of the coalition is a suggestion without any objective grounds.
- c) The submission is also made without taking into account the proposed offsetting plan, which is intended to result in a net increase in salmon productivity.

Noise impacts to SRKW

The coalition relies upon the advice of its experts in asserting that the noise effects of the project will not be offset by the measures proposed by the port authority. The coalition also suggests that DFO agrees. In response, the port authority states as follows:

- a) As described in detail above, the scientific expert advice relied upon by the coalition is unreliable.
- b) As noted by DFO in its comments on the IR response ([CIAR #2407](#)), offsetting underwater noise is new, not impossible, and accepted that the measures, including the contingency measures that are available if vessel traffic exceeds projections, can be considered as potential offsets ([CIAR #2407](#)).
- c) The Government of Canada is currently working on underwater noise offsetting for the Trans Mountain Expansion (TMX) Project and is developing methods to evaluate its effectiveness. As part of the TMX project, the “Government is currently implementing multiple initiatives” to “address the threats to the SRKW and its critical habitat”, including “to more than offset the impacts of Project-related traffic including vessel noise”.⁸² The Governor in Council concluded that the existence of these measures made it unnecessary to issue an emergency order.⁸³ Moreover, these measures are in addition to the broader Oceans Protection Plan, which is being implemented and has been renewed and enhanced in the 2022 federal budget for a multi-year period.

DFO also recommended that the port authority “in consultation with DFO, further consider methods for evaluating the effectiveness of underwater noise offsets to counterbalance impacts of underwater noise from Project operations (berthing), **building on the work that is being undertaken by DFO for the Trans Mountain Expansion Project.**”⁸⁴

Vessel traffic projections

The coalition asserts the following:

- a) That the updated vessel projections “... would mean a transition to larger, noisier ships”
- b) That this would “lock in” the “current unsustainable numbers.”

In response, the port authority notes the following:

⁸² Canada Gazette, Part I, Volume 153, Number 25: Orders in Council. June 22, 2019. Department of Natural Resources. National Energy Board Act, (Recommendation 5) (<https://gazette.gc.ca/rp-pr/p1/2019/2019-06-22/html/sup1-eng.html>)

⁸³ <https://laws-lois.justice.gc.ca/eng/regulations/SI-2018-102/page-1.html>

⁸⁴ [CIAR #2083](#), IR2020-3, p.46

- a) Although the average size of vessels may become larger, it is not the case that they will necessarily be noisier. Those larger vessels will tend to be newer, and the Government of Canada is pursuing research and development of quiet vessel technology. The Governor in Council relied upon that program, among others, in approving the TMX project.
- b) In any event, the primary mitigation measure—vessel slowdowns—will apply to larger vessels. The ECHO Program has a high rate of participation.⁸⁵ The slowdown program can be expanded to additional areas and for additional time periods. Moreover, the Government of Canada has the authority to legally require slowdowns if necessary.
- c) In summary, there is no reason to doubt the reliability or effectiveness of mitigation of the potential for noise effects from vessels that will call at RBT2 nor of all large vessels traversing Juan de Fuca Strait, Haro Strait, and the Salish Sea.

Lethal vessel strike of SRKW

In its submission, the coalition asserts that a single lethal vessel strike of an individual SRKW would be significant. A lethal vessel strike would be a serious matter. However, the port authority notes the following:

- a) In its report, the review panel, along with DFO, agreed that vessel strikes are unlikely during project operation due to the low transiting speed of container vessels and vessel-assist tugs during arrival, berthing, unberthing, and departure activities.⁸⁶
- b) The risk of vessel strikes is not expected to increase with the project because the total number of container vessels transiting the marine shipping area is not predicted to change with the project.
- c) Reducing vessel speed is an effective mitigation measure for reducing the likelihood and lethality of vessel strikes (Vanderlaan and Taggart 2007; McWhinnie et al. 2018, 2021; Schoeman et al. 2020).⁸⁷

Additional mitigation for SRKW

The coalition suggests that the additional mitigation measures for operations are “minor” and that no new measures are proposed for SRKW.

In response, the port authority notes the following:

- a) The operation of the marine terminal will have limited impacts to SRKW
- b) The analysis provided in the IR response confirms that:
 - i. On the most likely scenario, the number of vessels is likely to be the same
 - ii. The **existing** ECHO Program slowdown program is effective
 - iii. The slowdown program can be scaled up in time and in space to accommodate additional vessel traffic should that occur
- c) In its response, DFO acknowledges that uncertainty exists but also confirms that uncertainty can be addressed through appropriate conditions and DFO would continue to work with the port

⁸⁵ <https://www.portvancouver.com/environmental-protection-at-the-port-of-vancouver/maintaining-healthy-ecosystems-throughout-our-jurisdiction/echo-program/>

⁸⁶ CIAR #2083, IR2020-3, p.23

⁸⁷ CIAR #2083, IR2020-3, p.27

authority and IAAC in support of the development of plans to mitigate the potentially significant environmental effects on SRKW.⁸⁸

In summary, there are a suite of effective, feasible measures that can be implemented to mitigate potential acoustic effects of the project and the marine shipping incidental to the project.

Conclusions regarding SRKW

In its report, the review panel explains that it assessed the potential for the project and for marine shipping incidental to the project to adversely affect SRKW based on the conservative assumption that the RBT2 Project would result in 260 additional vessel calls each year, which has since been superseded by a more likely scenario, as described in **Section 2.2.1** of this submission. Based on that conservative assumption, the review panel concluded as follows:

- Based on the effects due to the project and marine shipping incidental to the project on underwater noise, Chinook salmon prey availability, and potential ship strikes, and in the absence of effective and mandatory mitigation measures, the review panel concludes that there would be a significant adverse effect on SRKW.
- The review panel concludes that the project and marine shipping incidental to the project would result in a significant adverse cumulative effect on SRKW.

As stated in **Section 2.1.2** of this submission, in its response to the minister's IR, and in consultation with Indigenous groups, DFO, and Transport Canada, the port authority proposed additional mitigation measures for SRKW, which, in combination with previously proposed measures, would further reduce potential adverse effects of project construction, project operation, and marine shipping incidental to the project on SRKW.

The additional proposed measures increase confidence that project construction and operation, and marine shipping incidental to the project, will not jeopardize the survival or recovery of the species.

2.6.1.5 Conclusion to port authority's response to the coalition

As stated in **Section 2.1.2** of this submission, in its response to the minister's IR, the port authority describes additional measures that result in substantially enhanced mitigation, including offsetting, to further mitigate the potential effects of the project identified by the review panel. As discussed in this submission, the legal and technical criticism provided by the coalition does not detract from validity nor certainty of the information provided to the minister.

Should the project be approved, the port authority would implement additional, enhanced, and targeted measures resulting from the new analyses that will reduce uncertainty and further mitigate the potential adverse effects of the project. The measures proposed are feasible, reasonable, have been proven effective, and focus on key species of interest to Indigenous groups, government, and local communities.

2.6.2 Themes raised in submissions of other non-government organizations

During the public comment period on the port authority's IR response and on the draft conditions, numerous submissions were made by non-government organizations. The port authority acknowledges all of these submissions, and has provided responses below to themes raised by several groups, including the following:

- Effectiveness of tidal marsh creation

⁸⁸ [CIAR #2083](#), IR2020-3, p.47

- The productivity approach to determining offsetting requirements

2.6.2.1 Effectiveness of tidal marsh creation

Tidal marsh effectiveness is a common theme raised by non-government organizations⁸⁹ through public comment period submissions that warrants a response from the port authority.

The port authority addresses the following assertions about tidal marsh effectiveness:

- Marsh creation is not a proven technique or that success is not universal
- Concerns regarding the scale of the proposed RBT2 tidal marsh offsetting
- Marsh offsetting habitat is vulnerable to stressors and environmental change
- Long-term effectiveness of marsh offsetting habitats

Marsh creation success

The review panel, in their report ([CIAR #2062](#)), concluded that the port authority is highly experienced in developing habitat offsetting projects in the Fraser River estuary and has created many successful tidal marsh habitats. Further, the review panel stated that the creation and enhancement of intertidal marsh habitats are a well-established concept for offsetting ([CIAR #2062](#)).

The proposed RBT2 offsetting projects prioritize tidal marsh (and eelgrass) habitats, which have been found to be the most valuable habitats to estuarine-rearing juvenile salmon (Chalifour et al. 2019 and 2021⁹⁰), and to provide a variety of other key ecological functions (e.g., detrital food web support, shoreline erosion protection) (Appendix IR2020-1.1-C, [CIAR #2083](#)). The proposed RBT2 tidal marsh offsetting projects are intended to provide a continuum of habitats (in alignment with the vision and priorities of Indigenous groups like Musqueam) to benefit priority fish and fish habitat (e.g., for estuarine-rearing juvenile salmon) potentially affected by and within the geographic area of the RBT2 Project.

Contrary to points made in Submissions on Behalf of David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation, and Wilderness Committee ([CIAR #3322](#)), the majority of the proposed RBT2 tidal marsh offsetting projects focus on expanding existing well-established brackish or salt marsh habitats, not freshwater marsh habitats. The proposed tidal marsh offsetting projects have been designed to work with natural physical and biological processes, and in a way that optimizes synergies with the enhancement initiatives of others (e.g., the South Arm Jetty Tidal Marsh Project and the Steveston Jetty breaches recently implemented by Raincoast Conservation Foundation).

Scale of proposed offsetting

The port authority has taken a conservative approach to calculating RBT2 offsetting requirements (e.g., in relation to technical analyses; time lag, underlying habitat value, and uncertainty assumptions and discounting; through proposing a surplus of offsetting habitat) (IR2020-1.2, [CIAR #2083](#)). DFO noted in their submission “the substantial improvement to the offsetting plan, the identification of additional available offsetting opportunities, as well as the progress made by the Proponent in evaluating offsetting

⁸⁹ Non-government organization submissions raising points relevant to this theme include Submissions on Behalf of David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation, and Wilderness Committee ([CIAR #3322](#), submitted by Dyna Tuytel of Ecojustice), Factors influencing the persistence of created tidal marshes in the Fraser River Estuary ([CIAR #3143](#), submitted by Eric Balke of Ducks Unlimited Canada), Comment in opposition to RBT2 Project ([CIAR #3126](#), submitted by Daniel Stewart of Asarum Ecological Consulting)

equivalency, improves DFO's confidence that a final offsetting plan could be developed that is consistent with DFO policy" ([CIAR #2407](#)).

Stewart et al. 2022 report findings suggest that marsh habitat creation is a proven technique with an effectiveness of 90-100% in terms of areal habitat gain. Even if 10% of the proposed RBT2 marsh offsetting habitat were to underperform, the port authority is proposing a surplus of offsetting (22 hectares or approximately 35%) relative to what a conservative analysis demonstrates would be required to offset the potential effect of the project. The port authority is also proposing long-term effectiveness monitoring and adaptive management to identify and address any underperformance. Stewart et al. 2022 also reported that invertebrate abundance (i.e., fish prey) was frequently higher in created marshes compared to reference marshes, that juvenile Chinook and chum salmon catches were either the same or higher in created marshes depending on fish size.

Resilience to environmental stressors

The proposed offsetting plan for the Designated Project, as described in IR2020-1.1 ([CIAR #2083](#)), has been guided by substantial investigative work completed by a range of recognized experts with decades of relevant experience and informed by lessons learned from past projects (e.g., enhanced understanding of physical processes and associated engineered erosion control structures, as well as plant species selection such as the mat-forming Baltic rush which provides additional resilience to erosion and geese herbivory). The design of the proposed RBT2 marsh offsetting habitats addresses the challenges identified by Stewart et al. (2022). For example:

- All proposed RBT2 marsh offsetting projects are well sited (i.e., not "upriver") and most are associated with protective design elements (e.g., closed embayment designs and/or robust protective rock berms or log deflection structures).
- The relatively large and evenly-dispersed proposed RBT2 marsh offsetting projects, which generally seek to expand existing areas of functioning marsh habitat, are anticipated to help mitigate and moderate the effects of geese herbivory.
- Native perennial marsh plant species are proposed for RBT2 marsh offsetting projects and have been selected on a project-specific basis informed by Indigenous group input.
- Regarding predicted sea-level rise, the port authority has sought to propose habitat offsetting that can function under present day conditions, to meet the requirements of the *Fisheries Act* Authorization process and associated regulations and policy, while providing resilience and adaptability to predicted sea-level rise to a reasonable extent.
 - The elevation ranges and gentle slopes of proposed tidal marsh offsetting habitats, as well as the vegetation species proposed to be planted have been selected to optimize the adaptability of marsh offsetting habitats to predicted sea-level rise.

In summary, the port authority welcomes the Stewart et al 2022 report and concurs with Ducks Unlimited Canada's accompanying press release⁹¹ where it was stated "there are several sites that date back to the early 1990s that show no signs of recession and are absent of invasive species. This suggests that projects can be successful and somewhat resilient for decades if a site is properly designed, implemented, and monitored."

In summary, the design of the proposed marsh offsetting projects focuses on providing self-sustaining habitat appropriate for the physical and environmental setting, that seeks to expand, replicate, and

⁹¹ https://www.ducks.ca/news/provincial/british-columbia/fraser-river-estuary-restoration/?mc_cid=ef4e553e26&mc_eid=771b703ee7

complement existing well-established marsh habitat, for which there is a large body of evidence demonstrating fish habitat benefits and values.

Effectiveness monitoring

Uncertainty of marsh habitat creation has been and will continue to be appropriately addressed through planning and design, as well as long-term effectiveness monitoring and adaptive management pursuant to an established contingency measure approach (IR2020-1.2 Appendix C, [CIAR #2083](#), draft condition 7.11, 7.13). DFO states in their submission that “uncertainty regarding the effectiveness of offsets can be managed through appropriate planning and through conditions of a *Fisheries Act* Authorization” ([CIAR #2407](#)). The port authority will implement a long-term effectiveness monitoring plan for the proposed offsetting projects, which would continue until those marsh projects are considered to be functioning as intended in alignment with *Fisheries Act* Authorization requirements (and consistent with review panel recommendations).

2.6.2.2 Productivity approach

Applying a productivity approach rather than an areal ratio approach was raised in the submission on behalf of David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation, and Wilderness Committee ([CIAR #3322](#)).

As described in its closing remarks to the public hearing ([CIAR #2045](#)), an areal ratio approach to determining offsetting requirements is not appropriate for a project like RBT2. This is supported by science advice and regulatory policy and guidance. This is particularly the case given the scale of the project, the complexity and dynamic nature of the Roberts Bank environment, as well as the types of habitat predominantly being affected by the project (e.g., subtidal sand/mud) and proposed as offsetting (e.g., eelgrass and tidal marsh). Consequently, the port authority incorporated an ecosystem-based productivity approach to evaluate existing and future ecosystem productivity, to determine offsetting requirements, and to identify appropriate offsetting measures using, among other lines of evidence, the Roberts Bank ecosystem model (RB model).

The ecosystem-based productivity approach to determining offsetting requirements is appropriate, and consistent with relevant federal policies and guidance. Indigenous group and regulator consultation and engagement will continue to inform the development of the final RBT2 offsetting plan pursuant to a *Fisheries Act* Authorization application. Finally, in its recent public comment period submission ([CIAR #2407](#)), DFO refer to how “the substantial improvement to the offsetting plan, the identification of additional available offsetting opportunities, as well as the progress made by the Proponent in evaluating offsetting equivalency, improves DFO’s confidence that a final offsetting plan could be developed that is consistent with DFO policy”. DFO did not express any concern about a productivity approach.

2.6.3 Response to other non-government organizations

Comments were also submitted by two organizations that are led by members of Indigenous groups:

- Great Blue Heron Way⁹²

⁹² The submission by the Great Blue Heron Way describes the organization as led by a Tsawwassen First Nation Elder with a vision to reconnect First Nations communities around the Salish Sea and along the Fraser River on new and existing pathways.

- Sacred Lands Conservancy⁹³

The port authority notes that neither submission made comments on specific draft conditions.

The port authority acknowledges the comments in the submission of the Great Blue Heron Way regarding the organization's desire to reconnect an existing break in recreational trail that follows "a historic Indigenous path and route of the Great Blue Heron Way." The port authority notes that the existing break in the trail is unrelated to the project.

The port authority also acknowledges the comments in the submission of the Sacred Lands Conservancy regarding existing and potential project-related effects on juvenile Chinook salmon, fishing, and SRKW, and the cultural importance of salmon, fishing, and SRKW to the Lummi way of life. Refer to **Section 2.5.11** of this submission for responses to similar comments raised by U.S.-based Indigenous groups.

⁹³ The submission by the Sacred Lands Conservancy, doing business as Sacred Sea, describes the organization as "an Indigenous-led non-profit...headed by...two enrolled Lummi tribal members," with a commitment to "the protection of Xw'ullemy (the Salish Sea and its rivers and waterways), and the life, sacred sites, and Treaty rights connected to and held within those waters."



3. Response to draft conditions

3.1 Key principles relevant to the conditions

Important legal principles govern the authority of the minister to impose conditions on the proponent and should underlie and inform the drafting of conditions by IAAC and/or the minister. These principles have guided the port authority's detailed feedback on the draft conditions, provided in **Section 3.2** and **Appendix 3.2-A** of this submission. Accordingly, to support IAAC's and the minister's consideration of the port authority's submission, these principles are outlined below.

3.1.1 The overarching legal principles

In imposing conditions in a decision statement, the minister will be exercising statutory authority granted under subsections 53(1) and 53(2) of CEAA 2012. Accordingly, the minister must act reasonably, and a decision to impose conditions must be "...transparent, intelligible and justified..."⁹⁴ In particular, as with all statutory decisions, the justification for a decision to impose a condition must be "based on an internally coherent and rational chain of analysis in relation to the facts and law that constrain the decision maker."⁹⁵

In the circumstances of the RBT2 Project, the laws that constrain the minister are i) the legal principles that govern all statutory decisions and ii) the *Canadian Environmental Assessment Act, 2012*⁹⁶ (CEAA 2012). The facts that constrain the minister are those properly on the record in the assessment.

3.1.2 Specific legal requirements

Under CEAA 2012, there are several specific principles that bind the minister in deciding whether to impose a condition. These are discussed below. The port authority refers to these principles, where relevant and as appropriate, in its detailed feedback on the draft conditions in **Appendix 3.2-A**.

The authority to impose conditions under CEAA 2012

The minister's duty and authority to impose conditions is found in sub-sections 53(1) and (2) of CEAA 2012:

Conditions — environmental effects referred to in [subsection 5\(1\)](#)

53 (1) If the decision maker decides under [paragraph 52\(1\)\(a\)](#) that **the designated project** is not likely to cause significant adverse environmental effects referred to in [subsection 5\(1\)](#), or the Governor in Council decides under [paragraph 52\(4\)\(a\)](#) that the significant adverse environmental effects referred to in that subsection that the designated project is likely to cause are justified in the circumstances, *the decision maker must establish the conditions in relation to the*

⁹⁴ *Canada (Minister of Citizenship and Immigration) v. Vavilov*, 2019 SCC 65 ("Vavilov"), at para 15

⁹⁵ *Vavilov*, at para 85

⁹⁶ CEAA 2012 has been repealed, but under the *Impact Assessment Act*, the provisions CEAA 2012 continue to apply to the RBT2 Project.

environmental effects referred to in that subsection with which the proponent of the designated project must comply.

Conditions — environmental effects referred to in [subsection 5\(2\)](#)

(2) If the decision maker decides under [paragraph 52\(1\)\(b\)](#) that **the designated project** is not likely to cause significant adverse environmental effects referred to in [subsection 5\(2\)](#), or the Governor in Council decides under [paragraph 52\(4\)\(a\)](#) that the significant adverse environmental effects referred to in that subsection that the designated project is likely to cause are justified in the circumstances, *the decision maker must establish the conditions* — that are directly linked or necessarily incidental to the exercise of a power or performance of a duty or function by a federal authority that would permit a designated project to be carried out, in whole or in part — *in relation to the environmental effects referred to in that subsection with which the proponent of the designated project must comply.*

(emphasis added)

Conditions must be related to the environmental effects of the project

Under sections 53(1) and 53(2), the conditions must relate to the environment effects⁹⁷ **resulting from the project**. IAAC has acknowledged this—most recently during the presentation to Indigenous groups regarding the draft conditions on December 10, 2021. To be clear, the conditions cannot relate to effects that are not predicted to be caused by the project or to which the project is not predicted to contribute.

Conditions must be justified on the effects identified in the review panel report and in responses to the minister's IR

An assessment of the RBT2 Project was conducted by an independent review panel. Consequently, the minister must determine the significance of the potential effects (under section 52) and the conditions (under section 53) taking into account the review panel's report (section 47(1)) and the proponent's responses to the minister's IR (section 47(2)). Consequently, the record upon which the minister must make those determinations is contained in, **and only in the following**:

- The Federal Review Panel Report, which is based on and refers to the following:
 - The EIS
 - The Project Construction Update
 - The evidence collected by the review panel in the public hearing
 - The port authority's responses to IRs from IAAC, from its predecessor, the Canadian Environmental Assessment Agency, and from the review panel
- The port authority's responses to the information requested by the minister under section 47(2)

Conditions can only be imposed on the proponent

Under section 53 of CEAA 2012, the minister's authority is limited to imposing conditions "...with which *the proponent* of the designated project must comply" (emphasis added). As IAAC has previously confirmed—most recently during the presentation to Indigenous groups regarding the draft conditions on December 10, 2021—this means that conditions can be imposed only on the proponent.⁹⁸

⁹⁷ Identified in subsections 5(1) and 5(2)

⁹⁸ The same limitation applies under the Impact Assessment Act: see S. 64

Conditions cannot be imposed on third parties

As only conditions "...with which the proponent of the designated project *must comply*" (emphasis added) can be imposed, conditions cannot require a third party to take action.

This principle is closely linked to the following principle.

Compliance by the proponent cannot be dependent on the action of a third party

As the proponent **must** comply with conditions, compliance cannot depend on the action of a third party. Consequently, those requirements must be capable of being complied with by the proponent alone.

While it might be possible⁹⁹ to require the proponent to **invite** another party to take action (for example, to participate in a monitoring program), that third party cannot be required to do so,¹⁰⁰ and might not. That inaction must not preclude the proponent from being able to comply with the condition.

Conditions can only impose requirements that the proponent can in fact comply with

In an assessment, only "...mitigation measures that are technically and economically feasible..." can be taken into account.¹⁰¹ Imposing conditions is a step within the assessment. Imposing a condition requiring implementation of measures that are not technically and economically feasible will breach this statutory requirement.

Moreover, a requirement that is not feasible cannot be complied with. Measures that are not feasible can arise in two circumstances. In the first circumstance, a party may suggest imposing a requirement that there be "no effects" of the project on a valued component. Where the assessment demonstrates that a component is likely to result in an effect, a condition simply requiring "no effect"—as opposed to requiring implementation of a measure—would be physically impossible. In the second circumstance, a party might suggest imposing a requirement to take steps that cannot be taken. Imposing a condition in either circumstance would amount to requiring the impossible. This would not comprise a "condition" but, rather, would amount to an outright prohibition of the project.

Imposing a condition that cannot be complied with would **not** be "...transparent, intelligible and justified..."¹⁰² nor "...based on an internally coherent and rational chain of analysis in relation to the facts and law that constrain the decision maker."¹⁰³ Ultimately, approval under CEAA 2012 will be confirmation that it is in the public interest for the RBT2 Project to proceed. Imposing conditions that cannot be complied with undermines the public interest served by the project.

In short, the minister can only impose requirements that are technically and economically feasible. As such, among other things, the requirements must be within the care and control of the proponent.

There is another aspect of feasibility that the port authority wishes to raise. It is conceivable that a circumstance could arise where, in order to strictly comply with a condition, the port authority might be required to breach another law. There are several laws that could conceivably be engaged by conduct ostensibly required by draft conditions. Examples are privacy laws, the statutory scheme governing marine transportation security, and laws within the exclusive jurisdiction of British Columbia. The concern

⁹⁹ Any such requirement must still be otherwise lawful, that is, justified based on the outcome of the assessment.

¹⁰⁰ And, even if a third party takes some action, they cannot be compelled to do so diligently or in good faith.

¹⁰¹ CEAA 2012, s. 19(1)(d)

¹⁰² *Canada (Minister of Citizenship and Immigration) v. Vavilov*, 2019 SCC 65 ("Vavilov"), at para 15

¹⁰³ *Vavilov*, at para 85

could also arise if the port authority is required to implement a mitigation measure that itself requires a permit.¹⁰⁴ For example, offsetting projects will require permits.

We have not identified any particular condition which, on its face, would require the port authority to break a law. However, we believe it is important to confirm that in imposing any condition, the minister will be requiring the port authority to take only steps that are otherwise lawful.

The minister cannot delegate statutory authority to a third party in the conditions

A person with authority under statute cannot assign that the authority to another person unless the statute permits the person to do that.¹⁰⁵ CEAA 2012 only authorizes the minister to impose conditions and there is nothing in the Act that would allow the minister to delegate that power to anyone else. This is consistent with the fact that decision-making under CEAA 2012 requires consideration of the public interest.

Consultation with statutory authorities should be limited to their areas of expertise

Federal authorities are statutory bodies and, consequently, can act only within the roles given to them by statute. The role of federal authorities under CEAA 2012 is defined under section 20. Under that section, a federal authority is to provide “specialist or expert information or knowledge it may hold” upon the request of the entity conducting the assessment.

In summary, the federal authorities are only capable of providing “specialist or expert information or knowledge” and where a condition requires consultation with a relevant authority, the scope of that consultation should be strictly limited to that role. For example, Transport Canada provided expert information at the request of the review panel on the subjects of marine shipping and vessel noise ([CIAR #1618](#)), and DFO provided expert information pertaining to SRKW ([CIAR #1630](#)).

There are draft conditions that require consultation with federal authorities. These conditions require clarification to ensure that the scope of the consultation with each is limited to the exchange of that specialist or expert information or knowledge.

¹⁰⁴ Or the consent of a third party.

¹⁰⁵ *Peralta v. Ontario*, [1988] 2 SCR 1045; *Therrien (Re, [2001 SCC 35](#))*

3.2 Introduction to feedback on draft conditions

This section of the port authority's submission explains the port authority's detailed feedback on the draft conditions.

The port authority's feedback in this submission originates from the following:

- Work undertaken to respond to the minister's IR
- Other new or amended measures proposed by the port authority
- Review of the draft conditions based on feedback received in consultation with Indigenous groups, IAAC, and other federal authorities and submissions of other parties on the registry
- Further review of the draft conditions for feasibility, clarity, and consistency, including consistency with the key principles outlined in **Section 3.1** of this submission

An explanation of each of these sources is provided in Sections 3.2.1 to 3.2.4 below for your information. Section 3.25 describes the structure and format of the port authority's detailed feedback on the draft conditions, which is provided in **Appendix 3.2-A** of this submission.

3.2.1 Response to the minister's IR

Among other things, the minister's IR requested the port authority describe alternative and additional feasible design options and mitigation measures to address potential adverse environmental effects of the project. The port authority's response to the IR has incorporated comments from other federal authorities and information provided to the port authority during consultation with Indigenous groups, and therefore discusses additional or modified design features and/or mitigation measures, which may be appropriate to reflect in the potential conditions.

To support IAAC and the minister in drafting the potential conditions to be included in a decision statement (if the project is approved to proceed), the port authority has suggested revisions to existing draft conditions and/or has proposed new conditions on the basis of the technical analyses and information collected in responding to the minister's IR where these were not already reflected in the draft conditions.

3.2.2 New or amended measures proposed by the port authority

Throughout the environmental assessment, including since the public hearing, the port authority has continued to consult with Indigenous groups and engage with relevant authorities regarding the design of the project and the collaborative management of its potential environmental effects. Through ongoing consultation and engagement, the port authority has proposed new measures and amendments to others to address certain interests expressed by the parties; some of these are related to topics not covered in the response to the minister's IR. To support IAAC and the minister in drafting conditions, the port authority has, in this **Appendix 3.2-A**, suggested revisions to existing draft conditions and addition of new conditions to reflect these new or amended measures, as appropriate.

3.2.3 Other feedback on conditions informed by consultation

Since providing our initial feedback on the pre-public consultation draft conditions to IAAC in January and September of 2021, the port authority has continued to engage and consult IAAC, Indigenous groups, and other federal authorities on various issues related to the draft potential conditions. This engagement has included seeking clarification from IAAC regarding the intent of certain conditions. Consultation with Indigenous groups has focused on conditions of mutual interest, including but not limited to draft

conditions pertaining to the potential effects of incidental marine shipping on marine mammals and current use of lands and resources for traditional purposes, and monitoring oversight.

To support IAAC and the minister in drafting conditions, the port authority has, in **Appendix 3.2-A**, suggested revisions to existing draft conditions and/or addition of new conditions to reflect relevant outcomes of this ongoing engagement and consultation.

On March 15, 2022, the port authority submitted to IAAC, together with Tsawwassen First Nation and Musqueam Indian Band, a joint letter regarding potential conditions pertaining to mitigation of potential effects on current use of lands and resources for traditional purposes. As explained in that letter, the 'placeholder' draft condition 12.3 should be replaced with the revisions and additional conditions jointly suggested by Tsawwassen First Nation, Musqueam Indian Band, and the port authority. These suggested revisions and additional conditions are noted also in **Appendix 3.2-A** of this submission.

3.2.4 Other feedback regarding feasibility, clarity, and consistency

In preparing its detailed feedback on the draft conditions, the port authority has considered the key legal principles outlined in **Section 3.1** of this submission. In particular, the port authority has evaluated each condition to determine whether it is technically and economically feasible, within the port authority's care and control, and whether the port authority is able to implement the condition without reliance on any third party. The port authority has also examined each condition to determine whether it is related to environmental effects of the project identified during the environmental assessment. The port authority has also considered whether the conditions are sufficiently clear for the purposes of compliance and whether there is any inconsistency, overlap, duplication, or redundancy that may hinder compliance. To support IAAC and the minister in drafting conditions, the port authority has, in **Appendix 3.2-A** of this submission, suggested revisions to existing draft conditions and the addition of new conditions to ensure feasibility and to promote greater clarity and consistency and reduce redundancy.

3.2.5 Structure of detailed feedback

The port authority's detailed feedback on the conditions is provided in **Appendix 3.2-A**, in a table comprising four columns:

- The first two columns reproduce the draft potential condition (number and text) verbatim
- The third column includes the port authority's feedback on the condition and, where applicable, the rationale for suggested revisions to the conditions
- The last column provides the port authority's suggested revisions to the draft condition and/or suggested text for additional new conditions. In this column, all revisions and suggested new text are highlighted in *green text*

As much as possible, where revisions are suggested, the port authority has used language consistent with the language used elsewhere in the draft conditions and in the port authority's responses to the minister's IR.

The port authority's comments on the draft potential conditions reflect our understanding of the intent and purpose of the conditions, which has been informed by the clarifications provided by IAAC. If any comments or suggested revisions are in any way unclear, the port authority would be pleased to provide IAAC any further clarification required.

3.3 Input to the Whole of Government Response

3.3.1 Introduction

The mandate of the port authority is to facilitate Canada's trade objectives, ensuring goods are moved safely, while protecting the environment and considering local communities. The RBT2 Project is being advanced by the port authority in furtherance of and consistent with this federal mandate.

The rights, obligations, capacity, and powers of the port authority are provided for in the *Canada Marine Act*, and in the regulations and the port authority's Letters Patent issued under that Act. Like all bodies created by statute, that same legislative and regulatory framework also limits the port authority's power to act to the navigable waters and real property within the Port of Vancouver. For this reason, the ability of the port authority to directly implement mitigation measures or to take other actions with respect to conduct by others is limited. This is particularly the case for marine shipping incidental to the RBT2 Project, which has been deemed to be part of the project for the purpose of environmental assessment but is not an activity proposed or conducted by the port authority.

The Government of Canada has the authority over marine shipping in the Salish Sea, Haro Strait, and Juan de Fuca Strait. That authority is exercised by Transport Canada, the Canadian Coast Guard, and DFO. Each of these federal departments and agencies has roles and responsibilities commensurate with their respective mandates and statutory authorities set out in various federal laws and regulations.

As a matter of principle (as discussed in **Section 3.1** of this submission), as well as of practicality, conditions imposed on the RBT2 Project must be drafted in a manner that is aligned and consistent with the respective roles and responsibilities of the port authority, as the proponent, and the federal authorities. Further, conditions should be drafted in a manner that avoids overlap with or duplication of actions, including regional initiatives, that will be undertaken by the Government of Canada. Our suggested revisions and additions to the draft conditions, outlined in **Section 3.2** and **Appendix 3.2-A** of this submission, consider these principles.

Moreover, it is important to bear in mind that for the purpose of environmental assessment, marine shipping has been deemed incidental activity. However, marine shipping is not part of the RBT2 Project proposed by the port authority. In its consideration of whether the incidental marine shipping is likely to cause significant adverse environmental effects and, if so, whether those effects are justified in the circumstances, it is incumbent on the federal government to take into consideration mitigation measures that are beyond the scope of the proponent's control, but **within the authority of the federal government itself**. This is exactly what the Government of Canada did in its decision to approve the TMX project.¹⁰⁶

In this regard, this section of the port authority's submission provides the port authority's feedback on the Whole of Government Response, which the port authority understands will articulate the measures that are being or will be implemented by other federal authorities in the Government of Canada to address the potential adverse environmental effects of marine shipping incidental to the RBT2 Project identified by the review panel.

3.3.2 Measures committed to by the Government of Canada

The measures that the Government of Canada has committed to implement in relation to the TMX project are relevant when considering the measures that should also be applied to the RBT2 Project. Marine

¹⁰⁶ "What informed the Government decision", accessed online here: <https://www.canada.ca/en/campaign/trans-mountain/what-is-tmx/the-decision/background2.html>.

shipping related to the TMX project will overlap with SRKW critical habitat along the shipping route. During the review of that project, the then National Energy Board (the Board or NEB) (now the Canadian Energy Regulator) made recommendations to the Government of Canada regarding measures the federal government could implement to avoid or lessen the potential adverse environmental effects of project-related marine shipping, particularly on SRKW, and to monitor those effects, and considered that “should the Government implement the NEB’s 16 recommendations, they could *offset the incremental effects of the [TMX] Project and make material improvements to the health of the Salish Sea* (in particular recommendations 5 and 6, which are directly focused on SRKW). The Board also noted that while there are likely significant adverse effects on the SRKW from Project-related shipping, the offset approach proposed in its recommendations to the GIC [Governor in Council] could *allow for a reduction in that finding to non-significant effects* if and when Project-related shipping effects have been effectively reduced to net zero in each relevant section of the proposed shipping route”¹⁰⁷ (emphasis added).

In particular, the NEB made recommendation #6, which reads as follows:

6 As part of the Offset Program in Recommendation 5, *the Governor in Council should further consider each of the following specific measures, each applicable to all appropriate vessels (i.e., not limited to Project-related vessels), and publicly report on the feasibility and likely effectiveness of each (including consideration of navigational safety, international coordination and socio-economic effects):* (emphasis added)

By Order in Council dated June 18, 2019, the Federal Government approved the TMX project. In the recitals to the Order in Council (at page 9), the Governor in Council—the federal Cabinet—promised to implement all of the recommendations by the NEB:

“Whereas, the Governor in Council, having reviewed the Recommendations of the Board to the Governor in Council contained in the Reconsideration Report, *undertakes to implement all the Recommendations;*” (emphasis added)

In summary, in approving its own project, the Government of Canada undertook to develop and implement measures to mitigate the potential impacts on SRKW of **all** shipping, not just the oil tankers that will call at its marine terminal.

In the Explanatory Note that follows the Orders in Council ([TMX Orders in Council, 2019](#)) setting forth the Government of Canada’s decisions allowing the TMX project to proceed, the federal government accepted the Board’s recommendations, and described the actions, including regional initiatives, it is taking or will take to support the recovery of SRKW, address cumulative effects (in the marine shipping area), reduce the risk of marine incidents, and mitigate other environmental effects of that project. These actions are consistent with the NEB’s recommendations. Further, the Government of Canada, in approving the TMX project, expressed confidence in the effectiveness of the measures that have been and continue to be put in place by the federal government to mitigate effects of marine shipping and other threats to SRKW.¹⁰⁸ Taking those measures into account (as well as the measures to be implemented by the proponent), the Government of Canada decided that the significant adverse environmental effects of the TMX project were justified and that the project was in the public interest and should proceed.

The Government of Canada has promised that it will implement all the measures included with the Orders in Council for the TMX project that pertain to commercial marine shipping in the marine shipping area.

¹⁰⁷ TMX Orders in Council, and Explanatory Note, June 22, 2019, accessible online here: [Canada Gazette, Part 1, Volume 153, Number 25: ORDERS IN COUNCIL](#)

¹⁰⁸ “Trans Mountain Expansion will fund Canada’s future clean economy”, news release, Prime Minister of Canada, June 18, 2019, accessible online here: <https://pm.gc.ca/en/news/news-releases/2019/06/18/trans-mountain-expansion-will-fund-canadas-future-clean-economy>.

This will necessarily include the oil tankers that call at the TMX facility and all container vessels that call at container terminals within the Port of Vancouver. Those measures are being implemented today and can and should be included in the final Whole of Government Response for the RBT2 Project. The port authority agrees with the Governor in Council that the implementation of these measures would mitigate the cumulative effects of all marine shipping, including existing and ongoing container vessel traffic and would materially improve the health of the Salish Sea. The port authority further agrees that implementation of these measures by the Government of Canada will mitigate potential adverse cumulative environmental effects on SRKW.

The draft Whole of Government Response¹⁰⁹ appears to include the measures that the Government of Canada has previously committed to implement in relation to the TMX project. The port authority recommends the Whole of Government Response should also include the additional and updated information on Government of Canada initiatives provided by Transport Canada and DFO in their recent submissions during the public comment period on the IR response and draft conditions. For example, Transport Canada identified and provided additional and updated details regarding initiatives it is leading or working on collaboratively with Indigenous groups, the United States, and/or the International Marine Organization to “address effects from existing and future marine shipping activities to the environment and Indigenous peoples” (CIAR #2298). Transport Canada also described their investment in the development of a new active vessel traffic management system being led by the port authority, which will “improve the overall efficiency and reliability of the flow of goods through this strategic gateway for all supply chain partners, which will partially mitigate capacity constraints and associated social and environmental impacts” (CIAR #2298, p.11). Similarly, DFO describes its ongoing work to develop methods to measure the effectiveness of the measures being implemented by the Government of Canada (CIAR #2407). Further, the federal government recently announced in its 2022 budget an ongoing and additional financial commitment over the next decade to renew and expand the Oceans Protection Plan to strengthen marine safety, protect marine ecosystems, and create stronger partnerships with Indigenous and coastal communities. The proposed funding will enable the proactive management of marine emergencies and to cover more types of pollution and to allow for marine activity to continue safely and sustainably.

3.3.3 Additional measures

The effects of the project and cumulative effects are mitigable through both the conditions that would be imposed on the proponent (with revisions and additions suggested by the port authority in **Section 3.2** and **Appendix 3.2-A** of this submission) and the actions that are being and will be taken by the Government of Canada (as outlined in the draft Whole of Government Response). Nevertheless, the port authority notes that there are *additional* available measures that can be implemented by other federal authorities to address regional-scale issues and further mitigate cumulative effects.

For example, during consultation with Indigenous groups in relation to marine shipping incidental to the project, the port authority heard concerns about the effects of **existing** marine shipping on aspects of current use of lands and resources for traditional purposes and on SRKW. These effects are expected to continue whether or not the RBT2 Project proceeds.

In IR2020-3 (CIAR #2083), the port authority identified and assessed the effectiveness of **additional** contingency mitigation options. These measures could further mitigate underwater noise levels in the

¹⁰⁹ As described in **Section 1.1** of this submission, IAAC provided the port authority, Indigenous groups, the provincial government, and other federal authorities with the draft Whole of Government Response to the recommendations of the review panel that were directed to the government on October 22, 2020. The draft Whole of Government Response is subject to change and may be updated in the future.

marine shipping area and any resulting effects. The evaluation is focused on vessel slowdowns because these methods are available today and have been proven to be effective; the effective measures include further reducing container vessel speeds, increasing the duration of vessel slowdowns (i.e., number of months), and expanding the slowdown areas. As these measures cannot be implemented alone nor enforced by the port authority, they therefore cannot be included in conditions imposed on the proponent. However, these measures can be implemented by the Government of Canada and could be included in the Whole of Government Response for RBT2, if the federal government determines that additional measures are needed to address underwater noise and the (cumulative) effects of marine shipping.

The Canadian Science Advisory Secretariat issued a report entitled [Evaluation of the Scientific Evidence to Inform the Probability of Effectiveness of Mitigation Measures in Reducing Shipping-Related Noise Levels Received by Southern Resident Killer Whales](#) (DFO 2017). The port authority notes that, to its knowledge, some of the measures evaluated by the Canadian Science Advisory Secretariat have not yet been implemented or fully implemented, and these measures are available to the Government of Canada should it see fit to implement them.

As described in **Section 2.4.5** of this submission, the State of Washington Department of Ecology (Ecology) recommends certain additional initiatives and measures that pertain to matters outside the care and control of the port authority, including matters related to spill response planning, pilotage, vessel safety, transboundary collaboration, and community air monitoring. As noted by the port authority in its response to the State of Washington Department of Ecology (in **Section 2.4.5**), if the Government of Canada determines that the initiatives and measures described by Ecology are warranted, it should address those initiatives and measures in the Whole of Government Response.

3.3.4 Measures to be considered in decision-making

In general, the port authority considers that the actions and initiatives outlined in the draft Whole of Government Response will serve to mitigate adverse environmental effects associated with marine shipping incidental to the project, as well as other potential project and cumulative environmental effects.

The additional measures identified above should also be considered for inclusion in the Whole of Government Response. In particular, if the minister determines the project, including marine shipping incidental to the project, is likely to cause a significant adverse environmental effect, including cumulative effects, these additional measures should be taken into account by the federal government in decision-making regarding the project. In summary, there is no reasonable basis for imposing conditions that the port authority cannot comply with nor for declining to approve the RBT2 Project because of potential environmental effects that the Government of Canada itself can mitigate through the exercise of its own authority. The Government of Canada recognized this when it approved the TMX project and should do so for the RBT2 Project, which is being advanced by the port authority as an agent of the Crown, in furtherance of its mandate to facilitate Canada's trade objectives.

Appendix 2.4-A Response to comments of government on draft conditions

Preface

In submissions during the public comment period, other parties have included specific suggestions to revise or add to the draft potential conditions. The port authority has reviewed these suggestions to evaluate the technical and economic feasibility of any suggested measures, in addition to considering other relevant factors, such as the key principles that must underlie the conditions, as described in Section 3.1 of this submission (e.g., whether they pertain to a project effect), and whether the suggested conditions would be effective. The port authority has provided a response in **Tables 1** through **8**, as listed below, where feedback on the suggestions of government may be helpful to IAAC.

- Table 1 – Response to comments of Transport Canada
- Table 2 – Response to comments of Indigenous Services Canada
- Table 3 – Response to comments of B.C. Ministry of Environment and Climate Change Strategy (ENV) and B.C. Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) joint submission
- Table 4 – Response to comments of B.C. Ministry of Indigenous Relations and Reconciliation
- Table 5 – Response to comments of B.C. Ministry of Health
- Table 6 – Response to comments of B.C. Ministry of Agriculture, Food and Fisheries
- Table 7 – Response to comments of Metro Vancouver
- Table 8 – Response to comments of City of Delta

Table 1 – Response to comments of Transport Canada

Posted February 9, 2022. Link: [CIAR #2298](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
TC-1	8.1 – Marine Mammals	The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups, Fisheries and Oceans Canada and Transport Canada measures to mitigate adverse environmental effects caused by underwater noise emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the measures during the relevant phase of the Designated Project. As part of these measures, the Proponent shall:	<p>Transport Canada proposes the removal of the reference to “<i>operation</i>” as this condition and its associated sub-conditions relate to construction of the terminal, causeway and the expanded tug basin, not marine shipping (i.e., operation).</p> <p>Operational mitigation and conditions are included elsewhere.</p>	The port authority agrees with this suggestion and makes the same suggestion in Appendix 3.2-A of this submission.
TC-2	8.4 – Marine Mammals	<p>The Proponent shall develop, prior to operations, in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada, a plan to address effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) due to underwater noise produced as a result of the operations of the Designated Project, including both marine shipping and operations at the marine terminal. The Proponent shall implement the plan in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada during operation. As part of the plan, the Proponent shall:</p> <p>8.4.1 establish a budget for underwater noise for the operation of the Designated Project, specifying the amount, locations, and timing of underwater noise that will be generated, reduced, and/or offset, in order to meet the predicted effects to Southern Resident Killer Whales (<i>Orcinus orca</i>) due to underwater noise described in IR2020-3</p>	<p>Transport Canada, in consultation with DFO, recommends that this condition be updated to reflect a performance-based approach and the proponent’s commitment to limit noise to existing levels and to address any unanticipated underwater noise by implementing identified feasible mitigation measures.</p> <p>Prior to operation, and in consultation with Indigenous groups, Indigenous groups (marine shipping), Fisheries and Oceans Canada, and Transport Canada, the Proponent be required to establish baseline conditions for underwater noise based on noise levels associated with container vessels currently calling at VFPA.</p> <p>Prior to operation, and in consultation with Indigenous groups, Indigenous groups (marine shipping), Fisheries and Oceans Canada, and Transport Canada, the Proponent should be required to develop and implement an Adaptive Noise Management Plan, which will include monitoring, and measurement to ensure the established noise baseline is not exceeded (even at full operation).</p> <p>The Adaptive Management Plan should include the frequency of monitoring as well as the identification of additional mitigation measures to be implemented if the noise budget is not maintained. Additional mitigation measures could include, but are not limited to further slowdowns, reduced container vessel calls, offsetting, and any other adaptive management measures required to adhere to the noise budget.</p> <p>The Proponent should work with Fisheries and Oceans Canada and Transport Canada to ensure that underwater noise (impacting SRKW and as described in IR2020-3) in the shipping lanes does not increase relative to current baselines as described in IR2020-3 as a result of the Designated Project.</p>	The port authority responds to Transport Canada’s suggestions and comments with respect to the draft conditions in part 8, as well as those of DFO, and is proposing revisions and additional conditions that are consistent with the intent expressed by Transport Canada and DFO while ensuring the conditions are feasible and within the care and control of the port authority to implement. Please see Appendix 3.2-A of this submission for the port authority’s suggestions and supporting rationale.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>(Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672);</p> <p>8.4.2 monitor underwater noise levels and conduct analysis in order to ensure that the underwater noise budget established in condition 8.4.1 is being met;</p> <p>8.4.3 implement modified or additional mitigation measures, and report to the Agency, Transport Canada, and Fisheries and Oceans, if the results of the monitoring and modelling referred to in condition 8.4.2 demonstrate that levels of underwater noise are nearing exceedance of the budget established in condition 8.4.1. Measures may include:</p> <p>8.4.3.1 mandatory speed reductions for vessels and/or tugs in addition to those required pursuant to condition 8.3;</p> <p>8.4.3.2 additional offsets for underwater noise in Southern Resident Killer Whale (<i>Orcinus orca</i>) critical habitat in the Salish Sea;</p> <p>8.4.3.3 limits on container vessel calls to the Designated Project;</p> <p>And</p> <p>8.4.4 identify measures, out of the care and control of the Proponent, that could be undertaken by relevant authorities in order to achieve the budget for underwater noise established in condition 8.4.1 or to limit effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) to those predicted in IR2020-3 (Canadian Impact Assessment Registry</p>	<p>The Proponent should ensure that underwater noise generated as a result of operation of the marine terminal, including container vessel arrival, berthing, at berth, unberthing, and departure with the assistance of tugs, is offset by reductions in underwater noise elsewhere in Southern Resident Killer Whale (<i>Orcinus orca</i>) critical habitat in the Salish Sea, as described in IR2020-3, to the satisfaction of Fisheries and Oceans Canada.</p> <p>With regards to 8.4.4: Transport Canada is of the view that contingency or adaptive management measures should not be implemented based on the proposed hierarchy, rather by the most effective response to the measurable impact (if it occurs).</p> <p>Transport Canada, in consultation with Fisheries and Oceans Canada, is proposing additional clarifications for consideration by the Impact Assessment Agency of Canada including:</p> <ul style="list-style-type: none"> · annual submission should include review of adaptive management approach. · Additional requirement for specific triggers and thresholds, and actions required as part of the plan. This includes additional mitigation to be implemented in consultation with TC and DFO. · Periodic review of the plan to ensure new effective measures are integrated (i.e., 5 years, before permitting, before construction, operation and before opening new berth to 2035/2040. · Plan requires ability to integrate a metric that aligns with government actions being implemented in response to work to respond to Recommendations 5 and 6 from Canada Energy Regulator on the Transmountain Expansion Project and Fisheries and Oceans Canada’s Proposed Underwater Noise Strategy. · Further consideration to ensure alignment with the anticipated Species at Risk Act permit application requirements is recommended. · Clarification regarding follow up program requirements is also recommended. <p>8.4.1 establish a budget limit for underwater noise, based on levels associated with container traffic calling on VFPA as described in IR2020-3, for the operation of the Designated Project, specifying the amount, locations, and timing of underwater noise that will be generated, reduced, and/or offset, in order to meet the predicted effects to Southern Resident Killer Whales (<i>Orcinus orca</i>) due to underwater noise described in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672);</p> <p>8.4.2 monitor project and container vessel related underwater noise levels and conduct analysis in order to ensure that the underwater noise budget limit established in condition 8.4.1 is being met;</p>	

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>Reference Number 80054, Document Number 141672) should the Proponent be of the opinion that measures developed and implemented pursuant to condition 8.4.3 have been exhausted.</p>	<p>8.4.3 implement modified or additional mitigation measures, and report to the Agency, Transport Canada, and Fisheries and Oceans, if the results of the monitoring and modelling referred to in condition 8.4.2 demonstrate that levels of underwater noise are <u>expected to hearing-exceedance-of the budget limit</u> established in condition 8.4.1.</p> <p>8.4.4 identify measures <u>prior to the commencement of project operations and in consultation with Transport Canada</u>, out of the care and control of the Proponent, that could be undertaken by relevant authorities in order to achieve the limit for underwater noise established in condition 8.4.1 or to limit effects to Southern Resident Killer Whale (Orcinus orca) to those predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672) <u>should the Proponent be of the opinion that measures developed and implemented pursuant to condition 8.4.3 have been exhausted.</u></p>	
TC-3	12.3 – Current use of lands and resources for traditional purposes	<p>[The Agency is considering additional conditions regarding mitigating effects of the project on current use of lands and resources for traditional purposes commensurate with the proponent's predictions regarding container vessel traffic]</p>	<p>Transport Canada recommends that the Impact Assessment Agency of Canada consider requiring the proponent, in consultation with any interested Indigenous groups and Transport Canada, as required, proactively work prior to operation of the project to identify potential options that could be implemented if the number of vessels (associated with this project) exceeds the vessel forecasts. Options could include a range of measures and opportunities to support Indigenous groups in practicing their rights on the water.</p> <p>Transport Canada suggests this should include the incorporation of monitoring and follow up requirements that include verifying vessel transits and identifying the effectiveness of solutions preferred by Indigenous groups.</p>	<p>The port authority suggests revisions and additional conditions to replace the draft condition 12.3 placeholder, which meet the objective of Transport Canada's suggestion here. Please see Appendix 3.2-A of this submission for the port authority's suggestions and supporting rationale.</p>

Table 2 – Response to comments of Indigenous Services Canada

Posted December 27, 2021. Link: [CIAR #2091](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
ISC-1	2.5 Follow-up requirements (Pg. 6)	2.5.2 the scope, content and frequency of reporting of the results of the follow-up program;	<p>If applicable, recommend adding a reference to specify to whom the reporting requirements will be submitted/shared - i.e., will Indigenous groups have access to the reports and results? The text could potentially read:</p> <p>2.5.2 the scope, content and frequency of reporting of the results of the follow-up program and with whom the reports will be shared;</p>	<p>The parties to whom follow-up program reports are to be provided are already specified in other draft conditions, particularly draft condition 2.8.5, which refers to IAAC and to the parties, including Indigenous groups, specified in each condition requiring the development and implementation of a follow-up program.</p> <p>The suggested revision would therefore be duplicative of and potentially in conflict with these other conditions.</p>
ISC-2	2.5 Follow-up requirements (Pg. 6)	2.5.5 the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.5.4 have been reached or exceeded; and	<p>If applicable, recommend specifying when and why mitigation measures are not feasible. The text could potentially read:</p> <p>2.5.5 the technically and economically feasible mitigation measures to be implemented by the Proponent, as well as measures that cannot be implemented and the reasons impeding implementation, if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.5.4 have been reached or exceeded; and</p>	<p>The port authority interprets the suggested revision as referring to the additional or modified measures that have been suggested by others, rather than <u>all</u> measures that cannot be implemented. It would not be reasonable or practical to document an exhaustive list of measures that cannot be implemented.</p> <p>The port authority suggests clarifying the intent of the suggested edit with the following revision:</p> <p><i>'... as well as measures suggested by the party or parties being consulted that cannot be implemented and the reasons why they cannot be implemented impeding implementation...'</i></p>
ISC-3	2.10 Annual Reporting (Pg. 8)	for conditions set out in this document for which consultation is a requirement, a summary of any views and information received during or as a result of consultation and how the Proponent considered and addressed the views and information received;	<p>If applicable, recommend including a reference to the identification of outstanding issues and whether they are impeding implementation of any mitigation measures and/or compliance with the condition.</p> <p>The text could potentially read:</p> <p>for conditions set out in this document for which consultation is a requirement, a summary of any views and information received during or as a result of consultation and how the Proponent considered and addressed the views and information received, as well as any outstanding issues and whether the outstanding issues impede implementation of any mitigation measures and/or compliance with any conditions;</p>	<p>The suggested revision is duplicative with the intent of the suite of sub-conditions to draft condition 2.10. Draft condition 2.10.1 and the draft conditions in part 20 deal with documenting and reporting on the implementation of conditions, including conditions that require implementation of mitigation measures. In the event of a potential non-compliance with a condition, the reasons for lack of compliance (including impediments to implementation due to outstanding issues) would be noted in the report.</p> <p>Further, draft condition 2.10.3 requires the proponent to summarize the views and information received during consultation required by the conditions. As part of this reporting, it is reasonable to assume that impediments to implementing mitigation measures that are related to concerns of Indigenous groups would be noted.</p> <p>However, this is an unlikely hypothetical situation, as all efforts will be made to address and remove any impediments to implementation of conditions in a timely fashion and before annual reporting. As such the proposed wording is not needed.</p>
ISC-4	2.12 - Annual Reporting (Pg. 8)	"The Proponent shall submit to the Agency the annual report referred to in condition 2.10, including a plain language executive summary in both official languages, no later than March 31 following the reporting year to which the annual report applies."	<p>It may be beneficial to provide information pertaining to whether there will be an option for Indigenous groups to request availability of documentation in their respective languages within this section.</p> <p>ISC notes that this will often only be conducted on a case-by-case basis pending potential inquiry by Indigenous nations which are interested.</p>	<p>The port authority agrees that the need for translation is prospective ("pending potential inquiry") and would be "conducted case-by-case," but the conditions should not establish this as a requirement for project documentation as a matter of course.</p> <p>It is not feasible to provide (all) documentation in (all) the languages used by the many Indigenous groups implicated in all the conditions.</p> <p>Indigenous groups can request translated materials during ongoing direct consultation with the port authority, as well as during any consultation required by various conditions, and through the Indigenous Advisory Committee contemplated in part 17 of the draft conditions and/or the Environmental Management (Stewardship) Committee contemplated in Part 18 of the draft conditions. The port authority notes that it has been consulting with Indigenous groups for many years and adapting consultation activities based on their feedback and has not received any requests for translated materials.</p> <p>The feasibility of translation options (e.g., of summary information) will have to be determined on a case-by-case and as-needed basis.</p>

Table 3 – Response to comments of B.C. Ministry of Environment and Climate Change Strategy (ENV) and B.C. Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) joint submission

Received on March 14, 2022. Link: [CIAR #3218](#)

#	Section	Original condition	Comment and suggested revision	Port authority response
BC ENV & FLNRORD - 1	General	N/A	<p>IAAC did not provide a “track changes” comparison of this newest version of federal conditions with the previous version we reviewed. There was also no explanation provided as to which comments were incorporated and which were not. This made the review more difficult and time-consuming.</p> <p>Suggested Edit: We recommend that in future IAAC provide information clearly showing how conditions have changed, and explaining why, so that reviewers can see more clearly whether their earlier comments were incorporated or not, why or why not, and what other changes were made.</p>	No comment.
BC ENV & FLNRORD - 2	General	N/A	<p>ENV requests that any plans to account for future climate change scenarios in project activities be submitted to ENV for review before they are implemented, so that Climate Action Secretariat experts within ENV can assess the proponent’s plans and provide additional direction if needed.</p> <p>Suggested Edit: Add a mention of submitting plans to ENV before they are implemented to any conditions requiring the consideration of future climate change. For example, in condition 6.5: “The Proponent shall implement the measures during all phases of the Designated Project and submit the measures to the Agency and to the B.C. Ministry of Environment and Climate Change Strategy prior to implementing them.”</p>	No comment.
BC ENV & FLNRORD - 3	6.2 – Marine Environment	The Proponent shall construct the northwest corner of the terminal in a manner that reduces the potential for seabed scour and sediment deposition identified on figures IR2020-4-25 and IR2020-4-26 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672).	<p>ENV/FLNRORD recommendation (formerly condition 6.3) from July 2021 not addressed in current Federal Conditions:</p> <p>Given that the province has jurisdiction in waters in the Fraser River estuary upriver from the shoreline and the bottom under the river channels and under inshore marine waters, except where specified within the VFPA boundaries (2015 Jurisdictional map VRPA), suggest additional references to British Columbia’s legislation and guidelines.</p> <p>It is uncertain if the project design mitigation measures to reduce scour and sediment and the proposed follow up monitoring program include mitigation or monitoring of RBT2 project effects within the Roberts Bank Wildlife Management Area.</p> <p>Suggested Edit: Ensure measures to reduce the potential for seabed scour and sediment deposition explicitly include the Roberts Bank Wildlife Management Area.</p>	<p>The port authority notes that draft condition 6.2 pertains to a specific design mitigation measure. Draft condition 6.11 pertains to the development and implementation of the Coastal Geomorphic Process Evaluation and Associated Effects Prediction follow-up program element, outlined in Table C2 of Appendix G of the review panel report (CIAR #2062). The port authority notes that draft condition 6.11 already would require consultation with FLNRORD with respect to the development of the Coastal Geomorphic Process Evaluation and Associated Effects Prediction follow-up program element, outlined in Table C2 of Appendix G of the review panel report (CIAR #2062).</p> <p>Pursuant to draft condition 2.5.1, the location of monitoring to be conducted in relation to this follow-up program element would be determined during the development of this follow-up program element. Further, pursuant to draft condition 2.5.5, the development of this follow-up program element would also include identifying feasible mitigation measures that would be implemented if needed based on the monitoring results, while draft condition 6.11.2 would require the port authority to implement additional mitigation measures if needed to address scour and/or effects resulting from scour attributed to the project. Those measures would be implemented where needed to most effectively mitigate identified effects; it is premature to specify in a condition the location of measures that may be implemented in the future to address an unforeseen effect. For this reason, the port authority does not recommend a change to this draft condition.</p>

#	Section	Original condition	Comment and suggested revision	Port authority response
BC ENV & FLNRORD - 4	6.4 – Marine Environment	The Proponent shall take into account the Canadian Council of Ministers of the Environment’s Water Quality Guidelines for the Protection of Aquatic Life and British Columbia’s <i>Approved Water Quality Guidelines: Aquatic Life, Wildlife and Agriculture</i> when undertaking in-water work activities required for the Designated Project that use concrete, and do so in a manner consistent with the <i>Fisheries Act</i> and its regulations. In doing so, the Proponent shall:	<p>ENV/FLNRORD suggest adding reference to British Columbia’s recently revised guidelines, specifically for the use of concrete, as well as to the site-specific water quality guidelines for the lower Fraser River¹.</p> <p>Please note that both approved and working water quality guidelines are relevant, not solely the approved guidelines. For substances that are relevant to BC but do not have formally approved WQGs, working water quality guidelines (WWQGs) and working sediment quality guidelines (WSQGs) are adopted.</p> <p>B.C. applies site-specific B.C. objectives, and/or B.C. water quality guidelines, whichever is more current for a given parameter. For parameters for which these are not available, federal water quality guidelines are applied. The proponent should be directed to use the same approach.</p> <p>Suggested Edit:</p> <p>“... and British Columbia’s Approved and Working Water Quality Guidelines: Aquatic Life, Wildlife and agriculture and following British Columbia’s Requirements and Best Management Practices for Making Changes In and About a Stream in B.C. (2022)², and in particular, to inform in-water work activities required for the Designated Project that use concrete.”</p>	<p>The port authority understands the intent of draft condition 6.4 is to ensure in-water activities that use concrete do not impact marine water quality, specifically pH. Because approved federal and provincial water quality guidelines already exist for pH in marine environments, the addition of a reference to “working” guidelines is confusing and would reduce the clarity and certainty of this condition.</p> <p>The port authority notes that the in-water works will be undertaken in the marine environment; best management practices that were developed for in-water works in freshwater watercourses are not applicable in the marine environment and, for clarity, should not be referenced in the condition.</p>
BC ENV & FLNRORD - 5	6.7 – Marine Environment	The Proponent shall collect and treat any storm water from the Designated Project area in a manner consistent with the Fisheries Act and its regulations before discharging that water into waters frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water.	<p>Consideration of future climate change is not included in a condition on stormwater management systems, while it was in the previous draft conditions. ENV requests that it be added back in so that the stormwater collection and treatment system is designed to handle larger expected rain and storm events.</p> <p>Suggested Edit:</p> <p>Recommend adding to this condition or condition 6.5 wording similar to the earlier draft, i.e. “The Proponent shall collect and treat any storm water from the Designated Project area in a manner consistent with the Fisheries Act and its regulations before discharging that water into waters frequented by fish. Storm water treatment systems should take future climate change into account due to expected increases in precipitation and storm surges.”</p>	The port authority notes that future climate change is being taken into account in the design of the stormwater management system for the project, which will be consistent with the <i>Fisheries Act</i> .
BC ENV & FLNRORD - 6	6.8 – Marine Environment	The Proponent shall, prior to fill placement, characterize representative samples of all fill material received from an off-site location, including quarry material, Fraser sand, dredged material and other material that may be used as fill, to demonstrate that Designated Project construction activities, including supernatant discharge, will not result in marine pollution as defined in the <i>London Protocol and Convention</i> and according to advice received from Environment and Climate Change Canada during the environmental assessment (Canadian Impact Assessment Registry Reference Number	<p>Given that the province has jurisdiction in waters in the Fraser River estuary upriver from the shoreline and the bottom under the river channels and under inshore marine waters, except where specified within the VFPA boundaries (2015 Jurisdictional map VRPA), ENV/FLNRORD suggest additional references to British Columbia’s legislation and guidelines.</p> <p>In addition, because the condition references the definition of pollution in B.C.’s Environmental Management Act, it should also reference B.C.’s site-specific water quality objectives for the Fraser River and B.C.’s water quality guidelines, as it is in relation to these guidance pieces that B.C. determines whether or not pollution is occurring.</p>	<p>The port authority notes that it is suggesting revisions to this draft condition in Appendix 3.2-A of this submission.</p> <p>Draft condition 6.8 would require consideration of the potential for marine pollution, as defined by the <i>London Protocol and Convention</i>, B.C.’s <i>Environmental Management Act</i>, and the federally <i>Recommended Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey</i>. The suggestion to add the B.C. <i>Water Sustainability Act</i> (WSA) to this list is confusing, as it pertains to freshwater systems, and section 46 of the WSA does not apply to the marine environment, within which the project is located. The WSA also does not add any protection not already covered by the other</p>

¹ Available at https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-objectives/fraser_river_from_hope_to_sturgeon_and_roberts_banks.pdf.

² [Requirements and Best Management Practices for Making Changes In and About a Stream in B.C. \(2022\)](#)

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		<p>80054, Document Number 1091) and in pollution as defined in subsection 6(4) of British Columbia's <i>Environmental Management Act</i> and in consideration of the federally <i>Recommended Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey</i>. The Proponent shall not use any materials as fill, where the characterization of representative samples indicates a potential for marine pollution, unless additional mitigation measures, such as the collection of supernatant, are implemented to prevent marine pollution.</p>	<p>Site-specific water quality objectives for the Fraser River from Hope to Sturgeon and Roberts Bank apply in the lower Fraser River and Fraser River Estuary. The relevant lower Fraser river site-specific objective or B.C. water quality guideline should be applied. (B.C. water quality guidelines and objectives may include guidance for levels in sediment and/or aquatic life.)</p> <p>Suggested Edit:</p> <p>"including pollution as defined in subsection 6(4) of the British Columbia's <i>Environmental Management Act</i>, and in accordance with the <i>British Columbia Water Sustainability Act</i>, section 46, prohibitions on introducing foreign matter into stream.</p> <p>Recommend:</p> <p>"and in consideration of the federally Recommended Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey", <i>Fraser River Water Assessment and Objectives</i>³, and <i>provincial Water Quality Guidelines</i>⁴."</p> <p>Recommend:</p> <p>Explicit reference that the most current site-specific objective or B.C. water quality guideline should be applied, here and to other conditions that mention water quality objectives and guidelines.</p>	<p>referenced laws and guidelines. The project is not located in freshwater and will not impact Fraser River water quality.</p> <p>Note that "pollution" is not defined in section 6(4) of the <i>Environmental Management Act</i>.</p> <p>The majority of the B.C. Water Quality Guidelines will be met because the project (including the use of fill) is not predicted to change the levels of marine water quality parameters, with the exception of total suspended solids (TSS) and turbidity.</p> <p>The water quality guideline derivation for both the CCME and B.C. guidelines require a reliable TSS-turbidity relationship; however, RBT2 baseline studies have demonstrated variability in this relationship for the Roberts Bank project area. Use of turbidity as a parameter to manage suspended sediment loads should always be based on an area-specific evaluation of turbidity-TSS relationships, as has been done for the project. For this reason, project- and site-specific water quality thresholds will be established for the project, in accordance with draft condition 6.10.2.</p> <p>The Fraser River objectives provide management thresholds for the Roberts Bank area for seven analytes: faecal coliforms, enterococci, <i>Escherichia coli</i>, <i>Pseudomonas aeruginosa</i>, dissolved oxygen, dioxins and furans in sediment, and polycyclic aromatic hydrocarbons (PAHs) in sediment. The project is not predicted to cause any change in environmental levels of enteric bacteria and associated human pathogens (first four of seven analytes). The project is also not predicted to cause any change in water column dissolved oxygen levels. Further, re-suspension and re-distribution of sediments is not predicted to increase seabed concentrations of dioxins, furans, or PAHs in sediment. These objectives are therefore not relevant to the project or to this condition. The addition of reference to the Fraser River objectives therefore would reduce the clarity of this condition.</p> <p>For these reasons, the port authority does not recommend the suggested edits.</p>
BC ENV & FLNRORD - 7	6.9 – Marine Environment	<p>The Proponent shall not use material dredged from the upper 0.5 m of the existing tug basin nor the tug basin expansion area as fill for land development for the Designated Project unless the Proponent:</p>	<p>The draft federal conditions indicate material from the upper 0.5 m of the existing tug basin nor tug basin expansion should not be used as fill for land development for the Designated Project unless certain conditions are met.</p> <p>ENV/FLNRORD recommend that this condition should also prohibit use of the material for areas outside the project footprint and, specifically, prohibit use in areas for habitat offsetting activities.</p> <p>Suggested Edit:</p> <p>"Proponent shall not use material dredged from the upper 0.5 meters of the existing tug basin and tug basin expansion as fill for land development for the Designated Project, nor for habitat offsetting activities outside the project footprint, unless..."</p>	<p>The port authority notes that material dredged from the upper 0.5 m of the existing tug basin and tug basin expansion is not proposed to be used as fill in any offsetting projects.</p>

³ Available at https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-objectives/fraser_river_from_hope_to_sturgeon_and_roberts_banks.pdf.

⁴ Available at <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/water-quality-guidelines>.

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BC ENV & FLNRORD - 8	6.10 – Marine Environment	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, measures to mitigate the release of sediments to the water column during dredging activities, taking into account the <i>Fraser River Estuary Management Program Dredge Management Guidelines</i> . As part of these measures, the Proponent shall:	<p>FLNRORD recommendation from July 2021 not addressed in current Federal Conditions:</p> <p>FLNRORD not included for consultation in this program.</p> <p>B.C.'s water quality objectives and guidelines should be referenced in the parent condition.</p> <p>Suggested Edit:</p> <p>The Proponent shall develop, prior to construction and in consultation...and in collaboration with the B.C. Ministries of Forests, Lands and Natural Resource Operations and Environment and Climate Change Strategy measures to mitigate...".</p> <p>Recommend:</p> <p>"taking into account the Fraser River Estuary Management Program Dredge Management Guidelines, Fraser River Water Quality Assessment and Objectives, provincial Water Quality Guidelines and other resources."</p>	<p>The port authority notes that it is willing to consult with FLNRORD and ENV in relation to the measures contemplated in this condition but note that certain measures will or may be specified by DFO in any <i>Fisheries Act</i> Authorization that may be issued in respect of the project.</p> <p>Please refer to BC ENV & FLNRORD-6 above for the port authority's response regarding the Fraser River objectives. These objectives are not relevant to the project or to this condition. The addition of reference to the Fraser River objectives therefore would reduce the clarity of this condition; for this reason, the port authority does not recommend a change to this draft condition.</p> <p>The port authority further notes that the term "... and other resources" should not be added to any condition due to vagueness.</p>
BC ENV & FLNRORD - 9	6.10 table C2 – Marine Environment	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, measures to mitigate the release of sediments to the water column during dredging activities, taking into account the <i>Fraser River Estuary Management Program Dredge Management Guidelines</i> . As part of these measures, the Proponent shall:	<p>Federal Panel Review 2020 document Table Appendix G Table C2 does not address the information in (a) other than mentioning grain size.</p> <p>Suggested Edit:</p> <p>the following sampling within the Roberts Bank WMA</p> <p>a. Prior and ongoing sediment cores sampling to ~1 m depth for (i) sediment grain size analysis and (ii) Cs-137 and Pb-210 dating analysis to let us know how sedimentation has changed over time and specifically, determine changes in sedimentation rates and patterns post construction</p> <p>Recommend</p> <ul style="list-style-type: none"> • Core sample location and frequency of sampling to be determined in consultation with FLNRORD and included on the final monitoring plan • All samples to be provided and results of analyses be forwarded to the FLNRORD biologists 	<p>The port authority notes that draft condition 6.11, as drafted, would already require consultation with FLNRORD with respect to the development of the Coastal Geomorphic Process Evaluation and Associated Effects Prediction follow-up program element, outlined in Table C2 of Appendix G of the review panel report (CIAR #2062).</p> <p>As explained in the port authority's feedback on draft condition 6.11.3 in Appendix 3.2-A of this submission, sediment coring is not intended to be used to evaluate changes in sedimentation rates or patterns due to the project. (See also our response to ENV/FLNRORD's comments on draft condition 6.11.3 below.)</p> <p>The port authority notes that, consistent with draft condition 2.5.1, specific follow-up program details related to methodology, location, and frequency of monitoring in relation to sedimentation would be determined during the development of the follow-up program element, in consultation with FLNRORD and other specified parties. It would be premature to specify these details in the condition, as that would pre-empt the multi-party consultative development of the follow-up program element contemplated by the condition.</p> <p>The port authority notes that draft condition 2.5 already would require the determination of the scope, content, and frequency of reporting of the results of the follow-up program element during development of the follow-up program in consultation with the specified parties, here including FLNRORD. Further, draft condition 2.8.5 would require reporting of the follow-up program element results to the consulted parties.</p> <p>The port authority notes that it is not practical to provide all samples to FLNRORD. All samples will be provided to and analyzed by an accredited independent laboratory and the results will be shared in accordance with the reporting determined under draft conditions 2.5 and 2.8.5 as noted above. These details will be determined during the development of the follow-up program and no change to the draft condition is recommended by the port authority.</p>

#	Section	Original condition	Comment and suggested revision	Port authority response
BC ENV & FLNRORD - 10	6.10.2 – Marine Environment	establish site-specific water quality objectives and thresholds, including for turbidity and total suspended solids;	<p>Given that the province has jurisdiction in waters in the Fraser River estuary upriver from the shoreline and the bottom under the river channels and under inshore marine waters, except where specified within the VFPA boundaries (2015 Jurisdictional map VRPA), suggest additional references to British Columbia’s legislation, objectives and guidelines.</p> <p>Site-specific water quality objectives already exist for the project area. A monitoring program should be required to be developed by a qualified professional and implemented by the proponent to demonstrate that applicable Fraser River Water Quality Objectives or Provincial Water Quality Guidelines are met (whichever is more current for the parameter being studied).</p> <p>ENV would be happy to engage on an initiative to update the existing site-specific objectives, in collaboration with ECCC.</p> <p>Suggested Edit:</p> <p>‘establish site-specific water quality objectives and thresholds, including for turbidity and total suspended solids and other parameters identified in baseline assessments, and taking into account the Fraser River Estuary Management Program Dredge Management Guidelines⁵, Fraser River Water Quality Assessment and Objectives, and provincial Water Quality Guidelines”.</p>	<p>The port authority understands the intent of this draft condition is to require development of site-specific thresholds for turbidity and TSS because of baseline assessment results. No other parameters were identified as requiring site-specific thresholds during baseline assessments. The suggested addition of “other parameters” would therefore add confusion and remove clarity from this condition and is not supported by the port authority.</p> <p>Site-specific thresholds for TSS and turbidity will be developed based on sensitive receptors present at the project site, high natural background of TSS from the Fraser River input, and oceanographic conditions. See also the port authority’s response to BC ENV & FLNRORD-6 above regarding the need for project- and site-specific TSS and turbidity thresholds.</p> <p>As noted above, in the response to BC ENV & FLNRORD-6, with the exception of TSS and turbidity, the project is not predicted to change the levels of other parameters in the water quality guidelines.</p> <p>Please refer to BC ENV & FLNRORD-6 above for the port authority’s response regarding the Fraser River objectives. These objectives are not relevant to the project or to this condition. The addition of reference to the Fraser River objectives therefore would reduce the clarity of this condition; for this reason, the port authority does not recommend a change to this condition.</p> <p>The port authority would be supportive of consulting with ENV in the development of the measures as specified in draft condition 10.2 and sub-conditions.</p>
BC ENV & FLNRORD - 11	6.11 – Marine Environment	The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Fisheries and Oceans Canada, Natural Resources Canada, British Columbia’s Ministry of Forests, Lands, Natural Resource Operations and Rural Development and Indigenous groups, a follow-up program as described in Table C2 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to sediment erosion and deposition and any associated eutrophication. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	<p>Given the provincial jurisdiction noted previously, interested parties to be consulted for FUP development should include the BC Ministry of Environment and Climate Change.</p> <p>The current 2.5 Follow-up requirements, reference information in six sub-conditions (2.5.1 through 2.5.6). The condition 2.5.4 references environmental change relative to baseline caused by the Designated Project, but does not describe the characterization of the baseline, nor reference aquatic habitats outside the project footprint.</p> <p>The effects of concern include all environmental effects of sediment erosion and deposition. ENV previously recommended adding "contaminant concentration increases" associated with sediment deposition in addition to nutrient enrichment, but this concern has not been addressed.</p> <p>Potential adverse effects that must be monitored, avoided, and mitigated include physical smothering of benthic habitats by solids and contaminant release into the water column and sediment where elevated levels may adversely affect aquatic life directly or through bioaccumulation.</p> <p>Suggested Edit:</p> <p>Recommend</p>	<p>The port authority is willing to consult with ENV with respect to the development of this follow-up program element.</p> <p>The port authority notes that the “prior characterization” of the existing (baseline) conditions was already completed during the environmental assessment. That information will be used to inform follow-up program development.</p> <p>The port authority also notes that the potential for pollution (“contaminant concentration increases”) would already be addressed through draft condition 6.8, which would require consideration of the potential for marine pollution. To include it here would be duplicative.</p>

⁵ [Dredge Management Guidelines \(2005\)](#)

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			<p>“and in consultation with Fisheries and Oceans Canada, Natural Resources Canada, British Columbia’s Ministry of Forests, Lands, Natural Resource Operations and Rural Development and British Columbia’s Ministry of Environment and Climate Change Strategy...”</p> <p>Recommend</p> <p>“... including prior characterization of baseline sedimentation sampling and analyses, to inform the follow- up program (FUP) measures to avoid impacts, including to offset aquatic habitats outside the project footprint”.</p> <p>“...to verify the accuracy of the environmental assessment as it pertains to sediment erosion and deposition and any associated eutrophication or contaminant concentration increases.</p>	
BC ENV & FLNRORD - 12	6.11.3 – Marine Environment	collect sediment cores in relevant locations surrounding the Designated Project area prior to construction and for at least 10 years following the end of construction to determine changes in sedimentation rates and patterns; and	<p>ENV recommendation from July 2021 not fully addressed in current Federal Conditions:</p> <p>The only historical analyses mentioned in document are with respect to archeological and heritage sites.</p> <p>The parent condition 6.11 requires a follow-up program (FUP) to be developed in consultation with parties listed in the parent condition and as described in the Table C2 Appendix G in Federal Review Panel Report. FUP is ideally informed by prior characterization of baseline sedimentation analyses to inform measures for offset aquatic habitats outside the project footprint.</p> <p>Suggested Edit:</p> <p>Recommend prior characterization of baseline sedimentation sampling and analyses, to inform the follow-up program (FUP) measures to avoid impacts including offset aquatic habitats outside the project footprint.</p> <p>Recommend annual sampling and analysis of sediment core samples to approximately 1 m depth on the Roberts Bank foreshore (including Westham Island and Brunswick Point) and the Wildlife Management Area managed by FLNRORD, using informed by prior characterization of baseline sedimentation sampling and analyses, to inform measures for offset aquatic habitats outside the project footprint.”</p> <p>Recommended considerations for FUP development:</p> <p>using sediment grain size analysis and Cs-137 and Pb-210 dating analysis to:</p> <ul style="list-style-type: none"> (i) determine historical rates and patterns of sedimentation, (ii) inform aquatic habitat impact avoidance planning, (iii) take proactive measures to facilitate ecological resilience to climate change by the existing aquatic ecosystems in the estuary, (iv) evaluate the effects of past port development on local sedimentation, (v) model the anticipated effect on sedimentation by the proposed port development, 	<p>As noted above in response to BC ENV & FLNRORD-11, the “prior characterization” of the existing (baseline) conditions was already completed during the environmental assessment. That information will be used to inform follow-up program development.</p> <p>This sub-condition pertains to a follow-up program element to be developed in consultation with the parties specified in the draft parent condition (6.11), which includes FLNRORD. The port authority notes that, consistent with draft condition 2.5.1, specific follow-up program details related to methodology, location, frequency, timing, and duration of monitoring would be determined during the development of the follow-up program element, in consultation with FLNRORD and the other specified parties. It would therefore be premature to specify these details in the condition, as that would preclude these aspects of the follow-up program from being developed in consultation with all the specified parties.</p> <p>We also note that draft condition 6.11 would require this follow-up program to be developed as described in Table C2 of Appendix G in the review panel report (CIAR #2062). That table does reference collection and analysis of sediment grain size.</p> <p>Further, as explained in the port authority’s feedback on draft condition 6.11.3 in Appendix 3.2-A of this submission, sediment coring is not intended to be used to evaluate changes in sedimentation rates or patterns. Rather, changes in sedimentation rates and patterns would be determined mainly through the use of topographic, LiDAR, and bathymetric surveys and ortho-rectified photographs over time.</p> <p>The port authority notes that the purpose of this follow-up program element is to verify the predicted effects of the project and, if necessary, to implement measures to address project effects. The purpose of the follow-up program element is not to assess or mitigate the effects of past port development or sea level rise. The port authority looks forward to consultation with FLNRORD and the other specified parties to develop this follow-up program element with appropriate focus on project effects, consistent with the key principles outlined in Section 3.1 of this submission.</p>

#	Section	Original condition	Comment and suggested revision	Port authority response
			<p>(vi) inform metrics for assessing sedimentation by the proposed port development, and</p> <p>(vii) assess the capacity of these intertidal and subtidal ecosystems to persist with sea-level rise.</p>	<p>The port authority also notes that habitat offsetting projects follow a separate and thorough permitting process, which will consider sediment contaminants in offsetting areas as appropriate.</p>
BC ENV & FLNRORD - 13	6.11.4 - Marine Environment	verify the predictions of the environmental assessment regarding eutrophication by monitoring changes in organic enrichment indicators including on tidal flats.	<p>ENV recommendations from July 2021 not addressed in current Federal Conditions: in addition to organic enrichment, increases in contaminant concentration associated with sediment deposition outside the project footprint.</p> <p>Condition should make specific reference to existing B.C. guidance: site specific water quality objectives for the Fraser River from Hope to Sturgeon and Roberts Bank, and B.C. water quality guidelines.</p> <p>A trigger response plan should be required as part of the monitoring program on water and sediment quality and biological monitoring to be developed by a qualified professional and implemented by the proponent to respond and resolve poor water quality conditions that may arise. This should include specific threshold (triggers) and the additional monitoring and/or mitigation measures that will be taken if the triggers are reached.</p> <p>The trigger response plan must address the potential physical smothering of benthic habitats by solids and contaminant release into the water column and sediment where elevated levels may adversely affect aquatic life directly or through bioaccumulation. If the Roberts Bank Wildlife Management Area within the zone of influence of a supernatant discharge, then monitoring should be required.</p> <p>Suggested Edit:</p> <p>Recommend:</p> <p>Establish site-specific water quality objectives and thresholds, including for turbidity, total suspended solids, and other identified water quality parameters (as identified in the assessment for condition 6.8).</p> <p>Recommend adding “changes in organic enrichment and sediment contaminant indicators such as metals, PCBs and other contaminants of concern identified during the development of the follow-up program, including in offset aquatic habitats outside the project footprint.”</p> <p>“verify the predictions of the environmental assessment regarding eutrophication, including monitoring of tidal flats to detect changes in organic enrichment and sediment contaminant indicators such as metals, PCBs and other contaminants of concern, including on tidal flats and in offset aquatic habitats outside the project footprint”</p> <p>Make reference to B.C.’s water sediment quality guidelines⁶ and the Fraser River Water Quality Objectives⁷.</p>	<p>This follow-up program element is intended to verify effects predictions on project-related changes to geomorphic processes and sediment erosion and deposition (and not sediment contaminant levels). Consistent with draft condition 2.5, the parameters to be monitored would be determined during the development of the follow-up program, in consultation with the parties specified in the draft parent condition 6.11, which includes FLNRORD.</p> <p>Further, pursuant to draft condition 2.5.4, the development of this follow-up program element would also include identifying “the levels of environmental change relative to baseline that are caused by the Designated Project and that would require the Proponent to implement modified or additional mitigation measure(s),” and pursuant to draft condition 2.5.5, identifying feasible mitigation measures that would be implemented if needed based on the monitoring results. These requirements already constitute a “trigger response plan” as suggested by ENV.</p> <p>The port authority also notes that the potential for pollution (other contaminants) would already be addressed through draft condition 6.8. To include it here would be duplicative.</p> <p>Further, as noted in the port authority’s response to BC ENV & FLNRORD-6, with the exception of TSS and turbidity, the project is not predicted to change the levels of other parameters in the water quality guidelines. Also, as noted in the response to BC ENV & FLNRORD-10 above, no other parameters were identified as requiring site-specific thresholds during baseline assessments. The suggested addition of other parameters would therefore add confusion and remove clarity from this condition and is not supported by the port authority.</p> <p>The port authority also notes that offsetting projects follow a separate and thorough permitting process, which will consider sediment contaminants in offsetting areas as appropriate.</p> <p>Please refer to BC ENV & FLNRORD-6 above for the port authority’s response regarding the Fraser River objectives. These objectives are not relevant to the project or to this condition. The addition of reference to the Fraser River objectives therefore would reduce the clarity of this condition and is not supported by the port authority.</p>
BC ENV & FLNRORD - 14	7.10 – Fish and fish habitat	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping),	With the revision of previous condition 7.10 from October 22, 2020, current condition 7.10, dated Nov 18, 2021, does not address the	As noted by the review panel, sturgeon are unlikely to be adversely affected by the project: “due to the small overlap of the Project with the distribution of sturgeon, the Panel concludes that it is unlikely that the

⁶ Available at [Ambient Water Quality Guidelines - Province of British Columbia \(gov.bc.ca\)](https://www2.gov.bc.ca/gov2/amb/water/water_quality/water_quality_guidelines.htm)

⁷ Available at [Fraser River from Hope to Sturgeon and Roberts Banks.pdf \(gov.bc.ca\)](https://www2.gov.bc.ca/gov2/amb/water/water_quality/water_quality_guidelines.htm); objectives are included for sediment for a number of parameters.

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		<p>Indigenous groups (Fraser River), and relevant authorities, and implement measures during construction dredging activities to avoid or mitigate effects to marine fish and fish habitat, including:</p>	<p>FLNRORD Recommendations to the Review Panel dated Nov 25, 2019.</p> <p>FLNRORD Recommendations to Review Panel Nov 25, 2019</p> <ul style="list-style-type: none"> • Potential effects on white and green sturgeon: eulachon is included due to close interaction between the two species • Offsetting for likely impacts to sturgeon habitats and individuals would be warranted and should include, but not be limited to: <ul style="list-style-type: none"> o Ultra high-resolution side scan sonar assessments of the project and surrounding area during expected high and low use periods both pre and post construction; <p>Support for fixed acoustic telemetry monitoring station deploy at the project area to monitor for tagged sturgeon or other tagged fish use...</p> <p>Suggested Edit:</p> <p>Recommend:</p> <p>FLNRORD be consulted in the preparation of evaluations on impacts to sturgeon and eulachon as well as the use of suggested in 7.10.1, 7.10.2 and 7.10.3 of the following suggested revisions:</p> <p>FLNRORD requests that draft condition 7.10 be updated with the following suggested revisions:</p> <p>7.10 Prior to construction and in consultation with Indigenous Groups, Fisheries and Oceans Canada and British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD), the proponent shall;</p> <p>7.10.1 Build on recent and ongoing work related to eulachon and sturgeon in the lower Fraser River; and</p> <p>7.10.2 Evaluate the potential for the disruption of eulachon migration caused by the Designated Project; and</p> <p>7.10.3 Implement, during dredging in March and April, and prior to and during dredging in the dredge basin, hydroacoustic monitoring to detect eulachon in real-time and, where technically and economically feasible, stop dredging activities or guide dredging activities away from eulachon; and</p> <p>7.10.4 Identify, based on the results of the evaluation referred to in 7.10.2, additional technically and economically feasible measures to mitigate potential adverse effects from the construction and operation of the Designated Project on eulachon and sturgeon for at least a five-year period from the beginning of the date of construction; and</p> <p>7.10.5 Implement the technically and economically feasible mitigation measures identified and provide these measures to the Agency, DFO and FNRORD prior to implementing them.</p>	<p>Project would cause an adverse effect on sturgeon” (CIAR #2062, p.188). Therefore, mitigation measures for direct effects on sturgeon are not required and follow-up program monitoring of predicted effects or effectiveness of mitigation measures is not warranted for sturgeon and should not be reflected in the conditions. Separate from the project, the port authority has been supporting juvenile sturgeon habitat use studies in the lower Fraser River for a number of years, and in addition has provided funding to FLNRORD for white sturgeon baseline monitoring.</p> <p>The potential effect of the project on eulachon (a prey species for sturgeon) is limited to the potential interactions with dredging and underwater noise during construction and underwater noise and light during operation. Measures to mitigate these potential effects, the development of which will include consultation with Indigenous groups and relevant authorities, are already included in the draft conditions, notably draft conditions 7.10.2 (dredging), 5.1 (light), and numerous conditions related to underwater noise.</p> <p>Further, as stated in the port authority’s closing remarks to the review panel, “the VFPA has proposed mitigation measures for Pacific herring and surf smelt that will also benefit migrating eulachon. These measures include a fisheries sensitive window for gravid Dungeness crab that has been incorporated into the Project construction schedule, which will also protect migrating eulachon in February and March. (The port authority notes that dredging is not proposed to occur in March, due to the restrictive in-water timing window for crab, which ends on March 31.) Outside this timing window, the VFPA will manage potential effects to eulachon through the implementation of environmental management plans, including water quality compliance monitoring and underwater noise monitoring that will maintain water quality and underwater noise below levels that may injure fish” (CIAR #2045, pp.172-173).</p> <p>These measures are expected to effectively mitigate any potential effects of the project on eulachon. The port authority is willing to consult with FLNRORD, as well as DFO and other specified parties, in the development of these measures.</p> <p>The potential for project-related disruption of eulachon migration was evaluated and described in the port authority’s closing submission to the review panel (CIAR #2045). No mechanism was identified that would result in disruption to eulachon migration. The project (footprint) will not obstruct access or block the migratory corridor that leads to the river mouth. As stated in the closing remarks, “with the Project, the migratory pathway of adult eulachon transiting through the estuary to reach upriver spawning grounds will remain unobstructed. Adult eulachon undertake lengthy migrations from their marine feeding grounds off the west coast of Vancouver Island to their spawning grounds in the lower Fraser River, navigating through inlets and around islands. The new terminal and widened causeway do not create a challenge to migration; adult eulachon, should they encounter the terminal, will swim past it, as they do past the many varied natural and artificial features they encounter as they migrate through marine and freshwater environments” (CIAR #2045, p.172). Further, eulachon are distributed throughout the Strait of Georgia (well beyond the project footprint) when staging and before ascending the river; it is unlikely that any change in eulachon abundance or movement could be attributed to the project.</p>

#	Section	Original condition	Comment and suggested revision	Port authority response
BC ENV & FLNRORD - 15	7.10 – Fish and fish habitat	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River), and relevant authorities, and implement measures during construction dredging activities to avoid or mitigate effects to marine fish and fish habitat, including:	<p>The Condition does not address the FLNRORD Response to Federal Review Panel Report, Appendix H, March 27, 2020: Potential Recommendation 26.</p> <p>FLNRORD Response to Appendix H, [Potential] Recommendation 26</p> <ul style="list-style-type: none"> • <i>FLNRORD recommends that any evaluation of the potential disruption to eulachon migration employ hydroacoustic technologies beyond the dredging and construction phase.</i> <p>Suggested Edit:</p> <p>Recommend:</p> <p>FLNRORD be consulted on the ongoing monitoring of potential adverse effects beyond the construction and into the operational phase of the project as described in 7.10.4 above.</p>	<p>See comments on BC ENV & FLNRORD-14 above.</p> <p>During project operation, predicted effects to eulachon are limited to underwater noise and light. Mitigation has been proposed to reduce these effects and is already reflected in draft conditions, including draft condition 5.1 and numerous conditions pertaining to underwater noise. These measures would be developed in consultation with Indigenous groups and relevant authorities. The conditions also would require follow-up program elements for light (draft condition 5.2) and underwater noise (draft condition 8.9) that will be implemented to verify mitigation effectiveness.</p> <p>As previously noted, the port authority is willing to consult with FLNRORD, as well as DFO and other specified parties, in the development of appropriate mitigation measures for eulachon.</p>
BC ENV & FLNRORD - 16	7.10 – Fish and fish habitat	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River), and relevant authorities, and implement measures during construction dredging activities to avoid or mitigate effects to marine fish and fish habitat, including:	<p>The Condition does not empower FLNRORD to meet their mandate to adequately protect, monitor and mitigate project impacts to sturgeon and eulachon.</p> <p>Suggested Edit:</p> <p>Recommend:</p> <p>FLNRORD be named as an Agency the proponent must consult when preparing evaluation, mitigation, implementation and monitoring of potential adverse impacts. This is outlined in 7.10above.</p>	<p>See comments on BC ENV & FLNRORD-14 above.</p> <p>As previously noted, in the development of appropriate mitigation measures for eulachon, the port authority is willing to consult with FLNRORD, as well as DFO, Indigenous groups, and other specified parties, in accordance with the requirements of the conditions.</p>
BC ENV & FLNRORD - 17	7.12 – Fish and fish habitat	The Proponent shall, for any fish habitat offsetting measure proposed in any offsetting plan referred to in condition 7.11 that may cause adverse environmental effects not considered in the environmental assessment, develop and implement, prior to construction, following consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River) and relevant authorities, measures to mitigate those effects. The Proponent shall submit these measures to the Agency prior to implementing them.	<p>ENV recommendation from July 2021 not addressed in current Federal Conditions:</p> <p>Request baseline ecosystem analyses on the Roberts Bank foreshore and the areas adjacent to the Designated Project, including the Wildlife Management Area, prior to construction, and prior to the development of the Offsetting Plan (7.11), the Wetland Compensation Plan 9.2), and the Marine Vegetation FUP (7.15).</p> <p>Suggested Edit:</p> <p>Recommend:</p> <p>“ecosystem analyses on the Roberts Bank foreshore and the areas adjacent to the Designated Project be completed prior to construction to inform planning and implementation for water quality and aquatic habitat impact avoidance and mitigation options, and inform ongoing monitoring, remediation support, and compensatory work.”</p> <p>Recommend:</p> <p>“ecosystem baseline of the tidal marsh extent, composition, and elevation throughout the Brunswick Point and Tsawwassen tidal marshes be established by mapping with high-resolution multispectral imagery to:</p> <ul style="list-style-type: none"> (i) compare historical states of the marshes, (ii) predict future changes to the marsh that may result from port expansion and sea-level rise, 	<p>A baseline ecosystems analysis was already completed during the environmental assessment for both the RBT2 project footprint and the surrounding area (local assessment area) of the project, which included portions of the Roberts Bank Wildlife Management Area near Canoe Passage and encompassed the entire area within which project effects are predicted to occur.</p> <p>In brief, the baseline ecosystem analysis consisted of comprehensive studies (including data collection on water and sediment quality, vegetation, sediment movement/wave action, aquatic biota, and wildlife) to characterize and develop a model of the ecosystem, which was then used to predict project effects.</p> <p>The baseline information previously developed has already informed and will continue to inform the development of the offsetting plan that would be required by draft condition 7.11, including the draft offsetting plan provided in IR2020-1.2 (CIAR #2083), the wetland compensation plan that would be required by draft condition 9.2, and the marine vegetation follow-up program element that would be required by draft condition 7.15.</p> <p>Further, these plans and follow-up program element will continue to be developed in consultation with the specified parties and in accordance with the requirements of draft condition 2.5.</p> <p>The port authority notes that these plans and follow-up program element are and should remain focused on the potential effects of the project, consistent with the key principles outlined in Section 3.1 of this submission. The purpose of the follow-up program element</p>

#	Section	Original condition	Comment and suggested revision	Port authority response
			<p>(iii) assess aquatic habitat impact avoidance and mitigation, and (iv) inform adaptive management for resilient aquatic ecosystems.”</p>	<p>contemplated by this draft condition is not to assess or mitigate the effects of other past or future development (other than the project itself) or sea level rise. The port authority looks forward to consultation with FLNRORD and the other specified parties to develop this follow-up program element with appropriate focus on project effects.</p>
<p>BC ENV & FLNRORD - 18</p>	<p>9.2 – Terrestrial Vegetation and Wetlands</p>	<p>The Proponent shall develop, prior to construction, and in consultation with Environment and Climate Change Canada, British Columbia’s Ministry of Forests, Lands, Natural Resource Operations and Rural Development, and Indigenous groups, a wetland compensation plan, which shall consider the principles outlined in Environment and Climate Change Canada’s <i>Operational Framework for Conservation Allowances</i> and meet the objective of no net loss of the Federal Policy on <i>Wetland Conservation on Federal Lands</i> (Government of Canada, 1991), and include measures to compensate for residual adverse environmental effects on wetland functions caused by the Designated Project that cannot be avoided or minimized and that are not already accounted for as part of the offsetting plan(s) required pursuant to condition 7.11. The Proponent shall begin implementing the compensation plan during construction. As part of the implementation of the compensation plan, the Proponent shall:</p>	<p>Request for Wildlife Management Area Baseline Study on Tidal Marsh:</p> <p>FLNRORD requests the Agency to add a sub condition of parent condition 9.2 to add the requirement for the proponent to collaborate with FLNRORD to establish a baseline for the extent of tidal marsh within the WMA prior to construction to monitor any changes in the WMA tidal marsh.</p> <p>The monitoring plan should include:</p> <ul style="list-style-type: none"> -High-resolution multispectral imagery of the tidal marshes to map marsh extent, vegetation community composition, and elevation. Such data can be collected by drones equipped with a multispectral camera and lidar unit to Brunswick Point. -Ground truthing of imagery results. -Imagery location and frequency of sampling to be determined in consultation with FLNRORD and included on the final monitoring plan. <p>Suggested Edit:</p> <p>Recommend addition:</p> <p>9.2.x Determine the extent of tidal marsh within the Roberts Bank Wildlife Management Area prior to construction through imagery, assessment of vegetation community composition and elevation.</p>	<p>See response to BC ENV & FLNRORD-17 above.</p> <p>As previously noted, the baseline ecosystems analysis already completed during the environmental assessment included portions of the Roberts Bank Wildlife Management Area near Canoe Passage and encompassed the entire area within which project effects are predicted to occur.</p> <p>Further, the port authority notes that draft condition 9.2.2 already would require the delineation of all wetland habitat that would be lost as a result of the project. For this reason, the port authority does not recommend a change to this draft condition.</p>

Table 4 – Response to comments of B.C. Ministry of Indigenous Relations and Reconciliation

Received on March 14, 2022. [Link: CIAR #3218](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
BC MIRR-1	Page 5 Potential Conditions	N/A	<p>“They do not relieve the Proponent from any obligation to comply with other legislative or other legal requirements of the federal, provincial, or local governments.”</p> <p>I believe it is worthwhile to note that the proponent is also not relieved from any obligation to comply with Treaty Nation laws, in this case, Tsawwassen First Nation Laws and laws of the five Maa-nulth First Nations. It also should not relieve the proponent of any obligations to comply with Treaty Nation rights.</p> <p>Suggested Edit: “They do not relieve the Proponent from any obligation to comply with other legislative or other legal requirements of the federal, provincial, local or Treaty Nation governments.”</p> <p>Or something similar.</p>	<p>The port authority notes that the suggested edit is not applicable because the Designated Project does not use Tsawwassen First Nation Lands or Maa-nulth First Nations Lands.</p> <p>Treaty Nation governments have authority to make laws relating to the lands named in the respective Treaty. The Treaty Nation owns the lands. For Tsawwassen, the Treaty describes the lands as Tsawwassen Lands. For the five Maa-nulth First Nations, the treaty describes the lands as Maa-nulth First Nation Lands. The project does not use either of the Treaty Nation lands.</p>
BC MIRR- 2	2.4.1 – General Conditions	discuss with each Indigenous group, Indigenous group (marine shipping), and Indigenous group (Fraser river) separately whether it is interested in being consulted on the condition(s) where indicated. The Proponent shall revisit this every year with each Indigenous group, Indigenous group (marine shipping), and/or Indigenous group (Fraser river) and only conduct consultation requirements referred to in condition 2.3 for the condition(s) of interest to each Indigenous group, Indigenous group (marine shipping), and/or Indigenous group (Fraser river);	<p>Fraser river should be Fraser River This error occurs in several sections in the document and should be corrected in all.</p> <p>Suggested Edit: 2.4.1 discuss with each Indigenous group (marine shipping), and Indigenous group (Fraser River) separately whether it is interested in being consulted</p>	<p>The port authority has also noted this typographical error in its feedback in Appendix 3.2-A of this submission.</p>
BC MIRR-3	9.4 - Terrestrial Vegetation and Wetlands	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, Natural Resources Canada, British Columbia’s Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Tsawwassen First Nation, Musqueam, and other Indigenous groups, a follow-up program to determine the effectiveness of the wetland compensation plan referred to in condition 9.2, and verify the accuracy of the environmental assessment as it pertains to the effects of the Designated Project on wetlands. The Proponent shall consider the implementation of the offsetting conducted pursuant to condition 7.11 and associated follow-up program when implementing the follow-up program and shall implement it in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	<p>Lists “Tsawwassen First Nation, Musqueam, and other Indigenous groups” even though those two Nations are already in the definition of “Indigenous groups” on page 2. Why is it necessary to list them specifically? I see this in later parts, too (Section 12)</p> <p>Suggested Edit: Suggest that terms and phrases that are defined in the document are used consistently and without unnecessary redundancies so confusion or misinterpretation can be avoided.</p>	<p>The port authority has provided suggestions to improve clarity and consistency of references to Indigenous groups throughout the draft conditions in Appendix 3.2-A of this submission.</p>

Table 5 – Response to comments of B.C. Ministry of Health

Received on March 14, 2022. [Link: CIAR #3218](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
BC MoH-1	13 – Health and Socio-economic conditions		Satisfied with the Health and Socio-economic conditions (i.e., 13.1 to 13.8), except for the addition requested below for Condition 13.1.	No comment
BC MoH-2	3.6.3 - Air Quality and Greenhouse Gas Emissions	monitor, during construction, criteria air contaminants and trace organic contaminants determined for the construction phase pursuant to condition 3.6.1 at existing air quality monitoring stations operated by Metro Vancouver and at additional air quality monitoring station(s) in locations potentially affected by the construction of the marine terminal, the widened causeway, and the expanded tug basin, as determined in consultation with the parties involved in the development of the follow-up program;	Recommend the placement of additional air quality monitoring station(s) consider sensitive/vulnerable populations (e.g., located on Tsawwassen First Nation lands, which may also help address the substantive health-related air quality concerns that have been raised by the Tsawwassen First Nation in the Impact on Rights Assessment). Also recommend that the placement of additional air quality monitoring station(s) consider potential public health concerns with air quality (e.g., at the Tsawwassen Ferry terminal). Suggested Edit: This comment is for consideration during the development of the follow-up program, rather than the conditions (no edits to condition needed).	The port authority will consider this comment during the development of the follow-up program, as indicated. The port authority is currently engaged in discussions with Tsawwassen First Nation on the placement of air quality monitoring.
BC MoH-3	3.6.4 - Air Quality and Greenhouse Gas Emissions	monitor, during operation, criteria air contaminants and trace organic contaminants determined for the operation phase pursuant to condition 3.6.1 at existing air quality monitoring stations operated by Metro Vancouver and at additional air quality monitoring station(s) in locations potentially affected by the operation of the marine terminal, the widened causeway, and the expanded tug basin, as determined in consultation with the parties involved in the development of the follow-up program;	Recommend the placement of additional air quality monitoring station(s) consider sensitive/vulnerable populations (e.g., located on Tsawwassen First Nation lands, which may also help address the substantive health-related air quality concerns that have been raised by the Tsawwassen First Nation in the Impact on Rights Assessment). Also recommend that the placement of additional air quality monitoring station(s) consider potential public health concerns with air quality (e.g., at the Tsawwassen Ferry terminal). Suggested Edit: This comment is for consideration during the development of the follow-up program, rather than the conditions (no edits to condition needed).	The port authority will consider this comment during the development of the follow-up program.
BC MoH- 4	3.6.6 – Air Quality and Greenhouse Gas Emissions	for any exceedance determined pursuant to condition 3.6.5 to be attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, develop and implement modified or additional measures to mitigate air quality emissions, which may include reduction or cessation of one or more construction activities; and	This condition should include a requirement for a trigger/notification system during poor air quality events that informs people in the affected area(s) of the precautions they may need to take to protect their health (e.g., shut windows). This could be similar to health messaging distributed through B.C.'s Air Quality Health Index. Suggested Edit: "...which may include reduction or cessation of one or more construction activities <u>and notify potentially affected individuals of poor air quality and the actions to take to reduce exposure.</u> "	The port authority notes that the retrieval and analysis of monitoring data from air quality monitoring stations will not occur in real time. An exceedance of any defined air quality threshold would need to be evaluated to determine whether the exceedance was attributable to the project, and then, if a project-attributed exceedance is confirmed and the project activities contributing to the exceedance are expected to continue, modified or additional measures to mitigate air quality emissions from the project would be developed and implemented, in accordance with this draft condition. As the air quality monitoring stations relied upon for the air quality monitoring program will likely be within the Metro Vancouver network, it is assumed that any applicable real-time notification system implemented by Metro Vancouver for poor air quality, regardless of the source, would apply here as well.
BC MoH-5	13.1 – Health and Socio-economic conditions	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Health Canada, British Columbia's Ministry of Health, Fraser Health Authority and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the effects of the	This condition does not indicate it shall be developed to the satisfaction of a qualified individual/professional, as stated for several other conditions. Recommend this is added to Condition 13.1. Suggested Edit: "The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Health Canada, British Columbia's Ministry of Health, Fraser Health Authority, other relevant	The port authority has no concerns with this suggested revision.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on Indigenous health related to the quality and consumption of marine traditional food. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	authorities, and to the satisfaction of a qualified individual/professional, a follow-up program...”	

Table 6 – Response to comments of B.C. Ministry of Agriculture, Food and Fisheries

Received on March 14, 2022. [Link: CIAR #3218](#)

#	Section	Original condition	Suggested amendment	Port authority response
BC MOAFF-1	13.8 & 13.7 – Health and Socio-economic conditions	<p>13.8 – The Proponent shall participate in any regional initiative related to the prevention, monitoring and compensation of any adverse environmental effect attributable to the Designated Project on Agricultural Land Reserve properties located adjacent to the Designated Project area.</p> <p>13.7 - The Proponent shall evaluate the feasibility of implementing land use options related to or in support of agriculture, for portions of the land referred as Lot 3 in the Vancouver Fraser Port Authority’s 2018 Approved Land Use Plan Amendments that are not required for Designated Project components or activities. The Proponent shall provide the Agency with the results of the evaluation, provide a reasonable justification for options determined not economically or technically feasible, and implement technically and economically feasible land use options related to or in support of agriculture.</p>	<p>AFF staff note that the conditions still do not require that the project proponent commission a study regarding agricultural impacts on nearby agricultural properties. The condition remains limited in scope to adjacent properties only and is still reliant on other actors to initiate such work.</p> <p>As mentioned in our past comments, AFF staff recommend that the project proponent be required to conduct a study to identify potential impacts to agriculture in the immediate and surrounding areas. We also continue to recommend the completion of an agricultural impact assessment which identifies ways to prevent and mitigate impacts to agriculture. Such a study had also been requested by local agriculture representatives due to concerns with fragmentation of farmland, increased traffic, and loss of farmland by uses accessory to the project. It is important that the study also consider agricultural lands beyond adjacent properties that may be impacted by truck traffic and other potential impacts.</p>	<p>The review panel considered the proponent’s environmental assessment of agriculture (EIS Section 26.6, CIAR #181), and concluded that the project is predicted to affect only a very small area of port land (0.2 acres) that is currently leased for agricultural use. The review panel acknowledges that the land acquired by the port authority was land owned by the BC Railway Company and already dedicated as a railway right-of-way. The review panel concluded that the project effect due to the loss of a small portion of land within the Agricultural Land Reserve would not be significant.</p> <p>The draft conditions include requirements for the port authority to evaluate the feasibility of and implement feasible land use options related to or in support of agriculture, and to participate, at the request of a relevant authority, in any regional initiative related to managing project-related effects on adjacent Agricultural Land Reserve properties. These measures are appropriate and commensurate with the predicted project effect.</p> <p>The port authority further notes that the potential effects of traffic on agricultural land users have also been assessed. The assessments of air quality (EIS Section 9.2), noise and vibration (EIS Section 9.3), and human health (EIS Section 27) considered potential effects of project activities (including road and rail traffic on the causeway) on permanent receptors in upland areas including agricultural land (CIAR #181). The cumulative effects assessments for these three assessments also considered potential effects of project-associated road and rail traffic beyond the east end of the causeway. (CIAR #412)</p> <p>The environmental assessment has thus already considered all potential effects of the project on agricultural lands, including the project’s contribution to cumulative effects, as appropriate, in the local assessment area and regional assessment area. Those effects were considered regardless of where they would occur (i.e., the assessment was not limited to adjacent properties only, but the effects on agricultural land were nevertheless found to be limited in extent). No further assessment of project effects, including the project’s contribution to cumulative effects, on agricultural lands is warranted.</p> <p>The port authority notes that the scope of the project for the purpose of environmental assessment, both federally and provincially, does not include road or rail transportation outside of the area for which the port authority has jurisdiction or “uses accessory to the project.”</p> <p>Agricultural land matters are properly addressed through a regional approach to agricultural land management led by other relevant authorities.</p>

Table 7 – Response to comments of Metro Vancouver

Received on March 8, 2022. [Link: CIAR #3025](#)

#	Section	Original condition	Suggested amendment	Port authority response
MV-1	General	N/A	A complete review of any proximal impacts to Metro Vancouver's infrastructure must be done within the full boundary of the overall Project and any activities (marine dredging, excavation, preloading, pilings, large equipment, etc.).	The port authority notes that the potential effects of the project on Metro Vancouver's infrastructure were already assessed during the environmental assessment. Specifically, the assessment of potential effects on the valued component, services and infrastructure (EIS Section 23), considered potential effects on existing infrastructure, while the assessment of potential effects on the valued component, land and water use (EIS Section 26), considered potential effects on all adjacent users (CIAR #181). No further review is warranted.
MV -2	General	N/A	Potable water service to the Roberts Bank Terminal 2 Project is provided by long water mains. This type of service is prone to pressure transients, or water hammer, reflecting from the Project back to the service system. Metro Vancouver requires that the proposed development study water hammer and implement sufficient protective measures such as water storage on site, smooth introduction of water flows and avoidance of rapid changes in pressure and flow caused by activities such as valve closure.	The port authority notes that it is standard practice to consider and address issues related to pressure transients, or water hammer, during detailed design and the port authority confirms that it will require the contractor to do so through contract documentation. If further assurance is required, the port authority suggests the following new condition: <i>"The Proponent shall ensure the design of the water supply system for the Designated Project incorporates measures to mitigate potential water hammer effects."</i>
MV -3	General	N/A	Metro Vancouver is in agreement with Recommendation 70 from the Federal Review Panel Report for the Roberts Bank Terminal 2 Project, that the Government of Canada undertake regional environmental assessments for the Fraser River Estuary and the Salish Sea. Recommendation 70 aligns with feedback Metro Vancouver provided to the Government of Canada in 2016 during the Review of Federal Environmental Assessment Processes. Such assessments will support the management of cumulative effects from all projects and activities in this area.	The port authority acknowledges the Government of Canada's draft response to recommendation 70 from the review panel and notes that the draft conditions contemplate the port authority's participation in relevant regional initiatives. The Government of Canada's draft response is contained within the draft Whole of Government Response.
MV -4	6.8, 6.9, 6.10 - Marine Environment 7.4 – Fish and fish habitat	6.8 – The Proponent shall, prior to fill placement, characterize representative samples of all fill material received from an off-site location, including quarry material, Fraser sand, dredged material and other material that may be used as fill, to demonstrate that Designated Project construction activities, including supernatant discharge, will not result in marine pollution as defined in the <i>London Protocol and Convention</i> and according to advice received from Environment and Climate Change Canada during the environmental assessment (Canadian Impact Assessment Registry Reference Number 80054, Document Number 1091) and in pollution as defined in subsection 6(4) of British Columbia's <i>Environmental Management Act</i> and in consideration of the federally <i>Recommended Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey</i> . The Proponent shall not use any materials as fill, where the characterization of representative samples indicates a potential for marine pollution, unless additional mitigation measures, such as the collection of	There is a concern around dredging. The potential conditions document has several references to dredging and presumably using Fraser River dredge sand to expand the area of the Roberts Bank Terminal 2 site. Dredging on the Fraser alters the scour pattern around Metro Vancouver pipe crossings. Please confirm if the proposed project will trigger dredging in the Fraser River and how the scour concerns are being addressed. Further analysis may be required.	The port authority confirms that the project will not trigger any new or additional dredging in the Fraser River. The project will use dredged material produced by the annual Fraser River maintenance dredging program. As noted in the EIS (CIAR #181 , Section 4.4.1.5, p.24), the annual Fraser River maintenance dredging program is not part of the Designated Project; as it is carried out by a third party subject to applicable authorizations.

#	Section	Original condition	Suggested amendment	Port authority response
		<p>supernatants, are implemented to prevent marine pollution.</p> <p>6.9 – The Proponent shall not use material dredged from the upper 0.5 m of the existing tug basin nor the tug basin expansion area as fill for land development for the Designated Project unless the Proponent:</p> <p>6.10 - The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups impacted by the marine terminal, measures to mitigate the release of sediments to the water column during dredging activities in a manner consistent with the Fisheries Act and its regulations and taking into account the Fraser River Estuary Management Program Dredge Management Guidelines. As part of these measures, the Proponent shall:</p> <p>7.4 – The Proponent shall conduct dredging during operation, if required, only within the timing window of least risk for juvenile salmon (August 16 - February 28).</p>		

Table 8 – Response to comments of City of Delta

Received on February 14, 2022. Link: [CIAR #2877](#), with revisions posted on March 9, 2022 [CIAR #3049](#).

#	Section	Original condition	Suggested amendment	Port authority response
City of Delta -3	3.2.4 - Air Quality and Greenhouse Gas Emissions	review the Proponent's existing voluntary and incentive-based greenhouse gas reduction programs, as indicated in Table 7-3 of the Federal Review Panel Report, indicate within each plan whether the existing programs could be improved to include mandatory measures, and apply any applicable mandatory measures to the Designated Project;	<p>Previous staff comment:</p> <p>To more proactively [sic] air quality and noise concerns, Delta has asked that more aggressive measures be taken to accelerate the use of shore power, including more incentives for ships to use shore power and a mandated phasing-in period for the use of shore power similar to those being implemented at ports in California.</p> <p>Updated comment:</p> <p>Reiterate request.</p>	<p>The port authority's response to IR6-19 (CIAR #1113) describes the port-wide programs and initiatives in place, and applicable to RBT2, to encourage the use of shore power. These include the EcoAction program, which offers discounted harbour dues for use of shore power. The port authority's approach to encouraging use of shore power is port-wide, not limited to any single project or terminal.</p> <p>The port authority notes the history of collaboration with City of Delta regard to air quality, as described in Appendix IR6-04, Table IR6-04-A1 (CIAR #1118), which details the discussions and decisions made collaboratively during the Air Quality Scoping Study (2013 to 2015), with Environment and Climate Change Canada, B.C. Environmental Assessment Office, B.C. Ministry of Environment, Metro Vancouver, City of Delta, and Tsawwassen First Nation.</p> <p>The port authority will also be consulting with the City of Delta and the B.C. Ministry of Health (in addition to the parties listed above) in the development of the air quality human health follow-up program (condition 3.6).</p>
City of Delta -6	5.1.7 - Light	implement measures to reduce effects caused by light emitted from the marine terminal on Brunswick Point.	<p>Previous staff comment:</p> <p>At night Brunswick Point will be significantly impacted by terminal lighting; however, no specific mitigation options have been identified by either the proponent or the Agency. Requested clarification on this.</p> <p>Updated comment:</p> <p>Reiterate request.</p>	<p>This sub-condition specifically requires measures to reduce light effects at Brunswick point. These measures will be identified during development of the light management plan, articulated in the parent condition 5.1. The City of Delta is to be consulted in the development of these measures.</p>
City of Delta -7	13.8 - Health and Socio-economic conditions	The Proponent shall participate, at the request of a relevant authority, in any regional initiative related to the prevention, monitoring and compensation of any adverse environmental effect attributable to the Designated Project on Agricultural Land Reserve properties located adjacent to the Designated Project area.	<p>REVISED per CIAR #3049</p> <p>Previous staff comment:</p> <p>Staff is concerned about the vagueness of this condition.</p> <p>Updated comment:</p> <p>Delta remains very concerned that port-related development will increase pressure on agricultural land throughout Delta (not just adjacent to the project). The proponent has stated that the construction of RBT2 will require 2,500 acres of well-located developable industrial land, and that it would consider using agricultural lands as a 'last resort' to accommodate this. Delta requests that the proponent be required to develop an Agricultural Management Plan and an Agriculture Land Offsetting Plan to address RBT2 impacts on agricultural land in Delta (amended March 9, 2022).</p>	<p>In public hearing Undertaking #2 (CIAR #1832), the port authority clarified that the project does not require 2,500 acres (~1,000 ha) of agricultural land. This was a misunderstanding, and the estimate of 2,500 acres appears to relate to land that third parties along the supply chain may require for purposes such as import transload, container stuffing, and empty container storage. Such activities are not part of the RBT2 Project and are not proposed by the port authority.</p> <p>The port authority confirms that the project is predicted to have a potential effect on only a very small portion of agricultural land (0.2 acres), historically and currently used for railway purposes, and designated as a BCRC right of way. This land will be used for a 450 m rail tie-in of a lead track from the causeway to the existing BC Rail network.</p> <p>The review panel concluded that the project's effect on agricultural land use would not be significant.</p> <p>The draft potential conditions already include requirements for the port authority to evaluate the feasibility of and implement feasible land use options related to or in support of agriculture, and to participate, at the request of a relevant authority, in any regional initiative related to managing project-related effects on adjacent Agricultural Land Reserve properties. These measures are appropriate and commensurate with the predicted project effect.</p> <p>The pressure identified by City of Delta on agricultural land in Delta arise from urban, commercial, and industrial development in general, not the project specifically. Such matters are properly addressed through a regional approach to agricultural land management led by other relevant authorities.</p>

Appendix 2.5-A Response to comments of Indigenous groups on draft conditions

Preface

In some submissions during the public comment period, Indigenous groups have included specific suggestions to revise or add to the draft potential conditions. The port authority has reviewed these suggestions to evaluate the technical and economic feasibility of any suggested measures, in addition to considering other relevant factors, such as the key principles that must underlie the conditions, as described in Section 3.1 of this submission. The port authority has provided a response to some of the suggestions by Indigenous groups, in **Tables 1** through **8**, as listed below.

The port authority notes that it has only included in the table below comments from Indigenous groups where the port authority felt a response would be helpful to IAAC. The port authority has not included Indigenous group comments or responses on specific conditions for which the port authority has no comment, or for which the port authority takes no position.

For comments included in the table below (where a response may be helpful to IAAC), the port authority has either: a) provided a specific response; b) indicated the matter is best addressed through ongoing consultation; or c) indicated the matter is for consideration by IAAC, as the Indigenous group comment is not within the port authority's purview to address.

- Table 1 – Response to comments of Tsawwassen First Nation
- Table 2 – Response to comments of Musqueam Indian Band
- Table 3 – Response to comments of Tseil-Waututh Nation
- Table 4 – Response to comments of Pacheedaht First Nation
- Table 5 – Response to comments of Malahat Nation
- Table 6 – Response to comments of Halalt First Nation, Lyackson First Nation, and Cowichan Tribes
- Table 7 – Response to comments of Tsartlip First Nation
- Table 8 – Response to comments of S'ólh Téméxw Stewardship Alliance

Table 1 – Response to comments of Tsawwassen First Nation

Posted March 15, 2022. [CIAR #3502](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
TFN-1	12.3 - Current use of lands and resources for traditional purposes	[The Agency is considering additional conditions regarding mitigating effects of the project on current use of lands and resources for traditional purposes commensurate with the proponent's predictions regarding container vessel traffic]	TFN, Musqueam Indian Band and the VFPA have proposed updated language for draft proposed project condition number 12.3 by way of a separate letter.	The suggested revisions and additions to the draft conditions in part 12, as appended to the March 15, 2022 letter to IAAC from Tsawwassen First Nation (TFN), Musqueam Indian Band, and the port authority referenced in TFN's comment, are also provided in Appendix 3.2-A of the port authority's submission.
TFN-2	7.1 & 7.2 – Fish and fish habitat	<p>7.1 - The Proponent shall investigate the technical and economic feasibility of a causeway breach to allow fish passage. The Proponent shall provide a draft of the feasibility report to Indigenous groups, Fisheries and Oceans Canada, Environment and Climate Change Canada, and tenants at Roberts Bank and provide each with at least 60 days to comment. The Proponent shall provide the Agency with the final feasibility report within six months of the issuance of the Minister's decision statement describing whether and under what conditions a causeway breach would be technically and economically feasible and shall include a description of the feedback received during the consultation on the draft feasibility report.</p> <p>7.2 - The Proponent shall install and maintain a breach to allow fish passage through either the existing and proposed widened areas of the causeway, if determined feasible pursuant to condition 7.1, or at the east end of the marine terminal identified on figure IR2020-2.2-1 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall determine to the satisfaction of Fisheries and Oceans Canada which breach location to implement if both are technically and economically feasible.</p>	In addition to the foregoing, TFN has identified the need for further discussion regarding the draft proposed conditions relating to a causeway breach, particularly the draft proposed condition relating to the location of such a breach (draft conditions 7.1 and 7.2). If the Project is approved, it is essential that Project conditions and/or Crown commitments are in place that ensure the best interests of salmon conservation. Salmon conservation calls for potentially two 'breaches': one between the existing and proposed terminal pads (i.e., to mitigate the impacts of the RBT2 project on fish movement), and one along the causeway (i.e., to mitigate for past damage and cumulative effects caused by causeway and terminal construction). TFN notes that this approach would also serve the interests of biofilm habitat (including any biofilm creation projects in the intercauseway area) and the range of biophysical benefits that could flow from that.	<p>The port authority agrees that further dialogue regarding potential conditions pertaining to a breach for fish passage would be valuable, in light of the diversity of views expressed during the public comment period, and that this further dialogue take place following the close of the public comment period and prior to the preparation of the final set of conditions.</p> <p>The port authority agrees with TFN's characterization of the marine terminal breach as mitigation for the potential effects of the project on juvenile salmon migration. As noted by the port authority in the response to IR2020-2.1 and elsewhere in this submission (Section 2.4.1 and 2.4.2), the port authority is not proposing a causeway breach to mitigate project effects; rather, the implementation of a causeway breach instead of a marine terminal breach would be a public policy decision to choose to mitigate existing impacts of the existing causeway, which should be made by government, and would require additional feasibility discussion as part of the further dialogue, as required by draft conditions 7.1 and 7.2. The port authority notes that these draft conditions would require the port authority to implement the marine terminal breach if a causeway breach is determined to be not feasible.</p>
TFN-3	7.3 - Fish and fish habitat	<p>7.3 - The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River) and Fisheries and Oceans Canada, measures to avoid and mitigate adverse environmental effects of the Designated Project on marine species during in-water work activities during construction. The Proponent shall implement the mitigation measures during construction. As part of the measures, the Proponent shall:</p> <p>7.3.2 – validate every two years that the timing windows of least risk referred to in</p>	TFN suggests that 7.3.2 and 7.3.3 could be improved by adding additional clarity. For 7.3.2, this would entail clarifying that validation would be based on annual sampling. For 7.3.3, this would entail clarifying that the sampling should include the footprint area. In addition, TFN would appreciate further dialogue regarding 7.3 before it is finalized.	<p>Please see Appendix 3.2-A of the port authority's submission; the port authority notes that it recommends the removal of draft condition 7.3.2 and revisions to parent condition 7.3 and sub-condition 7.3.3 for the reasons given in the rationale in Appendix 3.2-A.</p> <p>The port authority agrees that further dialogue regarding this potential condition would be valuable, and that this further dialogue take place following the close of the public comment period and prior to the preparation of the final set of conditions.</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>condition 7.3.1 are appropriate considering the environmental conditions at the time;</p> <p>7.3.3 – monitor for spawning herring presence during in-water work activities conducted outside the timing window of least risk for juvenile salmon and in mid to late February, in areas that spatially overlap with herring spawning habitats, and use this information to inform the development and implementation of additional mitigation measures; and</p> <p>7.3.4 - determine the means, timing, frequency and location(s) of monitoring in condition 7.3.3.</p>		
TFN-4	7.11 - Fish and fish habitat	<p>7.11 – The Proponent shall develop, prior to construction, as required by Fisheries and Oceans Canada for authorization under the <i>Fisheries Act</i>, and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River), Environment and Climate Change Canada and British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, any offsetting plan(s) related to the alteration, destruction or disturbance of fish habitat, and death of fish associated with the carrying out of the Designated Project based on the draft offsetting plan (IR2020-1.2, Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall implement the plan(s) during construction and operation. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation. The plan shall include:</p> <p>7.11.1 – a description of anticipated losses of fish and fish habitat remaining after avoidance, reduction, and other mitigation measures have been implemented;</p> <p>7.11.2 – a description of the amount and type of offsets required and the selection of offsetting sites, including consideration of Indigenous priorities;</p> <p>7.11.3 – an assessment of the projected benefits of the offsetting measures, using more than one approach;</p> <p>7.11.4 – a description of how potential eutrophication, anoxia and changes in water drainage have been considered in</p>	<p>TFN sees an opportunity to more directly reference the TFN Offsetting Vision that we have shared with the Agency and that is referenced in the engagement principles that TFN and the VFPA collaboratively developed. We would like to further discuss ways to incorporate elements of the TFN Offsetting Vision as we see that as an exciting opportunity for the draft proposed conditions.</p>	<p>The port authority acknowledges the submission of TFN regarding this draft condition and notes that the port authority and TFN have collaborated and continue to collaborate on the development of the offsetting plan, including consideration of TFN's Offsetting Vision.</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		the design of the offsetting measures; and 7.11.5 - offsetting measures to compensate for effects to fish and fish habitat remaining after avoidance, reduction, and other mitigation measures have been implemented.		

Table 2 – Response to comments of Musqueam Indian Band

Posted March 15, 2022. [CIAR #3340](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
MIB-1	12.3 - Current use of lands and resources for traditional purposes	[The Agency is considering additional conditions regarding mitigating effects of the project on current use of lands and resources for traditional purposes commensurate with the proponent's predictions regarding container vessel traffic]	Current use follow-up program in relation to incidental marine shipping – Musqueam is collaborating with the Port Authority on the development of a marine shipping follow-up programs for the current use of lands and resources for traditional purposes (“current use”) in relation to the Project. Additional information on the proposal is provided in the joint letter Musqueam, Tsawwassen First Nation (“Tsawwassen”), and the Port Authority are submitting to the Impact Assessment Agency of Canada (IAAC) with respect to federal draft condition 12.3 on the Project. The proposed language represents a commitment to jointly implementing follow-up programs that reflect Musqueam’s interests.	The suggested revisions and additions to the draft conditions in part 12, as appended to the March 15, 2022 letter to IAAC from TFN, Musqueam Indian Band (Musqueam), and the port authority referenced in Musqueam’s comment, are also provided in Appendix 3.2-A of the port authority’s submission.

Table 3 – Response to comments of Tsleil-Waututh Nation

Posted March 15, 2022. [CIAR #3500](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
TWN-1	1.20 - Definitions	<i>Heritage value</i> means the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations.	1.20 TWN acknowledges this new addition, however, heritage values are also defined through political, emotional, and moral meanings attached to specific events, places, objects, or social practices. Please update to reflect other values in this definition.	The port authority notes that the definition of “heritage value” included in the draft condition is a standard definition used by federal agencies with a heritage mandate (e.g., Parks Canada’s Cultural Resource Management Policy) ¹ and considers the definition as drafted by IAAC provides clarity and consistency.
TWN-2	1.35 - Definitions	<i>Pre-construction survey</i> means any physical activity that is carried out by the Proponent for the purpose of gathering data to establish existing environmental conditions prior to the commencement of construction, other than any physical activity carried out in relation to a follow-up program that is a requirement of a condition set out in this document or any physical activity required by any other condition set out in this document.	1.35 Pre-construction shouldn't be limited to preliminary studies. Other activities such as geotechnical investigations, site preparation and pre-construction test programs should also consider a monitoring plan. Please update this definition to include other pre-construction activities.	The port authority notes that geotechnical investigations would be captured by this definition, as the purpose of geotechnical investigations would be to establish existing environmental—specifically, geotechnical—conditions. For greater certainty and clarity, the term “physical” could be added to the condition, e.g., “...for the purpose of gathering data to establish existing <i>physical</i> and environmental conditions...”. The port authority notes that “site preparation” is included in the definition of construction in draft condition 1.3. No other pre-construction “test programs” are anticipated that would not already be captured in either this definition or the definition of construction.
TWN-3	3.2.4 - Air Quality and Greenhouse Gas Emissions	review the Proponent’s existing voluntary and incentive-based greenhouse gas reduction programs, as indicated in Table 7-3 of the Federal Review Panel Report, indicate within each plan whether the existing programs could be improved to include mandatory measures, and apply any applicable mandatory measures to the Designated Project;	3.2.4 Please provide rationale as to why this condition 3.2.3 was removed? <i>Implement continual improvement in GHG emissions to not restrict achievement of regional/provincial targets.</i> Indicating whether existing programs “could be improved” does not ensure that these will include mandatory measures that align with Prov or Federal targets.	This is a clarification matter to be considered by IAAC.
TWN-4	7.6 – Fish and fish habitat	The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a Dungeness crab (<i>Cancer magister</i>) salvage program. The Proponent shall develop the program prior to construction and shall implement it prior to the commencement of any in-water work activity that has the potential to cause direct mortality of crab, including dredging. As part of the development of the program, the Proponent shall conduct a test to evaluate the use of baiting as a means to relocate crabs and minimize crab handling. If the Proponent concludes that the use of baiting is not an effective means to relocate crabs and minimize crab handling, the Proponent shall implement alternative salvage protocols.	7.6 TWN would like clarification on what the 'alternative salvage protocols' are before the project is approved.	The port authority clarifies that, if the baiting method to relocate Dungeness crab were found to be not feasible as a salvage method, the port authority would employ traditional salvage methods involving baited traps to relocate crabs in adjacent areas of Roberts Bank outside the project footprint.
TWN-5	7.10 - Fish and fish habitat	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River), and relevant	7.10 Please provide rationale as to why original conditions/measures were removed (7.8 to 7.10.4) re: studies and measures for pacific salmon, additional studies and mitigation measures for eulachon and sturgeon.	This is a clarification matter to be considered by IAAC. Please also refer to the correspondence regarding the previous draft condition 7.10 submitted to IAAC jointly by TFN, Musqueam, and the port

¹ Cultural Resource Management Policy - <https://www.pc.gc.ca/en/docs/pc/poli/grc-crm#grc-crm5>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		authorities, and implement measures during construction dredging activities to avoid or mitigate effects to marine fish and fish habitat, including:		authority (CIAR #3499), which explains the intent of the port authority's commitment upon which draft condition 7.10 had been based.
TWN-6	7.17 - Fish and fish habitat	The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in rockfish and lingcod (<i>Ophiodon elongates</i>) productivity as a result of the Designated Project, including to evaluate the accuracy of the Roberts Bank ecosystem model forecasts. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.	7.17 TWN acknowledges the addition to the FUP to include changes in rockfish and lingcod (<i>Ophiodon elongates</i>) productivity. What parameters will be used to assess changes on these species productivity?	The port authority notes that the parameters that would be used to verify the accuracy of the environmental assessment for these species would be determined during the development of this follow-up program element in accordance with draft condition 2.5, in consultation with Indigenous groups, including Tsleil-Waututh Nation.
TWN-7	8.2 – Marine Mammals	The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups and Indigenous groups (marine shipping), a marine mammal detection and response plan to reduce adverse effects to marine mammals caused by construction, consistent with any Fisheries and Oceans authorization under the <i>Fisheries Act</i> . The Proponent shall implement the plan during all in-water work activities during construction that pose a risk to marine mammals, and have a qualified professional oversee the implementation of the plan. As part of the marine mammal detection and response plan, the Proponent shall:	<p>Condition 8.2 includes a Marine mammals detection and response plan. However, TWN would like to understand the rationale for removing the original conditions from 8.2 to 8.4:</p> <ul style="list-style-type: none"> - Measures to mitigate effects on SRKW; No net increase in underwater noise and vessel strikes. - Marine shipping FUP (Was this replaced with a SRKW management plan?) - Monitor number, capacity, route, and underwater noise of containerships calling on Port of Vancouver - Include issue resolution section with Indigenous Groups. - Additional measures to mitigate/offset effects of marine shipping on marine mammals and current use. - Implement ECHO program. - Report annually on compliance of vessels with voluntary measures. 	The port authority is suggesting extensive revisions and additions to the marine mammal draft conditions in part 8 and to the draft conditions in part 12 that relate to current use of lands and resources for traditional purposes. Those suggested revisions and additions address the matters listed by Tsleil-Waututh Nation. Please see Appendix 3.2-A of this submission for details.
TWN-8	8.6 - Marine Mammals	The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada, Canadian Coast Guard, Pacific Pilotage Authority, and other relevant authorities, procedures to delay, where necessary, the daytime departure of container vessels calling on the Designated Project to mitigate effects to Southern Resident Killer Whale (<i>Orcinus orca</i>). The procedures shall include communication protocols, monitoring and criteria for determining whale presence, and safety and regulatory requirements. As part of the development of the procedures, the Proponent shall take into account the potential impacts of the implementation of the criteria and procedures on the Proponent's tenants and users of the Proponent's facilities at Roberts Bank.	<p>8.6 Please provide rationale as to why procedures to delay are only including daytime departure of container vessels calling on RBT2. What is the procedure for night-time departures?</p> <p>The previous condition included measures to mitigate effects to current use of lands and resources (12.2 moved to 8.6). As written now, it only addresses underwater noise and associated effects to SRKW. TWN requests that this condition also addresses the development and implementation of a follow-up program (in consultation with Indigenous groups) as it relates to their current use of lands and resources for traditional purposes.</p>	<p>In its response to IR2020-3, the port authority evaluated delaying night-time departure and determined it to be not feasible (CIAR #2083). The port authority acknowledges DFO's recommendation to further explore the feasibility of measures to avoid or reduce the exposure of southern resident killer whales (SRKW) to underwater noise at night in the vicinity of the marine terminal during project operation (CIAR #2407, p.44). The port authority notes that further work would be required to confirm whether the measures identified by DFO are feasible prior to their implementation. For these reasons, the port authority is suggesting a new condition to further evaluate night-time departure; please see Appendix 3.2-A of this submission for details.</p> <p>The port authority also notes that it is suggesting extensive revisions and additions to the conditions in part 12 that relate to current use of lands and resources for traditional purposes. Please see Appendix 3.2-A of this submission for details.</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
TWN-9	N/A	N/A	<p>Following our discussion on July 28, 2021, the port authority suggested the following revisions:</p> <p>8.3.4.1 “conduct analysis of incremental potential effects resulting from the exceedance of predicted container ships traffic calling on the Port of Vancouver and monitored pursuant to condition 8.3.1 on marine mammals and current use of lands and resources for traditional purposes; and”</p> <p>8.3.4.2.3 additional measures to mitigate, including offset, the effects of marine shipping on marine mammals and current use of lands and resources for traditional purposes.</p> <p>Are these captured in other sections?</p>	<p>The port authority is suggesting extensive revisions and additions to the marine mammal draft conditions in part 8 and to the draft conditions in part 12 that relate to current use of lands and resources for traditional purposes. Those suggested revisions and additions address the matters identified in this comment by Tsleil-Waututh Nation. Please see Appendix 3.2-A of this submission for details.</p>
TWN-10	9.2.5 – Terrestrial Vegetation and Wetlands	take into account time lags, technical limitations, and uncertainty when meeting the objective of no net loss as per the Federal Policy on <i>Wetland Conservation on Federal Lands</i> (Government of Canada, 1991);	<p>9.2.5 TWN would expect the Port to include net gain in its objectives. TWN requests that a Net increase in habitat, function, and productivity is reflected in the conditions (and definitions section). Following the Federal Policy on Wetland Conservation from 1991 is not acceptable. TWN strives for net gain and expects the Proponent to do the same, given that there has already been region-wide systemic losses of wetland functions. Please update this condition.</p>	<p>As per draft condition 9.2.1, the wetland compensation plan will be founded on the project’s Fish and Fish Habitat Offsetting Plan (draft condition 7.11). The proposed Fish and Fish Habitat Offsetting Plan is comprised, in part, of wetland enhancement, restoration, and creation (i.e., intertidal marsh and native eelgrass habitats), as described in IR2020-1.2 (CIAR #2083).</p> <p>The port authority will meet the Federal Policy’s wetland conservation objective of no net loss of wetland function. In the case of ecological function, the port authority expects the wetland compensation plan (draft condition 9.2) to achieve a net gain in primary productivity (a key wetland function that supports ecosystem processes and promotes biological diversity), even after taking into account time lags, technical limitations, and uncertainty. The net gain in primary productivity of intertidal marsh and native eelgrass is noted in Appendix IR2020-1.2-A (CIAR #2083).</p>
TWN-11	12.1 – Current use of lands and resources for traditional purposes	The Proponent shall allow access to closure area(s), including navigational closure area(s) that are within the care and control of the Proponent, for the purpose of Indigenous harvesting of crab for domestic or food, social and ceremonial purposes, to the extent that such access is safe. In doing so, the Proponent shall:	<p>12.1 The offshore area near Tsawwassen is also an important fishing and bird hunting spot for TWN members.</p> <p>TWN requests that the use of this area for cultural practices is also captured in the condition.</p>	<p>The matter of access to the navigational closure area(s) in relation to current use of lands and resources for traditional purposes is specific to project-related effects on Indigenous groups who harvest Dungeness crab in the vicinity of the navigational closure area(s). The condition as drafted is appropriately focused on that project effect and is consistent with the key principles outlined in Section 3.1 of this submission.</p>
TWN-12	12.3 - Current use of lands and resources for traditional purposes	[The Agency is considering additional conditions regarding mitigating effects of the project on current use of lands and resources for traditional purposes commensurate with the proponent’s predictions regarding container vessel traffic]	<p>12.3 Please provide further information on the 'additional conditions'. TWN reiterates that Consultation should occur with Indigenous groups should marine vessel traffic exceed predictions. This condition should apply to effects on CULRTP but also to the environment, including SRKW.</p>	<p>The port authority is suggesting extensive revisions and additions to the marine mammal draft conditions in part 8 and to the draft conditions in part 12 that relate to current use of lands and resources for traditional purposes. Those suggested revisions and additions address the matters identified in this comment by Tsleil-Waututh Nation. Please see Appendix 3.2-A of this submission for details.</p>
TWN-13	12.4 - Current use of lands and resources for traditional purposes	The Proponent shall develop, prior to construction, and implement, throughout the first eight years of operation, a follow-up program in consultation with Tsawwassen First Nation, Musqueam, and other Indigenous groups as it relates to their current use of lands and resources for traditional purposes. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to	<p>12.4 What is the rationale for this time frame? 8 years may not be enough for a project that will be fully operating in the next 20 years. TWN requests this FUP is extended to adequately address changes and impacts on the current use of lands and resources for traditional purposes. Monitoring should be adaptive and FUPs should only end if they have been observed to be in a steady state.</p>	<p>The port authority is supportive of maintaining the timeframe of eight years as a minimum requirement for implementation during operation, and notes that the end point for the follow-up program will be determined in consultation with listed parties in the development of the follow-up program, pursuant to draft condition 2.5.6.</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		2.9. As part of the development of the follow-up program, the Proponent shall identify:		
TWN-14	13.1 – Health and Socio-economic conditions	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Health Canada, British Columbia's Ministry of Health, Fraser Health Authority and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the effects of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on Indigenous health related to the quality and consumption of marine traditional food. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	13.1 TWN requests that a health follow-up program also addresses resource availability, in terms of the 'quantity' of marine traditional food that is (or will be) available for harvesting. Please update.	The port authority has noted in its rationale for a proposed change to draft condition 13.1.4 that the requirement to gather information regarding levels and patterns of harvesting and consumption of marine traditional foods would be appropriately addressed through the follow-up program related to current use of land and resources for traditional purposes. Please see Appendix 3.2-A for the port authority's comments on and suggested revisions to the draft sub-condition 12.4 in this regard. The suggested revisions address the matters identified in this comment by Tsleil-Waututh Nation.
TWN-15			The health section is limited to harvesting resources in relation to food consumption. TWN is not confident that the draft conditions, as presented, describe any measure to address and mitigate the adverse effects of marine shipping in Tsleil-Waututh's ability to practice their culture, and therefore to protect the health of its members. As expressed in several meeting, Cultural health is not only limited to harvesting traditional foods, but also the connection to cultural heritage (sometimes intangible) and other sacred places.	The port authority is suggesting extensive revisions and additions to the draft conditions in part 12 that relate to current use of lands and resources for traditional purposes, including a follow-up program element that is specific to marine shipping incidental to the project. There are also measures that have been, are being, and will be implemented by the Government of Canada that pertain to harvesting, cultural practices, and cultural heritage in the marine shipping area that are outlined in the draft Whole of Government Response (#40 and #46). The responsibility for mitigating the effects of existing and ongoing commercial vessel traffic in the marine shipping area lies with the Government of Canada. The revisions and additions suggested by the port authority (in Appendix 3.2-A) and the Government of Canada measures address the matters identified in this comment by Tsleil-Waututh Nation regarding cultural health.
TWN-16	14.1 – Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance	The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and other Indigenous groups, and to the satisfaction of a qualified professional, and implement a plan to conduct an inventory of fish trap stakes across the eastern end of the causeway expansion area within the area of moderate archaeological potential indicated by the Proponent on figure 8 of Appendix 28-A of the environmental impact statement. If the Proponent encounters any fish trap stakes during the inventory, it shall expand excavation towards the existing causeway. The Proponent shall implement the procedures developed pursuant to condition 14.3 when encountering any fish trap stake.	14.1 TWN is interested in the rationale for replacing the previous 'Cultural and Archaeological Management Plan' with a 'Physical Heritage Resource Management Plan'. As written, the plan focuses on conducting an inventory of fish trap stakes and physical heritage resources, it may not capture other archeological resources that are linked to the broader spectrum of Cultural Heritage.	This is a clarification matter to be considered by IAAC.

Table 4 – Response to comments of Pacheedaht First Nation

Posted March 16, 2022. [CIAR #3358](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
PFN-1	11.1 – Communication Plan	The Proponent shall develop, prior to construction and in consultation Indigenous groups, relevant authorities, and commercial and recreational marine users (including the Area I Crab Fisherman Association and the Lower Fraser Sport Fishing Advisory Committee), a communication plan. The Proponent shall implement the plan during construction and operation. The plan shall include measures applicable to each phase of the Designated Project to provide up-to-date information to Indigenous groups and commercial and recreational marine users about activities related to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin that may adversely affect access within the local assessment area for land and water use indicated on figure 26-1 of the environmental impact statement. As part of the plan, the Proponent shall include the following:	It is expected that vessels associated with the Project will have serious impacts on Pacheedaht’s ability to safely access their marine territory for cultural uses and to exercise their Aboriginal rights and title. The requirement that the Proponent prepare a communication plan must also include the Indigenous groups impacted by marine shipping rather than being restricted to the terminal. We note that communication plans have limited effectiveness in mitigating impacts to Pacheedaht’s ability to safely access their marine territory because they put the onus on individual Pacheedaht fishers and harvesters to get out of the way in order to avoid a potential collision with vessels associated with the Project. This results in maximum disruption of fishing and harvesting activities, as well as risks to human safety and gear as Pacheedaht members have to try to quickly pull up their gear and move their vessels.	<p>The port authority notes that the communication plan referred to in this condition pertains to activities associated with the construction and operation of the marine terminal, widened causeway, and expanded tug basin, not operations within the marine shipping area.</p> <p>The port authority is suggesting extensive revisions and additions to the draft conditions in part 12 that relate to current use of lands and resources for traditional purposes, including a follow-up program element that is specific to marine shipping incidental to the project.</p> <p>There are also measures that have been, are being, and will be implemented by the Government of Canada that pertain to harvesting and other cultural uses in the marine shipping area that are outlined in the draft Whole of Government Response (#40 and #46). As noted in Section 2.2 of this submission, the responsibility for mitigating the effects of existing and ongoing commercial vessel traffic in the marine shipping area lies with the Government of Canada.</p> <p>The revisions and additions suggested by the port authority (in Appendix 3.2-A of this submission) and the Government of Canada measures address the matters identified in this comment by Pacheedaht First Nation.</p>
PFN-2	12.3 – Current use of lands and resources for traditional purposes	[The Agency is considering additional conditions regarding mitigating effects of the project on current use of lands and resources for traditional purposes commensurate with the proponent’s predictions regarding container vessel traffic]	<p>In terms of the Agency’s consideration of additional conditions regarding mitigating effects of the Project on the current use of lands and resources from marine shipping, Pacheedaht can confirm that the likelihood of the vessels interrupting Pacheedaht fishers and harvesters is high. The frequency of existing shipping traffic is so high as to make it practically impossible for Pacheedaht fishers and harvesters to schedule their activities to avoid vessels even if this schedule were known to Pacheedaht fishers. At a minimum, the Conditions should include the following requirement relating to avoiding impacts to current use from vessels associated with the Project in the shipping lanes:</p> <p>a) Prior to construction, the Proponent shall consult with regulatory authorities and Indigenous groups (marine shipping) to develop and implement a program that facilitates safe harvesting in the marine shipping area, including at Swiftsure Bank.</p> <p>b) The Proponent shall carry out follow-up programs to determine the effectiveness of the safe harvesting program.</p> <p>c) Mandatory speed reductions for vessels need to be imposed on container vessels calling on the Project in order to reduce the impacts of vessel traffic on current use of lands and resources, including safety risks and loss of equipment and gear.</p>	<p>There are measures that have been, are being, and will be implemented by the Government of Canada that pertain to safe harvesting in the marine shipping area that are outlined in the draft Whole of Government Response (#40). As noted in Section 2.2 of this submission, the responsibility for mitigating the effects of existing and ongoing commercial vessel traffic in the marine shipping area lies with the Government of Canada.</p> <p>The port authority is suggesting extensive revisions and additions to the draft conditions in part 12 that relate to current use of lands and resources for traditional purposes, including a follow-up program element that is specific to marine shipping incidental to the project (refer to Appendix 3.2-A of this submission for details).</p> <p>With respect to speed reductions, the port authority notes that it does not have the authority to impose such measures on its own. That authority lies with Transport Canada and, to the extent the Government of Canada decides that mandatory speed reductions are warranted, that measure should be addressed in the Whole of Government Response, not the conditions imposed on the proponent.</p>
PFN-3	19 – Accidents and malfunctions		Additional safety requirements and mitigation measures are required in order to reduce impacts to Pacheedaht fishers, including at Swiftsure Bank which the Review Panel found was the most likely area for an interaction with a large vessel associated with the Project. Please include the following in the Conditions:	The port authority notes that tug and tethering requirements for vessels calling at the Port of Vancouver are specified by the Pacific Pilotage Authority and would not be restricted to container vessels calling at RBT2. In any case, to do so would create an unfair and uncompetitive constraint on RBT2 relative to other container terminals. Further, the port authority notes that the addition of tug escort to all container vessels

#	Section	Original condition	Comment and suggested amendment	Port authority response
			<p>a) A requirement that tankers be tethered by enhanced tug escorts while travelling the open waters adjacent to the southwestern shore of Vancouver Island through the Strait of Juan de Fuca to the J Buoy.</p> <p>b) A requirement that the Proponent fund additional emergency responses resources dedicated to the area around the J Buoy (an area of known increased risk) including for the marine safety centre at Port Renfrew, in order to enhance the marine emergency response regime capability, including response time.</p>	<p>transiting the marine shipping area would likely increase underwater noise associated with those transits, resulting in increased adverse effects on SRKW. This is further noted in Section 2.4.5 of this submission.</p> <p>The port authority has also noted in Section 2.4.5 of this submission that the Government of Canada has responsibility for developing and implementing response plans for accidents and malfunctions. The port authority notes Pacheedaht First Nation and the Canadian Coast Guard continue to advance planning for a co-managed Port Renfrew-based marine emergency response centre, as described in the draft Whole of Government Response. The port authority further notes that draft condition 12.5 would require the port authority to participate in regional initiatives related to effects on current use of lands and resources for traditional purposes as a result of marine shipping incidental to the project. The port authority also continues to consult with Pacheedaht First Nation directly to understand how it can appropriately support on matters related to emergency response.</p>

Table 5 – Response to comments of Malahat Nation

Posted March 15, 2022. [CIAR #3501](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
MN-1	2.3.2 – General Conditions	provide all information available and relevant to the scope and the subject matter of the consultation and a reasonable period of time not less than 30 days, or as otherwise parties agreed upon with the party or parties being consulted, to prepare their views and information;	2.3.2 A consultation period of 30 days is not a reasonable time frame. Indigenous communities continue to feel the impacts of Covid-19, meetings and community consultation are being postponed in order to protect the community and elders. While 30 day may have been the baseline timeframe before, Covid-19 has altered how consultation is carried out and the time period for that should reflect that.	The port authority notes that the draft condition provides for a longer period of time to be agreed upon with the parties being consulted; the port authority anticipates an appropriate time period for Malahat Nation review would be determined through ongoing consultation.
MN-2	3.2.5 – Air Quality and Greenhouse Gas Emissions	establish greenhouse gas emission reduction targets for specific intervals that aim to reduce overall emissions and that take into account how the Proponent plans to implement the technologies and practices in the manner referred to in condition 3.2.2 and any greenhouse gas reduction programs referred to in condition 3.2.4;	3.2.5 What are the repercussions for the proponent if the greenhouse gas emission reduction targets are not met? How will the IAAC ensure that the proponents will reach these targets?	The draft condition requires the proponent to establish greenhouse gas reduction targets, and to implement technologies, practices, and programs to reduce greenhouse gas emissions. Emission reduction targets, unlike regulatory standards, are non-binding limits for environmental quality, and are considered to represent overall goals arising from a policy or plan.

Table 6 – Response to comments of Halalt First Nation, Lyackson First Nation, and Cowichan Tribes

Posted March 14, 2022. [CIAR #3221](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
HFN, LFN & CT -1	1.3 - Definitions	<i>Construction</i> means the phase of the Designated Project during which the Proponent undertakes the site preparation, building or installation of any components of the Designated Project and the decommissioning of temporary infrastructure, including periods during which these activities may temporarily cease.	If this hasn't been done already, we suggest the proponent clarify if any potential maintenance for existing infrastructure would also be used as opportunity for site preparation of the Project as a matter of efficiency and establish clarity for all parties about whether such dual-purpose work should be viewed as substantive construction.	The port authority is not anticipating conducting any maintenance work for existing infrastructure as part of the project.
HFN, LFN & CT -2	1.4 - Definitions	<i>Construction activity</i> means any physical activity that is carried out by the Proponent for the purpose of construction of the Designated Project.	suggest revision to "any physical activity that is carried out at the Project area..."	The port authority notes that the Designated Project area, as defined by draft condition 1.8, is focused on the footprint of the project. Construction activity will occur in the vicinity of the Designated Project area but will not be restricted to the Designated Project area. For example, construction vessels will operate adjacent to but outside of the Designated Project area as defined in draft condition 1.8.
HFN, LFN & CT -4	1.37 - Definitions	<i>Qualified individual</i> means someone who, through education, experience and knowledge relevant to a particular matter, provides the Proponent with advice within their area of expertise. Knowledge relevant to a particular matter may include community and Indigenous knowledge.	Who will determine whether or not the qualified individual's education and background are satisfactory for the matter they have been engaged for? We suggest a stand-alone clause or clarification in Section 1.37 that proponents maintain documentation for Qualified Individuals invoked with statement of qualification.	The port authority would evaluate the qualifications of and retain qualified individuals and will maintain appropriate documentation.
HFN, LFN & CT -6	2.2 - General Conditions	The Proponent shall ensure that its actions in meeting the conditions set out in this document are taken in a way that is consistent with any applicable management plan, recovery strategy and action plan for listed species at risk.	Ambiguity about "applicable" in this condition could get complicated. If this is intended to be specific to terms "Management Plan", "Recovery Strategy", "Action Plan", and "Listed Species at Risk" as defined under the federal Species at Risk Act, then please make that explicit.	The port authority has made a similar suggestion in its feedback to IAAC (January 2021) on the draft conditions provided in October 2020.
HFN, LFN & CT -8	2.3.2 - Consultation	provide all information available and relevant to the scope and the subject matter of the consultation and a reasonable period of time not less than 30 days, or as otherwise parties agreed upon with the party or parties being consulted, to prepare their views and information;	What are the proponent requirements when an Indigenous group requests an extension? Please include these details in the Condition.	The port authority notes that the draft condition provides for a longer period of time to be agreed upon with the parties being consulted; the port authority anticipates an appropriate time period for Indigenous group review would be determined through ongoing consultation.
HFN, LFN & CT -10	2.5.1 - Follow-up requirements	the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program;	Suggest that this list of criteria also include (a) the rationale for those aspects of study design; and (b) where quantitative thresholds are established under Section 2.5.4, a statistical power analysis indicating the likelihood of detecting that threshold. The general concern here is Type 2 error where a threshold is exceeded but the change not detected because the study design was arbitrary.	In response to suggestion (a), the port authority notes that the parent draft condition (2.5) inherently considers the need to describe and provide rationale for the study design, as each follow-up program will be developed in consultation with identified parties. In the case of suggestion (b), the port authority intends to develop robust monitoring programs that will be informed by statistical analyses, such as power analysis, for applicable follow-up programs. However, not all follow-up programs lend themselves to statistical design (e.g., draft condition 14.9) or specifically to a power analysis (e.g., draft condition 5.2). Since the draft condition 2.5.1 applies to all follow-up programs, the port authority notes that

#	Section	Original condition	Comment and suggested amendment	Port authority response
				meeting such a requirement for all follow-up programs would not be feasible. Nevertheless, pursuant to draft condition 2.5, each follow-up program will be developed in consultation with listed parties, providing consulted parties the opportunity to inform and review proposed study designs, including the selection of appropriate threshold levels to reduce the likelihood of a Type 2 error.
HFN, LFN & CT -11	2.5.4 - Follow-up requirements	the levels of environmental change relative to baseline that are caused by the Designated Project and that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities causing the environmental change to be stopped;	This is a significant area of discussion that will likely attract a diversity of cultural views and levels of risk-tolerance. Halalt First Nation expects that the regulators, not the proponent, will play a leadership role in the consultation portion of this Section. The Condition language should reflect this.	This is a clarification matter to be considered by IAAC.
HFN, LFN & CT -12	2.5.4 - Follow-up requirements	the levels of environmental change relative to baseline that are caused by the Designated Project and that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities causing the environmental change to be stopped;	Halalt requests that this condition be written to include a process to revisit these thresholds as new information becomes available through the life of the project, and that Consulted parties be able to trigger that review.	The port authority will consult with identified Indigenous groups and other listed parties for the duration of each follow-up program, which includes consulting on reports and findings. As captured in draft condition 2.10.3, the port authority is required to consider and address views and information received during the consultation on follow-up programs. As such, consulted parties will have the opportunity to request a threshold be revisited as new information is available. Draft condition 2.10.3 also requires the port authority to document consultation feedback and how it was addressed.
HFN, LFN & CT -13	2.5.6 - Follow-up requirements	the specific and measureable end points that must be achieved before the follow-up program can end. Those end points should indicate that the accuracy of the environmental assessment has been verified and/or that the mitigation measures are effective.	This clause is helpful for adaptive management certainty with some monitoring indicators, but biases monitoring to focus on those indicators that are easily measurable. This may lead to rationale to avoid follow-up monitoring that relies more heavily on user perceptions, such as accessibility or holistic aspects of Indigenous rights and culture. We suggest 2.5.6 be revised to allow for either (a) [existing wording], or (b) if a specific and measurable threshold is not expected, a parallel-lines-of- evidence approach that will be interpreted in consultation with affected Parties.	The port authority notes that the parent draft condition (2.5) to this sub-condition specifies that this information must only be determined if it is not already specified in a condition requiring a follow-up program. Please see Appendix 3.2-A for the port authority's comments on and suggested revisions to the sub-conditions to draft condition 12.4 that consider information on current use of lands and resources for traditional purposes that may not be as easily measured, such as user perception around access and quality of experience.
HFN, LFN & CT -15	2.8.4 - Follow-up requirements	if modified or additional mitigation measures are required pursuant to condition 2.8.3, develop and implement these technically and economically feasible mitigation measure(s) as soon as feasible and monitor them pursuant to condition 2.8.2. The Proponent shall notify the Agency within 24 hours of any modified or additional mitigation measure being implemented and provide a detailed description of the measure, if not previously submitted to the Agency, within 7 days; and	If additional or modified measures are required, this implies invocation of adaptive management and so this Condition should also clarify that such outcome would also trigger Condition 2.5.5 (feasible mitigation measures to be implemented if monitoring shows exceedance of thresholds) and Condition 2.7 (updating programs and distribution of updated documents within prescribed timelines).	This is a clarification matter to be considered by IAAC.
HFN, LFN & CT -17	2.17 – Change to the Designated Project	The Proponent shall submit to the Agency any additional information required by the Agency about the proposed change(s) referred to in condition 2.16, which may include the results of consultation with	If consultation by the proponent is not a requirement for a change to the designated project, does the duty to consult on those changes then fall to the federal regulator? Are there types of changes that the regulator thinks would not require consultation? Please provide clarity for this process.	This is a clarification matter to be considered by IAAC.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		Indigenous groups and relevant authorities on the proposed change(s) and environmental effects referred to in condition 2.16.1 and the modified or additional mitigation measures and follow-up requirements referred to in condition 2.16.2.		
HFN, LFN & CT -19	3.4.1 - Air Quality and Greenhouse Gas Emissions	mitigate emissions of dust attributable to the construction of the marine terminal, the widened causeway, and the expanded tug basin, including by:	Please add provisions for water conservation in the event of drought levels applying to the project area to all dust mitigation conditions.	If IAAC decides to revise this draft condition to address water conservation, the port authority considers that a general requirement to “minimize freshwater use where technically and economically feasible” would be feasible and could apply at any time, not limited to periods of drought.
HFN, LFN & CT -20	4.1.5 – Atmospheric Noise and Vibration	install and maintain, to the satisfaction of a qualified professional, acoustic barriers around atmospheric noise-emitting components and activities to shield wildlife and human receptors from noise; and	Please update the Conditions to appropriately reflect the professional organizations of the QP required in order to avoid ambiguity.	The port authority notes there is no one professional body for acoustical consultants that would define them as a qualified professional. There are practitioners well qualified based on their experience who have undergraduate degrees in a variety of sciences.
HFN, LFN & CT -22	6.1 – Marine Environment	The Proponent shall have a qualified professional design the dykes in a manner to avoid channel formation in the seabed and shall construct the dykes according to this design.	Suggest adding to Section 6.1 that the Annual Reports in 2.10, as relevant to the respective stage of the Project will include relevant QP information, measures taken to avoid channel formation and the rationale, reference to monitoring programs relevant to those measures, and as-built construction details of the dykes.	The port authority suggests revisions to this draft condition; please see Appendix 3.2-A of this submission. The port authority notes that the measures would be integrated into the design and construction would be in accordance with the design; annual reporting of measures taken would then not be warranted once the dykes are constructed. As-built construction details would also not need to be reported annually. The port authority has no concern with respect to the suggested reporting of relevant qualified professional information or monitoring.
FN, LFN & CT -23	6.2 - Marine Environment	The Proponent shall construct the northwest corner of the terminal in a manner that reduces the potential for seabed scour and sediment deposition identified on figures IR2020-4-25 and IR2020-4-26 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672).	We were unable to find the two figures cited here on the CIAR Registry. They are not included in Document 141672. Please adjust to a more specific reference (e.g. date, authorship, figure title) and ensure figures are more easily available as reference during future implementation.	This is a clarification matter to be considered by IAAC.
HFN, LFN & CT -24	6.3 - Marine Environment	The Proponent shall not use vibro-replacement techniques for construction of the Designated Project in the marine environment.	Vibro-replacement is not a defined term, nor does the Draft Conditions document include reference to supporting documentation. As a condition with strict prohibition, this should be updated to avoid any ambiguity about applied meaning for this term.	This is a clarification matter to be considered by IAAC.
HFN, LFN & CT -25	6.4 - Marine Environment	The Proponent shall take into account the Canadian Council of Ministers of the Environment’s Water Quality Guidelines for the Protection of Aquatic Life and British Columbia’s <i>Approved Water Quality Guidelines: Aquatic Life, Wildlife and Agriculture</i> when undertaking in-water work activities required for the Designated Project that use concrete, and do so in a manner consistent with the <i>Fisheries Act</i> and its regulations. In doing so, the Proponent shall:	Water quality conditions tied to federal guidelines should clarify process if baseline conditions exceed those guidelines.	The process for baseline exceedances of referenced guidelines is detailed in the CCME (2003) <i>Guidance on the Site-Specific Application of Water Quality Guidelines in Canada; Procedures for Deriving Numerical Water Quality Objectives</i> .

#	Section	Original condition	Comment and suggested amendment	Port authority response
HFN, LFN & CT -26	6.5 - Marine Environment	The Proponent shall develop, prior to the relevant phase of the Designated Project, in consultation with Indigenous groups and to the satisfaction of a qualified professional, measures to control erosion and sedimentation in the Designated Project area, taking into account future climate change scenarios. The Proponent shall implement the measures during all phases of the Designated Project and submit the measures to the Agency prior to implementing them.	The Designated project area also includes incidental marine shipping. Please revise the language in 6.5 and 6.6 to better reflect monitoring points of concern along the marine shipping route like Saturna/Tumbo Islands, where there is high concern for erosion from ship wake. A mitigation and monitoring program for erosion from ship wake may need to be developed separately to address those unique needs.	The port authority notes that the review panel concluded "...ship wake waves from marine shipping associated with the Project would not contribute significantly to shoreline erosion in the marine shipping area beyond erosion caused by existing wind-driven waves" (Federal Review Panel Report, p.127, CIAR #2062).
HFN, LFN & CT -27	6.6 - Marine Environment	The Proponent shall regularly inspect, subject to safety requirements, all erosion and sediment control measures installed within the Designated Project area pursuant to condition 6.5, including during and following rainfall events, and shall document and repair any defective or damaged control measure in a timely manner.	The Designated project area also includes incidental marine shipping. Please revise the language in 6.5 and 6.6 to better reflect monitoring points of concern along the marine shipping route like Saturna/Tumbo Islands, where there is high concern for erosion from ship wake. A mitigation and monitoring program for erosion from ship wake may need to be developed separately to address those unique needs.	Please see preceding response to comment HFN, LFN & CT -26.
HFN, LFN & CT -28	6.8 - Marine Environment	The Proponent shall, prior to fill placement, characterize representative samples of all fill material received from an off-site location, including quarry material, Fraser sand, dredged material and other material that may be used as fill, to demonstrate that Designated Project construction activities, including supernatant discharge, will not result in marine pollution as defined in the <i>London Protocol and Convention</i> and according to advice received from Environment and Climate Change Canada during the environmental assessment (Canadian Impact Assessment Registry Reference Number 80054, Document Number 1091) and in pollution as defined in subsection 6(4) of British Columbia's <i>Environmental Management Act</i> and in consideration of the federally <i>Recommended Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey</i> . The Proponent shall not use any materials as fill, where the characterization of representative samples indicates a potential for marine pollution, unless additional mitigation measures, such as the collection of supernatant, are implemented to prevent marine pollution.	The CIAR is problematic in that there is a master reference number for the project (80054), and then a different use of "Reference Number" (let's call it a sub-reference number) once within that project. In this case, the Condition is actually referring to "CIAR Reference 80054, sub-reference 1091". The document number is 121072, not 1091. These references to outside documents are important - please ensure the documents are available, and that availability will endure if and when the CIAR is reformatted or archived. Appending referenced documents to the Final conditions is recommended.	This is a clarification matter to be considered by IAAC.
HFN, LFN & CT -29	6.9.2.1 - Marine Environment	sediment polychlorinated biphenyl levels in the supernatant do not exceed concentrations protective of Southern Resident Killer Whale (<i>Orcinus orca</i>), including those in the federally	The cited documents lack sufficient attribution for regulatory conditions. Please update to include specific reference (authorship, publication details) and acknowledge that the most recent versions of these documents shall apply to the Project.	This is a matter to be addressed by IAAC.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		Recommended <i>Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey</i> and in the British Columbia's <i>Working Sediment Quality Guidelines</i> , prior to discharge; or		
HFN, LFN & CT -30	6.11 - Marine Environment	The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Fisheries and Oceans Canada, Natural Resources Canada, British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development and Indigenous groups, a follow-up program as described in Table C2 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to sediment erosion and deposition and any associated eutrophication. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	The subsequent subsections should also include reference to erosion monitoring along the marine shipping route, specifically at Saturna/Tumbo Islands	Please see response to HFN, LFN & CT -26.
HFN, LFN & CT -31	6.11.3 - Marine Environment	collect sediment cores in relevant locations surrounding the Designated Project area prior to construction and for at least 10 years following the end of construction to determine changes in sedimentation rates and patterns; and	We suggest this time horizon be qualified: "at least 10 years, subject to extension based on consultation with Indigenous groups on the adequacy of conclusions drawn from that timeframe".	The port authority notes that sediment coring is not intended for the purpose of determining changes in sedimentation rates and patterns from the project. Please see the port authority's comments on this draft condition in Appendix 3.2-A of this submission. The port authority notes that consultation is already specified in the parent draft condition 6.11.
HFN, LFN & CT -32	7.2 – Fish and fish habitat	The Proponent shall install and maintain a breach to allow fish passage through either the existing and proposed widened areas of the causeway, if determined feasible pursuant to condition 7.1, or at the east end of the marine terminal identified on figure IR2020-2.2-1 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall determine to the satisfaction of Fisheries and Oceans Canada which breach location to implement if both are technically and economically feasible.	The proponent indicated that DFO will review and help determine the location of the breach. Indigenous consultation must also occur. Please update this Condition to trigger the Consultation process laid out in Section 2.	The port authority notes that consultation with respect to the feasibility evaluation is already addressed in draft condition 7.1. As noted by the port authority elsewhere in this submission (including Section 2.3.4 and Appendix 3.2-A), the decision to implement a causeway breach would be a public policy decision taken by government. If additional consultation is required in relation to decision-making, the port authority anticipates that would be undertaken by the Crown.

#	Section	Original condition	Comment and suggested amendment	Port authority response
HFN, LFN & CT -33	7.3; 7.3.1.2; 7.3.3 - Fish and fish habitat	<p>7.3 – The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River) and Fisheries and Oceans Canada, measures to avoid and mitigate adverse environmental effects of the Designated Project on marine species during in-water work activities during construction. The Proponent shall implement the mitigation measures during construction. As part of the measures, the Proponent shall:</p> <p>7.3.1.2 – for in-water work activities above -5 metre chart datum, during the timing window of least risk for juvenile salmon (August 16 - February 28), unless otherwise authorized under the <i>Fisheries Act</i>; and</p> <p>7.3.3 - monitor for spawning herring presence during in-water work activities conducted outside the timing window of least risk for juvenile salmon and in mid to late February, in areas that spatially overlap with herring spawning habitats, and use this information to inform the development and implementation of additional mitigation measures; and</p>	<p>Mitigation measures for in-water works that will be implemented during the construction phase should also include post-construction such as, monitoring. Please include.</p> <p>Additionally, no work should be conducted outside the timing window of least risk for juvenile salmon. Is the proponent planning on applying for an authorization under the Fisheries Act to be exempt from this condition? As the draft condition 7.3.2.1 and 7.3.3 indicate this will occur - e.g., "during in-water work activities conducted outside the timing window of least risk for juvenile salmon ". Please provide a rationale with supporting data explaining why in-water work is proposed outside the window of least risk and how impacts to juvenile salmon will be avoided.</p>	<p>The port authority notes that the majority of follow-up programs include post-construction monitoring to verify the accuracy of the effects assessment which considered the effectiveness of mitigation (see Tables C1 through C22 in Appendix G of the Federal Review Panel Report (CIAR #2062)). The following is a list of follow-up programs that will monitor potential effects of in-water works post-construction monitoring, including draft condition number:</p> <ul style="list-style-type: none"> • 6.11 Sediment erosion and deposition • 7.7 Crab nursery habitat • 7.9 Orange sea pen transplant • 7.11 Offsetting • 7.14 Juvenile salmon productivity • 7.15 Marine vegetation • 10.12 Great blue heron • 10.13 Salinity • 10.14 Western sandpiper prey distribution and abundance • 10.17 Diving bird diversity <p>There are no construction activities currently proposed to take place outside of the window of least risk for juvenile salmon within waters shallower than -5 m chart datum. The port authority notes that draft condition 7.3.1.2 refers to exceptions under the <i>Fisheries Act</i> Authorization as reference to potential works that could be completed in the dry (in isolation from marine areas and from juvenile salmon) to proceed outside the window of least risk, as authorized by DFO. Details will be described in documentation of the measures as required in draft condition 7.3.</p>
HFN, LFN & CT -34	7.4 - Fish and fish habitat	The Proponent shall conduct dredging during operation, if required, only within the timing window of least risk for juvenile salmon (August 16 - February 28).	Please elaborate on the proponents commitment to developing and implementing mitigation measures from impacts of dredging on marine species, beyond conducting works within the timing window of least risk for juvenile salmon. We note, Condition 7.3 contains additional measures for dredging however, more are expected. For example, what about the other timing windows of marine species? Will the area be isolated? Will a salvage be conducted for any other species other than Dungeness crab? Will there be a QEP environmental monitor present during all works? Will the CEMP contain a monitoring and maintenance plan specific to dredging? Please update the Condition to provide clarity in these areas.	This is a matter to be addressed through consultation on the dredging management and marine species salvage plan.
HFN, LFN & CT -35	7.6 - Fish and fish habitat	The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a Dungeness crab (<i>Cancer magister</i>) salvage program. The Proponent shall develop the program prior to construction and shall implement it prior to the commencement of any in-water work activity that has the potential to cause direct mortality of crab, including dredging. As part of the	What is considered a successful relocation of crabs by means of baiting? Is there a statistically defensible value that the test will need to reflect in order to use this technique? What are the alternative salvage protocols? Please update this Condition with details that address these questions.	<p>In relation to the reference to “alternative salvage protocols” within the draft condition, the port authority clarifies that, if the baiting method to relocate Dungeness crab were found to be not feasible as a salvage method, the port authority employ traditional salvage methods involving baited traps to relocate crabs in adjacent areas of Roberts Bank outside the project footprint.</p> <p>The port authority notes that consultation with Indigenous groups is required by the draft condition in relation to the salvage program,</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		development of the program, the Proponent shall conduct a test to evaluate the use of baiting as a means to relocate crabs and minimize crab handling. If the Proponent concludes that the use of baiting is not an effective means to relocate crabs and minimize crab handling, the Proponent shall implement alternative salvage protocols.		including but not limited to the pilot or test study, and that answers to the questions posed in the comment seeking details are more appropriately considered during the development and implementation of that program rather than in the condition.
HFN, LFN & CT -36	7.8 - Fish and fish habitat	The Proponent shall transplant, prior to construction, a minimum of 10 percent of the orange sea pen colony (<i>Ptilosarcus gurneyi</i>) that occurs within the Designated Project area. The Proponent shall determine, prior to transplanting and in consultation with Indigenous groups and relevant authorities, the means by which transplanting will be carried out.	Transplanting only 10 percent of orange sea pens is not enough. How will the proponent determine what percent of this species to transplant? What is the maximum amount? Please update the Condition to address these questions.	The port authority notes that the means by which transplanting will be carried out and the follow-up program to verify the effectiveness of the transplant will both be developed in consultation with Indigenous groups and relevant authorities, in accordance with draft conditions 7.8 and 7.9. The rationale for the proportion of orange sea pen transplantation was described in the responses to IR5-05 and IR5-06 (CIAR #1145); transplanting 10% of the orange sea pen aggregation will be sufficient, from an ecological perspective, to support life processes such as reproduction and recruitment.
HFN, LFN & CT -38	8.2 – Marine Mammals	The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups and Indigenous groups (marine shipping), a marine mammal detection and response plan to reduce adverse effects to marine mammals caused by construction, consistent with any Fisheries and Oceans authorization under the <i>Fisheries Act</i> . The Proponent shall implement the plan during all in-water work activities during construction that pose a risk to marine mammals, and have a qualified professional oversee the implementation of the plan. As part of the marine mammal detection and response plan, the Proponent shall:	Please update this Condition to include what mitigations will be provided to ensure that SRKW are not avoiding habitat due to existing noise while outside the exclusion zones.	Draft condition 8.2.3, requires the port authority to establish minimum exclusion zones. The exclusion zones, as defined in draft condition 1.13, represent the areas where SRKW may show a behavioural response to noise from project construction, including potential avoidance of the area. Validation of the size of applicable exclusion zones to ensure they are of adequate size is captured in draft condition 8.2.5. As noted in Section 3.1 of this submission, conditions must be related to the environmental effects of the project. Thus, it would not be appropriate to include a condition requiring the port authority to monitor and implement mitigation measures related to existing noise.
HFN, LFN & CT -39	8.3 - Marine Mammals	The Proponent shall require container vessels calling on the Designated Project to participate in the <i>Enhancing Cetacean Habitat and Observation Program</i> , or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:	As noted in the IR Response Comments, Halalt First Nation does not support this mitigation or Condition being attached to any one program. Please revise the Condition to read that the Proponent MUST participate in an enhanced observation program, including the key components of any such program, for the life of the project.	The port authority notes that the initiatives of the Enhancing Cetacean Habitat and Observation (ECHO) Program and/or components of any future equivalent program are expected to evolve/adapt over time as lessons are learned about what measures are effective and what is needed to protect and support recovery of at-risk cetaceans. For this reason, specific program initiatives or components and the duration of any specific program initiative or component should not be pre-determined in a condition.
HFN, LFN & CT -40	8.3.2 - Marine Mammals	evaluate, in consultation with Fisheries and Oceans Canada, Transport Canada, Indigenous groups, and Indigenous groups (marine shipping), the effectiveness of the participation of container vessels calling on the Designated Project in the <i>Enhancing Cetacean Habitat and Observation Program</i> in mitigating underwater noise and the risk of	Evaluate to what end? Language is needed to provide clarity around the consequences of an ineffective program if expected to mitigate impacts, and the requirement to improve results.	The ECHO Program-led vessel slowdown initiatives achieve measurable noise reductions as documented in a series of summary reports, which are published annually. In addition, reducing vessel speed is an effective mitigation measure for reducing the likelihood and lethality of vessel strikes (CIAR #2083). As noted in the above response (#38), the ECHO Program is expected to continue to evolve/adapt over time reflecting lessons learned.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		fatal vessel strikes to humpback whales (<i>Megaptera novaeangliae</i>) and Southern Resident Killer Whales (<i>Orcinus orca</i>).		<p>Methods to evaluate the effectiveness of the measure requiring RBT2-bound container vessels to participate in the ECHO Program or any future equivalent program will be developed, in consultation with DFO, as part of the application for a <i>Species at Risk Act</i> compliant <i>Fisheries Act</i> Authorization, as stated in DFO's submission (CIAR #2407).</p> <p>The port authority acknowledges the importance of mitigating project impacts to at-risk cetaceans; as such, the port authority has suggested a new condition (see Appendix 3.2-A of this submission) requiring the port authority to identify and implement additional feasible mitigation measures specified in any authorization for the Designated Project to further reduce the likelihood that the Designated Project will jeopardize the survival and recovery of SRKW.</p>
HFN, LFN & CT -41	8.1 - Marine Mammals	The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups, Fisheries and Oceans Canada and Transport Canada measures to mitigate adverse environmental effects caused by underwater noise emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the measures during the relevant phase of the Designated Project. As part of these measures, the Proponent shall:	Similar to requirements in 8.3 for the ECHO program, Halalt First Nation does not support this mitigation or Condition being attached to any one program. Please revise the Condition to read that the Proponent MUST participate in Conservation efforts with other interested parties, including the key components of any such program, for the life of the project.	<p>The port authority is suggesting extensive revisions and additions to the draft conditions in part 8; see Appendix 3.2-A of this submission.</p> <p>The port authority also notes that several draft conditions, including draft conditions 8.11, 8.12, and 8.13, would require the port authority to participate in regional initiatives pertaining to underwater noise and SRKW.</p>
HFN, LFN & CT -42	8.12 - Marine Mammals	The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at managing underwater noise due to commercial vessel traffic.	Please update this Condition to include regional program requests from Indigenous Groups.	For efficiency and effective coordination, the port authority prefers that its participation in regional initiatives continue to be at the discretion of relevant federal authorities.
HFN, LFN & CT -43	9.2 – Terrestrial Vegetation and Wetlands	The Proponent shall develop, prior to construction, and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, and Indigenous groups, a wetland compensation plan, which shall consider the principles outlined in Environment and Climate Change Canada's <i>Operational Framework for Conservation Allowances</i> and meet the objective of no net loss of the Federal Policy on <i>Wetland Conservation on Federal Lands</i> (Government of Canada, 1991), and include measures to compensate for residual adverse environmental effects on wetland functions caused by the Designated Project that cannot be avoided or minimized and that are not already accounted for as part of the offsetting	The Federal Policy is 31 years old; please review to ensure policy components related to the no net loss objective include pertinent new information from the last four decades, including the results of studies with observations and conclusions on the success rates of offsetting projects.	<p>The strategies outlined in the Policy to meet the Government of Canada's wetland conservation objectives remain applicable. The Policy does not preclude the use of new information to support achievement of the goal of no-net-loss to wetland function.</p> <p>As noted by the review panel, the port authority "is highly experienced in developing offsets in the Fraser River Estuary and has remediated previous offsets that did not function as intended" (p.141, CIAR #2062); the port authority will apply its experience to the development and implementation, including adaptive management, of the final wetland compensation plan for the project to achieve no net loss of wetland function.</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		plan(s) required pursuant to condition 7.11. The Proponent shall begin implementing the compensation plan during construction. As part of the implementation of the compensation plan, the Proponent shall:		
HFN, LFN & CT -44	9.2.1 - Terrestrial Vegetation and Wetlands	determine the compensation area required for each wetland and its associated functions remaining after the implementation of the offsetting requirements set out in the offsetting plan(s) referred to in condition 7.11 and that must be included in the wetland compensation plan;	Will this approach potentially separate habitat under the offsetting plan from habitat under the wetland compensation plan? Could this affect overall provision of ecological function?	As per draft condition 9.2.1, the wetland compensation plan will be founded on the project's Fish and Fish Habitat Offsetting Plan referred to in draft condition 7.11. The proposed Fish and Fish Habitat Offsetting Plan is comprised, in part, of wetland enhancement, restoration, and creation (i.e., intertidal marsh and native eelgrass habitats), as described in IR2020-1.2 (CIAR #2083). The port authority will meet the Federal Policy's wetland conservation objective of no net loss of wetland function. In the case of ecological function, the port authority expects the wetland compensation plan (draft condition 9.2) to achieve a net gain in primary productivity (a key wetland function that supports ecosystem processes and promotes biological diversity), even after taking into account time lags, technical limitations, and uncertainty. A net gain in primary productivity of intertidal marsh and native eelgrass is noted in the port authority's IR response (Appendix IR2020-1.2-A, CIAR #2083).
HFN, LFN & CT -45	9.2.3 - Terrestrial Vegetation and Wetlands	identify habitat suitable to be used as compensation for the lost wetland habitat referred to in 9.2.2, including by prioritizing wetlands within the local assessment area. For wetlands located outside the local assessment area, the Proponent shall favor sites located as close to the Designated Project as possible and that reflect equivalent wetland functions to those that are lost;	Please provide a maximum distance from the project area for compensatory efforts in order to ensure they are providing functions to the marine communities close to the project.	Certain functions are best replaced as close as possible to the affected wetlands (e.g., protecting the shoreline from erosion in the area nearest to wetland loss). Other functions may be served by compensatory wetlands located farther away from the project without diminishing the effectiveness of compensation for replacing particular functions (e.g., atmospheric carbon capture and sequestration). All of the offsetting habitats proposed will support the estuarine and marine community structure and ecosystem functioning within the lower Salish Sea either directly or indirectly and it is therefore not necessary to define a maximum distance from the project for compensatory efforts. For example, habitat restoration/creation completed along the lower Fraser River can indirectly enhance conditions in the Fraser delta and marine environment.
HFN, LFN & CT -47	9.4.2 - Terrestrial Vegetation and Wetlands	monitor, using a qualified professional, wetland compensation habitats, annually from the start of compensation and for five years and every ten years thereafter until performance standards have been met;	Wetland compensation should be monitored annually until performance standards have been met and at regular intervals following the achievement of performance standards.	The port authority is suggesting revisions to this draft condition to avoid potential conflict with the requirements of a future <i>Fisheries Act</i> Authorization; see Appendix 3.2-A of this submission.
HFN, LFN & CT -48	9.4.4 - Terrestrial Vegetation and Wetlands	identify and implement additional or modified mitigation measures should monitoring conducted pursuant to condition 9.4.2 indicates performance standards established pursuant to condition 9.4.1 have not been met or are no longer being met and/or the monitoring conducted pursuant to condition 9.4.3 indicates that the effects of the	A timeline for the achievement of performance standards must be set to determine when modified measures must be initiated	As outlined in IR2020-1.2 (CIAR #2083), offsetting habitats are expected to meet performance standards by Year 7, if not earlier. As noted in the port authority's comments on draft condition 9.4.2 in Appendix 3.2-A of this submission, the port authority is proposing to monitor offsetting habitats, including wetland compensation habitats, in years 1, 2, 3, 5, 7, and 10 (to be confirmed in consultation with DFO during the <i>Fisheries Act</i> Authorization regulatory permitting process). Additional or modified mitigation measures would be implemented if and when the monitoring identifies a need. Please

#	Section	Original condition	Comment and suggested amendment	Port authority response
		Designated Project exceed those predicted in the environmental assessment.		also see the port authority's comments on this draft condition in Appendix 3.2-A of this submission.
HFN, LFN & CT -49	11 – Communication Plan		The Proponent should also include examples of how communication will be formatted and provided for feedback from Indigenous groups on the relevance and accessibility of the format for their members	The port authority notes that consultation with Indigenous groups is a requirement of this draft condition. Draft condition 2.4 lays out specific requirements for the proponent where consultation is a requirement of a condition. These requirements include communicating with each Indigenous group with respect to the manner to satisfy consultation requirements.
HFN, LFN & CT -50	12.3 - Current use of lands and resources for traditional purposes	[The Agency is considering additional conditions regarding mitigating effects of the project on current use of lands and resources for traditional purposes commensurate with the proponent's predictions regarding container vessel traffic]	Section 8.6 creates provision to delay departure of vessels calling to the project to mitigate the effects to SRKW. This demonstrates that it is logistically feasible to enact a similar procedure for vessel delay when Indigenous groups are accessing their brief windows for FSC quotas within the Designated Project area to maintain access to resources. Improved management of ship traffic during FSC openings as a mitigation for the impacts of marine shipping on traditional foods access is a long- standing request from Halalt. We request that the regulator provide draft language for such a Condition to Halalt for review and consultation.	The port authority is suggesting extensive revisions and additions to the draft conditions in part 12 that relate to current use of lands and resources for traditional purposes (see Appendix 3.2-A to this submission). The port authority notes that the communication plan identified in draft condition 11.1 pertains to activities related to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin that may adversely affect access for land and water use, including by Indigenous groups. Sub-condition 11.1.1.2 specifically pertains to vessel traffic schedules.
HFN, LFN & CT -51	12.4 - Current use of lands and resources for traditional purposes	The Proponent shall develop, prior to construction, and implement, throughout the first eight years of operation, a follow-up program in consultation with Tsawwassen First Nation, Musqueam, and other Indigenous groups as it relates to their current use of lands and resources for traditional purposes. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the development of the follow-up program, the Proponent shall identify:	This condition puts undue focus on current use as a static representation of Indigenous resource access. If Canada is committed to true Reconciliation, the Quw'utsun Nation expects provision for the revitalization of cultural practices throughout their territory. This program must account for the need for this revitalization and increased cultural practices intrinsically linked to territorial resources and sense of place. This program must last for the life of the project with the objective of seeing increased use as a result of revitalized practices that have not been blocked by the project's construction and operations.	As outlined in Section 3.1 of this submission, conditions imposed on the proponent must be related to the environmental effects of the project. The port authority understands that measures that have been, are being, or will be undertaken by the Government of Canada to address effects, including cumulative effects, will be described in the Whole of Government Response.
HFN, LFN & CT -52	13.1 - Health and Socio-economic conditions	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Health Canada, British Columbia's Ministry of Health, Fraser Health Authority and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the effects of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on Indigenous health related to the quality and consumption of marine traditional food. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	This condition does not account for the perceived risk of consuming shellfish proximal to the project and the impact that can have on access to healthy traditional foods. An increased understanding of how real vs. perceived risk impacts Indigenous consumption of traditional foods from the project area is necessary and must be accounted for in this Condition.	Draft condition 13.2 requires the port authority to participate in any regional initiative related to improving the understanding of shellfish quality at Roberts Bank. This measure is intended to mitigate potential effects related to the perception of shellfish contamination. The port authority has noted in its rationale for a proposed change to condition 13.1.4 that the requirement to gather information regarding levels and patterns of harvesting and consumption of marine traditional foods would be appropriately addressed through the follow-up program related to current use of land and resources for traditional purposes. Please see Appendix 3.2-A for the port authority's comments on and suggested revisions to the sub-conditions of draft condition 12.4 in this regard. The port authority also notes that there are measures related to food security identified in the draft Whole of Government Response (#59) for implementation by government.
HFN, LFN & CT -55	15 – Indigenous Monitors		How will the proponent ensure that there is equitable access for monitors participating for all affected Indigenous Groups? How will Indigenous Groups interact with the monitors who are members of	The port authority notes that the draft condition would require all Indigenous groups listed in draft condition 1.22 to have the opportunity to participate as Indigenous monitors. The port authority

#	Section	Original condition	Comment and suggested amendment	Port authority response
			different communities? There is high potential to exacerbate existing political tensions through the implementation of this program. Who will the Indigenous Monitors report to and how will potential conflict or power dynamic be managed? Please update this Condition to provide clear answers to these questions.	is of the view that the collaborative process specified in the draft condition will provide the opportunity to determine the details requested in the comment.
HFN, LFN & CT -56	16.2 - Independent Environmental Monitor	The Proponent shall require the independent environmental monitor to report to the Proponent, in writing, about the implementation of any condition set out in this document during construction. The Proponent shall also require the independent environmental monitor to recommend to the Proponent, in writing, which action(s) in their view, should be taken by the Proponent in respect to the implementation of conditions set out in this document during construction.	Please update this Condition so that Indigenous Groups can also request to be updated with this information.	The port authority notes that other draft conditions, notably draft condition 15.1 and its sub-conditions, would establish a mechanism to determine communication channels between the Indigenous Monitors and the Independent Environmental Monitor, as well as with the Indigenous Advisory Committee. Further, draft condition 17.1 would require the development, in consultation with Indigenous groups, of Terms of Reference for the Indigenous Advisory Committee, which could include communication between the Indigenous Advisory Committee and the Independent Environmental Monitor. These measures are expected to be sufficient to establish appropriate communication between the Independent Environmental Monitor and interested Indigenous groups.
HFN, LFN & CT -57	16.4 - Independent Environmental Monitor	The Proponent shall consider the information obtained from the independent environmental monitor and shall report to the Agency and relevant authorities about how information obtained from the independent environmental monitor has been considered by the Proponent, including a rationale for why any action recommended by the independent environmental monitor has, or has not been taken.	Additional clarity around what IEM recommended actions the proponent would be permitted to not take action on would be appreciated.	This is a clarification matter to be considered by IAAC.
HFN, LFN & CT -58	16 - Independent Environmental Monitor		Request that the IEM meet directly with Indigenous Groups if requested, that the IEM live within or proximate to the Designated Project area, and that notification and rationale regarding any turnover in the IEM position be provided to Indigenous Groups.	As noted above in response to HFN, LFN & CT -55. other draft conditions, notably draft condition 15.1 and its sub-conditions, would establish a mechanism to determine communication channels between the Indigenous Monitors and the Independent Environmental Monitor, as well as with the Indigenous Advisory Committee. Further, draft condition 17.1 would require the development, in consultation with Indigenous groups, of Terms of Reference for the Indigenous Advisory Committee, which could include communication between the Indigenous Advisory Committee and the Independent Environmental Monitor. These measures are expected to be sufficient to establish appropriate communication between the Independent Environmental Monitor and interested Indigenous groups. As outlined in Section 3.1 of this submission, the port authority notes that the conditions cannot make the proponent's compliance dependent on the actions of a third party; it therefore may not be feasible to specify residence requirements for the Independent Environmental Monitor. The port authority has no concern about providing notification of a change in the Independent Environmental Monitor, but notes that the rationale for a change may include confidential personal information that cannot be disclosed.

#	Section	Original condition	Comment and suggested amendment	Port authority response
HFN, LFN & CT -59	17 - Indigenous Advisory Committee		How will Indigenous Group participation in the IAC be funded? How will the proponent garner input from Indigenous groups who cannot fully participate due to staff shortages? Is there a requirement that the Proponent provide a seat at the IAC for any interested Indigenous Group? This Condition will be challenging to implement meaningfully and must include additional details and answers to the questions above.	<p>The port authority notes that the draft condition would require all Indigenous groups listed in draft condition 1.22 to have the opportunity to participate in the Indigenous Advisory Committee. The port authority is of the view that the consultation requirements specified in the draft condition regarding the development of a Terms of Reference for the committee will provide the opportunity to determine the details requested in the comment.</p> <p>The port authority also notes that it has offered and continues to offer capacity funding to Indigenous groups to facilitate their participation in the project.</p>
HFN, LFN & CT -60	18 - Environmental Monitoring Committee		Details on how a EMC would interact with the IAC are needed.	The port authority is of the view that the consultation requirements specified in the draft condition regarding the development of a Terms of Reference for the Indigenous Advisory Committee will provide the opportunity to determine the details requested in the comment. This is a clarification matter to be considered by IAAC.
HFN, LFN & CT -61	19 - Accidents and malfunctions		How will the proponent contribute to needed capacity development for Indigenous Groups to meaningfully participate in the exercises and development of plans?	The port authority also notes that it has offered and continues to offer capacity funding to Indigenous groups to facilitate their participation in the project.
HFN, LFN & CT -62	19 - Accidents and malfunctions		Halalt would like to see commitments for the proponent with regards to compensation and remediation in the event of a spill that impacts availability of and access to traditional resources.	<p>In Canada, the <i>Marine Liability Act</i> addresses shipowner liability, including liability for spills. The <i>Marine Liability Act</i> is based on the polluter-pays principle. There are various regimes for paying clean-up and compensation costs, such as shipowners' liability, and domestic and international funds. A single pollution incident may draw compensation from one or more of these funds.</p> <p>The port authority also notes that panel recommendation #66 recommends that Transport Canada and the Canadian Coast Guard "Evaluate measures to improve and broaden the Ship-source Oil Pollution Fund for justifiable costs and damages that are not currently included, especially to compensate for effects on cultural heritage of Indigenous groups". In the draft Whole of Government Response, Transport Canada and the Canadian Coast Guard accept the recommendation and propose to take actions to implement the recommendation.</p>
HFN, LFN & CT -63	20 - Schedules		In order to adequately reflect the time needed for consultation on those conditions for which consultation is required, the Proponent should solicit input on the timelines needed for this to be completed meaningfully.	Draft condition 2.4 lays out specific requirements for the proponent where consultation is a requirement of a condition. These requirements include communicating with each Indigenous group with respect to the manner to satisfy consultation requirements, including timelines (draft condition 2.4.2.5).

Table 7 – Response to comments of Tsartlip First Nation

Posted March 14, 2022. [CIAR #3137](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
Tsartlip FN -1	2.10.7 – Annual Reporting	for any conditions where implementation is specifically stated to be dependent in whole or in part upon economic or technical feasibility, and the Proponent determines it is not economically or technically feasible, the Proponent shall provide a reasonable justification for that determination;	Condition 2.10.7 requires VFPA to provide “reasonable justification” if it determines that the implementation of a condition is not technically or economically feasible, for any conditions dependent in whole are part on feasibility. This Conditions should more explicitly require VFPA to provide their detailed analysis and applicable data in support of that finding.	The port authority anticipates that, should IAAC determine, upon review of the port authority’s justification, that additional detail is required, it would require the port authority to provide it. The level of detail of analysis and data that may be required to support a reasonable justification will likely vary in the circumstances.
Tsartlip FN -2	3.1 - Air Quality and Greenhouse Gas Emissions	The Proponent shall provide and maintain, during operation, electrical power connection(s) so that all container vessels equipped to plug into land-based electrical power while berthed at the marine terminal can do so to reduce the use of diesel powered auxiliary engines.	Section 3 of the draft Conditions sets out conditions related to air quality and GHG emissions. While Condition 3.1 requires VFPA to provide electrical power connections to container vessels to reduce the use of diesel-powered engines, the Conditions otherwise do little to mitigate the Panel’s finding that the Project would contribute to additional GHGs in the area even after mitigation measures, resulting in a significant adverse cumulative effect (Report of the Review Panel, Vancouver Fraser Port Authority Roberts Bank Terminal 2 Project, section 7.1.3).	The port authority notes that draft condition 3.2 would require the port authority to develop greenhouse gas reduction plans, including setting reduction targets, implementing reduction technologies, and applying mandatory reduction measures, while draft condition 3.3 would require the port authority to develop a follow-up program for greenhouse gas reduction. These measures are appropriate and commensurate with the potential effects of the project and will serve to reduce greenhouse gas emissions over the life of the project.
Tsartlip FN -3	3.4.2 - Air Quality and Greenhouse Gas Emissions	provide incentives to third-party contractors to use zero-emission mobile and stationary off-road equipment required for any physical activity undertaken in relation to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin or, if zero-emission equipment is not available or its use is not technically or economically feasible, provide a rationale for that determination and require third-party contractors to use equipment that:	The Panel acknowledged that the proposed mitigation measures would be much more effective if mandatory rather than voluntary, recommended contractually requiring the infrastructure developer and project operator to reduce GHGs aligned with the BC Ministry of Environment and Climate Change Strategy and Metro Vancouver GHG reduction strategies. Yet, this recommendation is not incorporated in the draft Conditions. Instead, Condition 3.4.2 requires VFPA to provide <u>incentives</u> to third-party contractors to use zero-emission equipment or provide a rationale if they deem the use of zero-emission equipment not technically or economically feasible. It is Tsartlip’s view that VFPA should be required to <u>mandate</u> , rather than merely incentivize, the use of GHG-reducing methods and technologies.	In its previous feedback (January 2021) on draft conditions provided in October 2020, the port authority noted that this draft condition could be interpreted to require the port authority to base contractor selection solely on the criterion of use of zero-emission equipment. This is neither reasonable nor feasible, as there are many other important criteria considered in the tender process that will inform contractor selection. The port authority understands the intent of this condition is to incent the use of zero-emission equipment, where available and feasible, by contractors.
Tsartlip FN -4	12.1 & 12.4 - Current use of lands and resources for traditional purposes	12.1 – The Proponent shall allow access to closure area(s), including navigational closure area(s) that are within the care and control of the Proponent, for the purpose of Indigenous harvesting of crab for domestic or food, social and ceremonial purposes, to the extent that such access is safe. In doing so, the Proponent shall: 12.4 - The Proponent shall develop, prior to construction, and implement, throughout the first eight years of operation, a follow-up program in consultation with Tsawwassen First Nation, Musqueam, and other Indigenous groups as it relates to their current use of lands and resources for traditional purposes. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to	Conditions 12.1 provides that VFPA shall provide access to closure areas for Indigenous crab harvesting, and Condition 12.4 requires a follow-up program to monitor changes to environmental components important for the traditional use of lands and resources by Indigenous nations. Similarly, section 14 of the Conditions seeks to ensure that physical and cultural heritage materials are protected from construction impacts and inventoried, while Conditions 14.8 and 14.9 require VFPA to develop nation-specific measures and follow-up programs for Tsawwassen, Musqueam and Tsleil-Waututh nations to address the effects of the Project on their cultural heritage. Tsartlip, as one of the Indigenous nations directly affected by the Project, should be included in the draft Conditions related to access and nation-specific measures. As noted above, SMOKEĆ – now known as Point Roberts – was historically associated particularly with Tsartlip and was Tsartlip’s most important fishery. It remains a focal point for Tsartlip traditional harvesting activities including revitalized reef-net fishing. Therefore, the draft conditions that seek to protect cultural heritage must acknowledge Tsartlip’s connection to the Project	The matter of access to the navigational closure area(s) in relation to current use of lands and resources for traditional purposes laid out in draft condition 12.1 is specific to project-related effects on Indigenous groups who harvest Dungeness crab in the vicinity of the navigational closure area(s). The condition as drafted is appropriately focused on that project effect and is consistent with the key principles outlined in Section 3.1 of this submission. If Tsartlip First Nation has access to crab in the vicinity of the navigational closure area(s) for domestic or food, social, and ceremonial purposes, Tsartlip First Nation would be included in consultation required by the condition. The port authority notes that the Indigenous groups listed in draft condition 1.22 include Tsartlip First Nation and therefore Tsartlip First Nation would be included in consultation related to the follow-up program described in draft condition 12.4. The port authority also notes that it is suggesting extensive revisions and additions to the draft conditions in part 12 that relate to current use of lands and resources for traditional purposes, including a follow-up program element that is specific to marine shipping incidental to the project (refer to Appendix 3.2-A of this submission).

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>2.9. As part of the development of the follow-up program, the Proponent shall identify:</p>	<p>site and ensure that any Tsartlip cultural materials that are exposed by the Project are protected and inventoried for Tsartlip.</p> <p>Additionally, crab harvesting is not the only traditional activity for which Tsartlip requires access. As access to important fishing sites throughout Tsartlip's traditional territory has become increasingly difficult due to the impacts of other, pre-existing developments, excessive vessel traffic and operations such as BC Ferries, Tsartlip's traditional marine territories across the Strait of Georgia have become increasingly important for maintaining Tsartlip's exercise of the treaty-protected right to fish as formerly. Tsartlip access to this important site must be protected beyond what the draft Conditions currently provide.</p>	<p>There are also measures that have been, are being, and will be implemented by the Government of Canada that pertain to harvesting in the marine shipping area that are outlined in the draft Whole of Government Response (#40). As noted in Section 2.2 of this submission, the responsibility for mitigating the effects of existing and ongoing commercial vessel traffic in the marine shipping area lies with the Government of Canada.</p>
<p>Tsartlip FN -5</p>	<p>14, 14.8 & 14.9 - Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance</p>	<p>14.8 – The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation, nation-specific measures to address the effects described in the Federal Review Panel Report caused by the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on cultural heritage, including tangible and intangible cultural losses. The Proponent shall invite Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation to co-lead the development of these measures. The Proponent shall implement the measures during all phases of the Designated Project and shall submit these measures to the Agency prior to implementing them, while ensuring that confidential information is protected. As part of the annual report referred to in condition 2.10, the Proponent shall report its discussions with Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation, including the level of satisfaction of Indigenous groups on the implementation of the measures. As part of the measures, the Proponent shall consider:</p> <p>14.9 - The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects on cultural heritage caused by the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall invite Indigenous groups to co-lead the development of the follow-up program. As part of the follow-up program, the Proponent shall monitor, during construction and the first 10 years of operation, cultural heritage</p>	<p>Conditions 12.1 provides that VFPA shall provide access to closure areas for Indigenous crab harvesting, and Condition 12.4 requires a follow-up program to monitor changes to environmental components important for the traditional use of lands and resources by Indigenous nations. Similarly, section 14 of the Conditions seeks to ensure that physical and cultural heritage materials are protected from construction impacts and inventoried, while Conditions 14.8 and 14.9 require VFPA to develop nation-specific measures and follow-up programs for Tsawwassen, Musqueam and Tsleil-Waututh nations to address the effects of the Project on their cultural heritage.</p> <p>Tsartlip, as one of the Indigenous nations directly affected by the Project, should be included in the draft Conditions related to access and nation-specific measures. As noted above, SMOKEĆ – now known as Point Roberts – was historically associated particularly with Tsartlip and was Tsartlip's most important fishery. It remains a focal point for Tsartlip traditional harvesting activities including revitalized reef-net fishing. Therefore, the draft conditions that seek to protect cultural heritage must acknowledge Tsartlip's connection to the Project site and ensure that any Tsartlip cultural materials that are exposed by the Project are protected and inventoried for Tsartlip.</p> <p>Additionally, crab harvesting is not the only traditional activity for which Tsartlip requires access. As access to important fishing sites throughout Tsartlip's traditional territory has become increasingly difficult due to the impacts of other, pre-existing developments, excessive vessel traffic and operations such as BC Ferries, Tsartlip's traditional marine territories across the Strait of Georgia have become increasingly important for maintaining Tsartlip's exercise of the treaty-protected right to fish as formerly. Tsartlip access to this important site must be protected beyond what the draft Conditions currently provide.</p>	<p>The Indigenous groups identified in draft conditions 14.8 and 14.9 regarding cultural heritage were identified as affected by the review panel. The conditions as drafted are appropriately focused on potential effects of the project and are consistent with the key principles outlined in Section 3.1 of this submission.</p> <p>There are also measures that have been, are being, and will be implemented by the Government of Canada that pertain to cultural heritage in the marine shipping area that are outlined in the draft Whole of Government Response (#46). As noted in Section 2.2 of this submission, the responsibility for mitigating the effects of existing and ongoing commercial vessel traffic in the marine shipping area lies with the Government of Canada.</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		indicators identified in consultation with Tsawwassen First Nation, Musqueam, and the Tsleil-Waututh Nation, and shall establish thresholds for implementing additional mitigation measures, in accordance with conditions 2.5 to 2.9.		
Tsartlip FN -6	17 & 17.1 - Indigenous Advisory Committee	The Proponent shall establish, prior to construction and in consultation with Indigenous groups, and maintain, throughout construction and operation, an Indigenous Advisory Committee (IAC) to support dialogue and issue resolution between the Proponent and Indigenous groups. The Proponent shall invite Indigenous groups to participate in all IAC activities, and shall consult participating Indigenous groups on the development of Terms of Reference for the IAC. The Proponent shall make reasonable efforts to come to agreement on the Terms of Reference with participating Indigenous groups. The Proponent shall submit the final Terms of Reference to the Agency prior to construction. As part of the Terms of Reference, the Proponent shall include:	Section 17 of the draft Conditions requires the VFPA to establish and Indigenous Advisory Committee to support dialogue and issue resolution between VFPA and Indigenous groups, yet Condition 17.1 does not explicitly require the Proponent to provide funding to participating Indigenous nations. VFPA should be explicitly required to fairly compensate Indigenous nations for providing their time, work and expertise.	The port authority will provide capacity funding for participation of interested Indigenous groups in the Indigenous Advisory Committee. However, the need for and scope of funding will depend on the scope of the committee itself and the roles of its participants, which will be determined in consultation with Indigenous groups during the development of the Terms of Reference for the committee. It therefore makes sense to also determine capacity funding requirements in consultation with Indigenous groups during the development of the Terms of Reference for the committee.

Table 8 – Response to comments of S’ólh Téméxw Stewardship Alliance

Posted March 23, 2022. [CIAR #3538](#)

Panel conclusions	Panel recommendations	Conditions (<i>Canada Environmental Assessment Act, 2012</i>)	PRRO/STSA Discussion (concerns, gaps, amendments, etc.)	Port authority response
Theme: Current Use of Lands and Resources for Traditional Purposes				
Shipping has residual and cumulative effects on important lands and resources for Indigenous Nations, but the significance of impact cannot be determined.	38: Address safety of traditional harvesting 39: Cumulative effects monitoring & mitigation 40: Plans for safe harvesting & build vessel monitoring among affected Nations	12.1-12.5: Maintaining Indigenous access through consultation; collaboration with First Nations in managing the area in relation to works; mitigation; follow-up programs; develop and support regional initiatives.	<ul style="list-style-type: none"> Is the “follow up program” a management approach? Or just a rhetorical commitment to monitoring without any requirement to act on the results? 	<p>The <i>Canadian Environmental Assessment Act, 2012</i> requires development of a follow-up program for ‘verifying the accuracy of the environmental assessment of a designated project, and for determining the effectiveness of any mitigation measures.’</p> <p>Draft condition 12.4 requires a follow-up program for current use of lands and resources for traditional purposes, and references general conditions applicable to all follow-up program. These draft conditions (2.5 through 2.9) require monitoring, and establishment of limits of environmental changes (thresholds) beyond which adaptive management must be undertaken, including the implementation of additional or modified mitigation measures.</p> <p>The port authority also notes that it is suggesting extensive revisions and additions to the draft conditions in part 12 that relate to current use of lands and resources for traditional purposes, including a follow-up program element that is specific to marine shipping incidental to the project; see Appendix 3.2-A of this submission.</p>
Theme: Greenhouse gas emissions				
Additional greenhouse gas emissions in the Metro Vancouver area even after the application of mitigation measures; significant adverse cumulative effect.	3: greenhouse gas emissions inventories, reduction plan, alignment with BC & Metro Vancouver reduction strategies.	1-6: Electric power provision; GHG management plans for construction, taking regulations into account; follow-up program assessing effectiveness of mitigation; mitigation of effects of emissions;	<ul style="list-style-type: none"> This is vague with no real commitments to limit greenhouse gas emissions. There are multiple points throughout the document where the terms “if economically feasible” or “to the extent feasible” are used without precise definition. There are more than 30 occurrences of these phrases. What mechanisms will be implemented to hold the proponent to account if it unilaterally determines recommendations are not “feasible?” 	This is a clarification matter to be considered by IAAC.
Theme: Wetlands and biodiversity protection				
Significant adverse and cumulative effects, including on red-listed marsh communities.	21: Include in offsetting plans: marsh habitats; areas of recent bulrush recession. 22: Follow-up program for marsh offsets: monitoring red and blue-listed communities, tidal marsh communities; detecting and reporting invasive species.	9.2-9.4: Wetland compensation plan; salvage and transplant native species, including blue and red-listed; follow-up program for effectiveness of wetland compensation plan, including performance measures, monitoring, mitigation	<ul style="list-style-type: none"> The notion of salvage is interesting, but it requires suitable and protected areas for the transfer of species. This also requires that transplant work will not create undue disturbances within those existing areas and the species contained therein. The precise location of these planned offset areas is not entirely clear. The only offset measure with significant value would be for the VFPA to purchase private lands and subsequently revert them to provincial, federal, or Indigenous 	The port authority notes that, as described in Section 3.1 of this submission, conditions must be directed at the proponent, and not be dependent on the actions of thirds parties. As such, the port authority does not recommend the suggested condition.

Panel conclusions	Panel recommendations	Conditions (<i>Canada Environmental Assessment Act, 2012</i>)	PRRO/STSA Discussion (concerns, gaps, amendments, etc.)	Port authority response
			ownership to be incorporated into a wildlife management area. From the STSA's perspective, the latter is the preferred option, supported by co-management agreements. The IAAC should consider implementing such a condition, to be supported with a co-management agreement among First Nations and with the support of provincial and federal governments.	
Theme: Bivalve shellfish				
Due to the habitat loss associated with the 177-hectare terminal footprint and reductions in productivity, and in the absence of adequate mitigation measures, the Project would result in a significant adverse and cumulative effects on Dungeness crab.	23: refine crab offsetting; develop a follow-up program for monitoring.	7.3; 7.6; 7.7; 11.1; 12.1; 12.4; 13.4-13.6: avoidance and mitigation measures; Dungeness crab salvage program; follow-up program for Dungeness crab; communication plan for Indigenous groups and marine users; allow Indigenous harvesting access to enclosure area(s); follow-up program in consultation with Indigenous regarding traditional use; mitigation of adverse effects on commercial & recreational crab fishing; include marine users in collaborative meetings; analyse crab harvesting data to inform marine users.	<ul style="list-style-type: none"> Have there been any toxicology studies looking at potential bioaccumulation of contaminants in bottom feeders? A relatively recent study in Puget Sound found "Of the POPs, PCBs were detected most frequently in Dungeness crab and spot prawn and were highest in specimens taken from urban areas. DDTs and PAHs in both species, and PBDEs in crab, were detected frequently at lower concentrations, with highest levels in samples from urban areas".² Similar studies are required in the Salish see and Fraser River estuary to understand baselines of crab and prawn ecological health. Without such studies, follow-up monitoring is meaningless. 	<p>The port authority notes that studies of contaminant levels in shellfish at Roberts Bank were conducted as part of the EIS (Section 27, and Appendix 27-C CIAR #181), and that draft condition 13.1 requires a follow-up program, including a human health risk assessment, on marine traditional food.</p> <p>Further, draft condition 13.2 requires the port authority to participate at the request of a relevant federal authority, in any regional initiative related to improving the understanding of shellfish quality at Roberts Bank.</p>
Theme: Orange sea pen				
Residual adverse effect of the Project on the orange sea pen colony in the Local Assessment Area, even after proposed mitigation, would be significant; inconclusive findings on cumulative effects.	24: transplant program; annual monitoring.	7.8-7.9: transplant > 10% of orange sea pen colony; follow-up program on effectiveness of transplants.	<ul style="list-style-type: none"> We have concerns about demonstrated efficacies of colony transplant and about any potential recourse (e.g. additional offsetting measures) if transplants are unsuccessful and the colony is lost due to the impacts of the RBT2 project. We recommend that the IAAC add contingencies to this condition: transplanting must be monitored and assessed, and where under-performing or failing additional measures must be implemented. 	The port authority notes that draft condition 7.9 requires a follow-up program to verify the effectiveness of the orange sea pen transplant referred to in draft condition 7.8. The follow-up program must be implemented in accordance with conditions 2.5 to 2.9, which require additional or modified mitigation measures to be implemented if pre-determined levels of environmental change have been reached or exceeded.
Theme: Barn Owls (<i>Tyto alba</i>) and Other Raptors				
Residual adverse effects and an adverse cumulative effect on diving birds. Insignificant. Increased vehicle traffic and increased human population and urbanization	35: design and install physical barriers to reduce road mortality. Must not attract other avian species. Must conserve roadside grass verge hunting habitat. Develop barn owl conservation plan. Nest boxes. Annual reporting. 36: Include solutions pertaining specifically to Great blue herons	10.3 Install physical barriers to mitigate mortality risk for barn owls. Must not attract other avian species 10.4 identify number and location of artificial nest structures 10.5 contribute to third party programs to maintain foraging habitat	<ul style="list-style-type: none"> Physical barriers may not be a realistic solution to reducing truck impacts. Planting hedges might be of equal or greater value from that standpoint, however nesting substrate supplementation or purchasing of lands to allow for old field habitats would likely be a better way to invest mitigation funds than building a wall, which could act as a movement barrier to other species. There are other listed raptor species within the immediate project area such as Peregrine Falcon, Short- 	<ul style="list-style-type: none"> The port authority notes that planting hedge rows can increase avian-vehicular strike risk as avian species may be attracted by nesting or foraging within the hedge row, which would be adjacent to motorized traffic. The port authority acknowledges the value of providing funds to protect foraging habitat or nest structures and is required to do so as per draft condition 10.5.

² Andrea J. Carey, Niewolny, L. A., Lanksbury, J. A., & West, J. E. (2014). Toxic Contaminants in Dungeness crab (*Metacarcinus magister*) and Spot Prawn (*Pandalus platyceros*) from Puget Sound, Washington, USA. Washington Department of Fish and Wildlife. Available from: <https://wdfw.wa.gov/sites/default/files/publications/01608/wdfw01608.pdf>

Panel conclusions	Panel recommendations	Conditions (<i>Canada Environmental Assessment Act, 2012</i>)	PRRO/STSA Discussion (concerns, gaps, amendments, etc.)	Port authority response
<p>would have significant adverse cumulative effect on barn owls.</p>	<p>37: Include SARA-listed or COSEWIC designated bird species and contingency/adaptive management measures in the management plan.</p>	<p>10.15 creation of follow- up program to determine effectiveness of mitigation measures regarding artificial nests</p> <p>10.16-10.16.1 creation of follow-up program to determine effectiveness of mitigation measures of barn owl mortality</p>	<p>short-eared Owl and Western Screech Owl. Why are there not mitigation measures in place for these species? Why is there no proposed monitoring efforts to determine impacts on these SARA-listed species?</p> <ul style="list-style-type: none"> The Lower Fraser is home to the world's largest concentration of wintering Bald Eagles and highest densities of breeding Bald Eagles anywhere in the species range. Given that this population relies heavily on foraging within the Roberts Bank area, there appears to be no demonstrated efforts to determine terrestrial impacts on any raptors beyond Barn Owl. 	<ul style="list-style-type: none"> The port authority acknowledges the concern with the use of second-generation rodenticides as a pest management tool due to the potential for secondary poisoning of avian predators (e.g., raptors). Further, the port authority is aware of the current 18-month ban placed in July 2021 for the use and selling of second-generation rodenticides to protect raptors and other wildlife. Terminal operators at the Port of Vancouver are responsible for pest management at their facilities and have advised that their service providers are currently following these provincial directives. The port authority will continue to monitor provincial developments related to second-generation rodenticides and will abide by all applicable legislation regarding pest management. The peregrine falcon was selected as a representative species of the coastal birds valued component and assessed as part of environmental impact statement (EIS). Negligible to minor effects on the productive potential of peregrine falcons before mitigation were predicted, which the review panel accepted in their recommendation report based on the advice of Environment and Climate Change Canada (ECCC; CIAR #2062). <p>Barn owls were selected as a representative species for a number of owls species, including short-eared owls as described in AIR #9 and presented in Table 4 of Appendix AIR9-A (CIAR #388). Further, the review panel requested additional information specifically on short-eared owls to better understand potential project effects and the effectiveness of proposed mitigation at the time (IR9-04, CIAR #581). The port authority concluded that with mitigation, effects to short-eared owls were negligible, which was considered by the review panel (response to IR9-04, CIAR #1322).</p> <p>Western screech owls were not predicted to be affected, as the proposed project is not expected to affect the species foraging or nesting habitat.</p> <ul style="list-style-type: none"> Bald eagles were also selected as a representative species of the coastal birds valued component and assessed as part of EIS. Similarly, negligible to minor effects on the productive potential of bald eagles before mitigation were predicted. The review panel considered this conclusion but did not comment in their report (CIAR #2062).

Appendix 2.6-A Response to Scott Report

The coalition makes submissions on the port authority's IR response regarding fish and fish habitat offsetting plan (IR2020-1.1 and IR2020-1.2, [CIAR #2083](#)), regarding project construction avoidance and mitigation measures, including design options, related to fish and fish habitat (IR2020-2.1, [CIAR #2083](#)), and regarding operational measures and design options to avoid or reduce habitat loss and potential disruption of juvenile salmon migration (IR2020-2.2, [CIAR #2083](#)). In support of those submissions, the coalition relies on the report, "Expert Opinion IR Responses & Draft Conditions", dated March 11, 2022, by David Scott (the "Scott Report").

The opinions of Mr. Scott are the basis of the coalition's submissions with respect to project effects on salmon. The Scott Report focuses on salmon migration and the effectiveness breaches, juvenile Chinook salmon use of the lower Fraser River estuary, specifically Harrison Chinook, the proposed RBT2 fish and fish habitat offsetting plan, and the project's potential effect on salmon productivity ([CIAR #3322](#)). The port authority provides brief responses to each of these themes below.

In addition, the port authority provides detailed responses to assertions made in the Scott Report and by the coalition with respect to salmon migration disruption, offsetting and productivity in **Table 2.6-1**. Mr. Scott also comments on the proposed draft conditions. The responses of the port authority to those comments are provided in **Appendix 2.6-C** of this submission. Furthermore, Mr. Scott was asked to update a portion of a report he previously authored and was submitted by the coalition to the review panel for the public hearing ([CIAR #1605](#)). By definition, and despite the title of the Scott Report, the information provided in this section of the Scott Report is unrelated to both the IR response and the draft conditions and must be disregarded. The review panel did consider the coalition's submission, including Scott's earlier report, as part of their report ([CIAR #2062](#)).

Responses to comments on salmon migration and fish passage in the Scott Report

The Scott Report contains points of criticism related to the proposed measures (i.e., breach, IR2020-2.2, [CIAR #2083](#)) to mitigate predicted salmon migration disruption with the project. In **Table 2.6-1**, we analyzed the criticisms identified by Mr. Scott and demonstrate that a single breach at any of the potential locations would effectively reduce the potential for disruption of juvenile salmon migration attributable to the project. Some of Mr. Scott's concerns and views regarding the effectiveness of the fish passage contradict literature published by others (e.g., effects of light during the night on juvenile salmon and juvenile salmon migration during the night) (**Table 2.6-1**). The detailed design of a fish passage breach will be undertaken following a decision to allow the project to proceed, confirmation of feasibility, and DFO's direction per draft condition 7.2.

Mr. Scott also comments on the need for the fish passage to account for potential disruptions in salmon migration due to existing infrastructure. As noted in **Section 3.1** of this submission, conditions must relate to the environment effects resulting from the project.

The port authority does agree with Mr. Scott that the initiatives he and Raincoast are undertaking with DFO to breach existing jetties at Sturgeon Bank in the Fraser River estuary will provide a benefit to fish and fish habitat. The port authority is aware of the initiatives, has authorized the project through the Port authority's project and environmental review process, and has granted land tenure to enable the North Arm jetty breach to be implemented.

Responses to comments on Harrison Chinook in the Scott Report

The Scott Report references DFO's recent Canadian Science Advisory Secretariat (CSAS) report which provides an analysis of the recovery potential for Harrison Chinook. Mr. Scott notes concerns regarding the project's potential effect on the population. As discussed in **Table 2.6-1**, the only factor identified by DFO that pertains to the RBT2 Project is referred to as "ecosystem modification". The potential effects of the modification caused by the project have been assessed and mitigation (including offsetting) proposed to avoid or reduced the potential project effect on Chinook salmon, including Harrison Chinook.

Responses to comments on offsetting and salmon productivity in the Scott Report

In his report, Mr. Scott criticizes the offsetting proposed by the port authority for RBT2. However, he expresses those criticisms as opinions without providing new data or literature references to support those opinions. Furthermore, Mr. Scott's criticism is inconsistent with the view expressed by DFO in its submission where it states that ([CIAR #2407](#)):

"...the substantial improvement to the offsetting plan, the identification of additional available offsetting opportunities, as well as the progress made by the Proponent in evaluating offsetting equivalency, improves DFO's confidence that a final offsetting plan could be developed that is consistent with DFO policy".

DFO acknowledges that uncertainty cannot be eliminated but that it can be managed in the permitting process, something that occurs routinely ([CIAR #2407](#)):

"...uncertainty regarding the effectiveness of offsets can be managed through appropriate planning and through conditions of a *Fisheries Act* Authorization"

Some of Mr. Scott's criticisms are simply incorrect. For example, Mr. Scott suggests, incorrectly, that the majority of the proposed RBT2 marsh offsetting projects are freshwater and, therefore, "fundamentally different from the brackish and saline habitats which will be lost due to the Project footprint". He also suggests that marsh habitat has never existed in the South Arm Jetty Tidal Marsh Project area.

In fact, the port authority seeks to expand a fringing brackish marsh that exists north of the Steveston Jetty. The existing brackish marsh is showing signs of naturally expanding slowly over time. This indicates that the area is conducive to marsh vegetation colonization and growth. The proposal is to expand that marsh in a manner intended to interact synergistically with the Steveston Jetty breaches recently implemented by Raincoast Conservation Foundation. As concluded by the review panel, the creation and enhancement of intertidal marsh habitats area well-established concept for offsetting ([CIAR #2062](#)).

Some of Mr. Scott's criticisms are presented in an inconsistent or potentially misleading way.

Mr. Scott criticizes the type and location of offsetting. He explains that a "continuum of habitats" is important but then criticizes the relative distance of offsetting sites from the RBT2 site. The port authority provides the following in response:

- As described in IR2020-1.1 ([CIAR #2083](#)), approximately one-third of the proposed offsetting would be onsite, within the EIS local assessment area. Furthermore, additional onsite offsetting opportunities have been identified.
- Mr. Scott does not address the fact that the proposed RBT2 offsetting plan expressly seeks to provide a continuum of habitats in the Fraser River estuary, which aligns with the vision and priorities of Indigenous groups like Musqueam, with several projects having been specifically brought forward by Indigenous groups as priority sites. With one exception, the proposed sites are within the geographic

area of, and same waterbody/watershed as, RBT2. As a result, these offsetting projects would benefit the juvenile Chinook salmon populations that would potentially be affected by RBT2.

- Importantly, in considering this criticism, it is important to bear in mind the project will result primarily in the loss of subtidal habitat, and that the port authority is proposing to offset that loss with more productive habitat such as tidal marsh and eelgrass.
- Specifically, the proposed RBT2 offsetting projects prioritize the tidal marsh and eelgrass habitats that Mr. Scott's own work (Chalifour et al. 2019 and 2021) found to be the most valuable habitats to estuarine-rearing juvenile Chinook salmon.
- Mr. Scott might be saying that offsets should consist **only** of subtidal habitat (he is not entirely clear). However, doing so would not make sense given the following:
 - Juvenile Chinook salmon are not constrained by a lack of subtidal habitat
 - Creating subtidal habitat of the type predominantly affected by RBT2 would generally only be possible by transforming higher-value intertidal habitat. This is self-evidently inappropriate. Not surprisingly, it would also run counter to DFO policy (DFO 2021).¹ Under that policy, physical manipulation of existing fish habitat should **improve** its capacity to produce and sustain fish; e.g., establishing or enhancing vegetated areas in estuaries and coastal areas.

Mr. Scott also suggests the fact that tidal marsh habitats are only available to juvenile salmon when tidally flooded is somehow a concern. There is no basis for this criticism and it contradicts Mr. Scott's own work (Chalifour et al. 2019 and 2021), which found juvenile salmon were most commonly captured in tidal marsh habitat and supported the idea that Fraser River estuary brackish marsh is a critical habitat for estuarine-rearing juvenile salmon:

“...this study supports the idea that the brackish marsh of the Fraser estuary represents a critical habitat for subyearling migrant Harrison Chinook salmon.”

Mr. Scott states that the proposed offsets will become less productive over time due to sea-level rise, whereas the RBT2 impacts will persist over the long term, indefinitely. This is misleading:

- Predicted sea-level rise is expected to affect constructed and existing intertidal habitats alike—through the mechanism of coastal squeeze.
- Mr. Scott fails to acknowledge that when seeking a *Fisheries Act* Authorization, proponents are expected to implement fish habitat offsetting that can function under present day conditions. The design of the RBT2 offsetting projects seeks to achieve this fundamental aim, while providing resilience and adaptability to predicted sea-level rise to a reasonable extent.

Mr. Scott refers to previous habitat enhancement projects led by the port authority that have faced issues. However, Mr. Scott does not present the full story of each. For example, he ignores agency intervention that was at least partly responsible for the underperformance of the east causeway Deltaport Third Berth (DP3) offsetting, and incorrectly claims that Salt Marsh Restoration habitat bank sites have required ongoing maintenance. He also fails to describe the projects that are functioning as intended—four out of the five DP3 offsetting projects, and a majority of the port authority habitat bank projects. The review panel acknowledged that the port authority “is highly experienced in developing offsets in the Fraser River estuary and has remediated previous offsets that did not function as intended” ([CIAR #2062](#)).

¹ DFO (Fisheries and Oceans Canada). 2021. Policy for applying measures to offset adverse effects on fish and fish habitat under the *Fisheries Act*. Available at <https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/policies-politiques-eng.html>. Accessed April 2022.

Mr. Scott states that the time lag between the construction of the offsetting habitat and functionality is not meaningfully accounted for in the RBT2 fish and fish habitat offsetting plan. Mr. Scott's criticism does not account for the following:

- The port authority proposes approximately 8.3 hectares (~10% of the 86 hectare total offsetting that the port authority proposes) in the form of well-established habitat bank projects that have already been constructed (in some cases approximately three decades ago) and have been providing habitat functionality in the interim (as described in IR2020-1.1, [CIAR #2083](#));
- Additional technical analyses presented in IR2020-1.2 ([CIAR #2083](#)), which takes into account uncertainty and time lag. The uncertainty and temporal lag are clearly identified and quantified. The analysis predicts that, taking into account both, the offsetting will result in a net gain in fish and fish habitat productivity.

The port authority also notes that completing offset projects and demonstrating offset functionality before RBT2 construction is not feasible:

- It will not be possible to construct onsite eelgrass-marsh habitats until some of the RBT2 infrastructure is in place
- This is not simply a question of inconvenience for a proponent like the port authority. Assessment under CEAA 2012 is an exercise in precaution, not a barrier to development. The Act also acknowledges that projects serve the public interest. Requirements that are not feasible will undermine the public interest served by the RBT2 Project.

Mr. Scott states that the Semiahmoo Bay-Little Campbell River Enhancement Project is unlikely to offer any benefit to the Chinook salmon populations that are predicted to be impacted by RBT2, given the project's distance from the Fraser River estuary. However, as described in IR2020-1.1 ([CIAR #2083](#)), this project has been identified as a priority by, and is being advanced in collaboration with, Semiahmoo First Nation to provide other ecological benefits and services (e.g., other salmon populations and forage fish).

In summary, the productivity of the offsetting projects has been evaluated, taking into account concerns identified in the Scott Report: uncertainty and time lag. The port authority's IR response demonstrates that the residual effect to Chinook salmon, will be less than that assessed by the review panel and moreover will lead to a net gain in productivity for the species.

Table 2.6-1 Responses to specific assertions by the coalition on migration and productivity

#	Submission section	Assertion	Response of the port authority
1	Coalition submission, p. 37	In reality there will be a period of zero productivity following the destruction of the Roberts Bank habitat and little account is given the impact of that period of no habitat on highly stressed and vulnerable salmon populations.	This statement is misleading. There will not be a period with zero productivity at Roberts Bank. The proposed marine terminal is sited in predominantly deeper waters, greatly reducing the overlap with intertidal and shallow subtidal habitats that are important to and preferentially used by juvenile salmon, such as intertidal marsh and native eelgrass. Roberts Bank will continue to sustain juvenile salmon during and post-project construction. Existing and extensive intertidal and shallow subtidal habitats not overlapping the project will continue to function with the project, and will continue to provide food and refuge to juvenile salmon during and post-project construction.
2	Scott Report, p. 5	The offsetting plan (IR2020-1.2) relies on two distinct components, habitat offsetting projects, breaches, both of which would need to function fully as intended to mitigate potential project impacts to juvenile Chinook salmon	This statement is inaccurate. In addition to mitigation, which includes offsetting, a net gain in productivity of juvenile Chinook salmon is anticipated to result from indirect productivity gains with the project forecasted by the Roberts Bank ecosystem model. Siting the marine terminal in predominantly subtidal waters is predicted to result in changes to coastal geomorphic conditions that will increase the productivity of juvenile salmon prey (macrofauna) and result in indirect increases in juvenile salmon productivity through food web linkages (enhanced food availability). Also, as noted immediately above, siting the marine terminal in predominantly deeper waters greatly reduces overlap with intertidal and shallow subtidal habitats, such as intertidal marsh and native eelgrass that are important to and preferentially used by juvenile salmon. Roberts Bank will continue to sustain juvenile salmon during and post-project construction.
3	Scott Report, p. 5	The reduction in project footprint proposed in IR2020-2.1 is very minor relative to the overall footprint and does not mitigate the increase in migration disruption caused by the expanded terminal footprint.	The project footprint reduction is a technically and economically feasible design-related means of further reducing effects to fish and fish habitat, including to intertidal marsh and native eelgrass habitats that are important to juvenile salmon. The project footprint reduction is not proposed as a measure to mitigate potential disruption to juvenile salmon migration. The terminal breach is proposed to mitigate this potential effect.
4	Scott Report, p. 5	The size, design and number of breaches being proposed is unlikely to fully mitigate the migration disruption due to numerous factors including partial tidal connectivity, small size, lights only operating during daylight hours, and potential to clog.	<p>An analysis of the factors identified by Mr. Scott demonstrates that a single breach at any of the potential locations would effectively reduce the potential for disruption of juvenile salmon migration from RBT2.</p> <ul style="list-style-type: none"> • Modelling (described in Appendix IR2020-2.2-E, CIAR #2083) conducted to respond to the minister's IR2020-2.2, quantified project-related disruption to outmigration of juvenile salmon; modelling showed that potential project-related disruption to migration may divert away from the inter-causeway area approximately 7% to 14% of juvenile salmon abundance. In terms of productivity, the project has the potential to divert away from and reduce use of the inter-causeway area by approximately 0.002 t/year to 0.004 t/year of juvenile salmon or approximately 35 to 70 juvenile salmon per day. • Culvert width: <ul style="list-style-type: none"> ○ Based on information provided by the coalition, 3 m wide box culverts installed through a training berm in the Squamish River estuary allowed for 20% of juvenile salmon to swim through. A breach of the terminal or the causeway would be wider (proposed to be 10 m wide) than the 3-m box culverts installed in the Squamish River estuary and will be effective in mitigating a project-related migration disruption: project-related migration disruption was predicted to range between 7 and 14% - less than the 20% of juvenile salmon that apparently successfully swam through 3-m box culverts in the Squamish River estuary. • Tidal connectivity: <ul style="list-style-type: none"> ○ A breach will be tidally connected and passable to juvenile salmon (i.e., with minimum water depth of 0.5 m) when the tidal flats are inundated (during rising or high tide) which also coincides with when juvenile salmon access intertidal habitats. The amount of time during the daily tidal cycle a breach will be tidally connected will be sufficient to allow for passage of approximately 35 to 70 juvenile salmon per day; hence the project-related effect will be mitigated. ○ When the tide is low, the tidal flats are also dry and juvenile salmon will have moved to offshore subtidal areas where they seek refuge in the Fraser River plume. • Light conditions: <ul style="list-style-type: none"> ○ Discussed below (#9, #12, #13)) • Debris accumulation:

#	Submission section	Assertion	Response of the port authority
			<ul style="list-style-type: none"> Discussed below (#10)
5	David Scott, “Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions”, (2022), (Appendix 1, Section 4, p.6))	Based on this data the VFPA conducted a modelling exercise which then predicted the additional migration disruption	<p>This is a misconception. The potential for the project to disrupt the migration of juvenile salmon was qualitatively assessed in the EIS (CIAR #181). The migration disruption quantified in IR2020-2.2 (CIAR #2083) assesses the same effect, not an additional effect. Specifically,</p> <ul style="list-style-type: none"> Potential project-related disruption to the outmigration of juvenile salmon was assessed qualitatively in the EIS, based on empirical and literature information, to result in a minor (6-30%) loss in juvenile salmon productivity pre-mitigation (EIS Section 13.6.2.1, CIAR #181). Further, as noted in the previous response, modelling conducted to respond to the minister’s IR2020-2.2 (Appendix IR2020-2.2-E, CIAR #2083) quantified project-related disruption to outmigration of juvenile salmon; modelling showed that potential project-related disruption to migration may divert away from the inter-causeway area approximately 7% to 14% of juvenile salmon abundance.
6	David Scott, “Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions”, (2022), (Appendix 1, Section 4, p.6, p.13, p.14))	<p>Canadian Science Advisory Secretariat assessed the recovery potential for the Harrison River Chinook salmon population (DU2). Based on the assessed threats, over the next three generations it is expected that there will be a population level decline of 31-100% for DU2 (Harrison Chinook).</p> <p>The VFPA is suggesting it could take 12 years before all the projects are fully productive, which is three full generations for the average ocean type Chinook in the Fraser River. Considering that Harrison River Chinook are designated as Threatened by COSEWIC, three full generations of reduced productivity may result in a serious impact which may not be easily compensated by potential future increases in productivity when offsetting projects eventually become productive, if they are even able to meet their productivity goals at all.</p>	<p>The port authority notes that the coalition comment misstates the information presented in IR2020-1.2 (CIAR #2083).</p> <ul style="list-style-type: none"> A 12-year time lag does not correspond to 12 years of reduced productivity at Roberts Bank. A 12-year time lag has been applied as a conservative assumption in quantifying the additional gains in productivity of intertidal marsh with the project over existing conditions. Further, this predicted time lag applies only to intertidal marsh habitats and not to the other offsetting habitat types Placement of the terminal in subtidal waters will greatly reduce a direct project overlap with the preferred habitat. Marshes in the assessment area will continue to offer productive rearing opportunities to Harrison Chinook juveniles during and post-project construction. To this, offsetting will add additional marshes to the system. Also, indirect gains in the productivity of intertidal marsh are predicted due to the wave shadow effect with terminal placement in subtidal waters. A net gain in productivity is predicted for juvenile Chinook salmon and intertidal marsh even with 12 years of discounting of the additional productivity gains. <p>The DFO CSAS review referred to by Mr. Scott provides an assessment of the recovery potential for Chinook stocks, including Harrison Chinook. For Harrison Chinook specifically, DFO identifies the following factors that have the potential to limit the recovery potential of the stock: climate change, pollution, fishing, ecosystem modifications (e.g., linear development), hatchery releases, and natural factors (e.g., predation). The only limiting factor identified by DFO CSAS that pertains to the RBT2 Project is ecosystem modifications. The potential effects of ecosystem modifications that will result from the project have been assessed. In summary, with avoidance, reduction, and offsetting measures, the project will result in a net gain in the productivity of juvenile Chinook salmon, including indirect productivity gains due to food web linkages and ecosystem level increases in juvenile Chinook salmon prey (macrofauna). This is described in IR2020-1.2 (CIAR #2083).</p> <p>The port authority’s IR response (IR2020-1.1, CIAR #2083) provides information about additional (relative to those described in the EIS and considered the panel) offsetting projects, both onsite and offsite, that will benefit juvenile Chinook salmon stocks potentially affected by the project. The productivity of the offsetting projects has been evaluated, taking into account concerns identified in the Scott Report, that is, uncertainty and time lag. The IR response demonstrates that the residual effect to juvenile Chinook salmon will be less than that assessed by the panel (IR2020-1.2, CIAR #2083).</p>
7	David Scott, “Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions”, (2022), (Appendix 1, Section 4, p.6))	It would seem that an impact of 7-14% per year on a population which currently has a High-Extreme threat rating and that is noted as particularly sensitive to loss of estuarine habitats would be significant and limit the potential for the population to recover.	<p>As discussed in the responses above, the proposed terminal breach or a breach of the causeway would be effective in mitigating a potential disruption to juvenile salmon migration from RBT2 (as quantified in Appendix IR2020-2.2-E, CIAR #2083).</p> <p>Terminal placement in subtidal (lower productivity) waters will greatly reduce overlap with (and a direct footprint effect on) more productive intertidal habitats, such as intertidal marsh and native eelgrass, which provide food and refuge opportunities for juvenile salmon rearing at Roberts Bank. Estuarine habitats will not be lost with the project and will continue to function and sustain juvenile salmon rearing at Roberts Bank during and post-project construction.</p> <p>Placement of the marine terminal in subtidal waters, away from more productive juvenile salmon habitat in the intertidal zone, is also predicted to increase productivity of juvenile salmon indirectly. Specifically, the configuration of the marine terminal is predicted to create a wave shadow effect immediately north of the terminal where physical conditions are predicted to become conducive to increases in juvenile salmon prey (macrofauna) and rearing habitat (intertidal marsh, native eelgrass) (CIAR #181). Further, as noted in IR2020-1.2, “this disruption and apparent effect is unlikely to result in a loss of Chinook salmon productivity because those individuals diverted from the inter-causeway area will either remain north of the causeway, where they will benefit</p>

#	Submission section	Assertion	Response of the port authority
			<p>from the increased productivity in new offset habitats (described in IR2020-1.1) and increases with the project in native eelgrass and intertidal marsh forecasted by the ecosystem model (described in IR2020-1.2), and/or they will migrate and successfully rear in offshore and other nearshore habitats in the estuary” (CIAR #2083).</p> <p>With mitigation, the project will not limit the potential for Harrison Chinook to recover.</p>
8	David Scott, “Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions”, (2022), (Appendix 1, Section 4, p.6))	The proposed breaches are too narrow to attract a significant amount of flow and therefore, fish are connected for only a portion of the tidal cycle due to their elevation	<p>As discussed above, based on information provided by the coalition, 3 m wide culverts installed through a training berm in the Squamish River estuary allowed for 20% of juvenile salmon to swim through. A breach of the terminal or the causeway would be wider (proposed to be 10 m wide) than the 3-m box culverts installed in the Squamish River estuary and will be effective in mitigating a project-related migration disruption, which is predicted to range between 7 and 14%—less than the 20% of juvenile salmon that were documented to swim through 3-m box culverts in the Squamish River estuary.</p> <p>The detailed design of a fish passage breach would be undertaken following a decision to allow the project to proceed, confirmation of feasibility, and DFO’s direction per draft condition 7.2. Potential breach locations and designs were evaluated to respond to the minister’s IR (IR2020-2.2, CIAR #2083). The port authority assessment determined that the percentage of time the breach will have minimum water depth of 0.5 m to allow for fish passage increases with a decrease in elevation. More juvenile salmon will encounter and use a breach located further away from shore (e.g., at Location 3 or at the marine terminal, IR2020-2.2, CIAR #2083), because at those locations, a breach would be wetted longer. At higher elevations, although a breach would be wetted for less amount of time relative to other locations evaluated, the percent time wetted will nevertheless allow for 35 to 70 juvenile salmon a day to pass through, which will offset the project’s effect on juvenile salmon migration.</p> <p>At higher elevations, during the times a breach would not be tidally connected (due to low tide), the tidal flats would also be drained, and juvenile salmon would be occupying offshore waters, as noted above. Therefore, whether a breach is tidally connected or not during a low tide is not relevant, as the fish would not be there to use it.</p>
9	David Scott, “Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions”, (2022), (Appendix 1, Section 4, p.6))	...will be very long dark culverts which are unlikely to attract juvenile salmon passage	This assertion is a based on a misconception. Illumination during the day is proposed as part of the breach design. Lighting conditions in the culverts will be such that allow fish passage, as described in IR2020-2.2 (CIAR #2083). During the night, the culverts will be dark to reduce the risk of disrupting circadian rhythms, causing the salmon to aggregate under the light, delaying migration, and attracting predators. This evaluation is based on literature, synthesized in the response to the review panel (IR5-25, CIAR #935). As noted above, the detailed design of a fish passage breach would be undertaken following a decision to allow the project to proceed, confirmation of feasibility, and DFO’s direction per draft condition 7.2.
10	David Scott, “Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions”, (2022), (Appendix 1, Section 4, p.6))	The narrow width and long distance also make it likely that the breaches would become clogged with debris further impeding juvenile salmon passage.	Concerns regarding clogging and maintenance of fish passage is considered by the port authority in IR2020-2.2 (CIAR #2083) and measures to mitigate the effect will be considered further in the detailed design of a fish passage breach (draft condition 7.1). Further, as per draft condition 7.14.2, the port authority will monitor the use of the breach for fish passage by juvenile salmon.
11	David Scott, “Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions”, (2022), (Appendix 1, Section 4, p.7 and p. 11; Section 8, p.18))	<p>While the terminal breach is connected for most of the tidal cycle it does not compensate for the ongoing migration disruption noted by VFPA</p> <p>The VFPA’s own field assessment has demonstrated the current Roberts Bank terminal results in a significant migration disruption to juvenile Chinook salmon (Phillips and Karpouzi 2021)</p> <p>Recent research by the VFPA (Phillips and Karpouzi 2021) has demonstrated that the current causeway and terminal are resulting in juvenile Chinook salmon failing to reach the inter-causeway area, an area of particularly high productivity.</p>	<p>This comment is not with respect to the Designated Project but to a potential effect resulting from existing infrastructure. As noted in Section 3.1 of this submission, conditions must relate to the environment effects resulting from the project. Nonetheless, the port authority provided information to the review panel regarding the current displacement of juvenile salmon from rearing habitats at Roberts Bank from existing infrastructure (IR5-22, CIAR #935).</p> <p>With regards to the recent research conducted by the port authority as part of the project’s juvenile salmon follow-up program element, data collected in 2020 and 2021 indicate no differences in densities of juvenile chum salmon between north and south of the existing causeway. This result suggests a uniform distribution across the flats and that access to habitats in the inter-causeway area is not impeded by existing infrastructure. Compared to juvenile Chinook salmon, juvenile chum salmon adapt physiologically to higher salinities early and access habitats away from the river mouth (such as south of the causeway) readily. Juvenile Chinook salmon, on the other hand, take longer to adapt physiologically to saline conditions, and outmigration to habitats away from the river mouth is gradual. This is reflected in higher densities of juvenile Chinook salmon estimated in 2020 and 2021 north of the causeway and off Westham Island than south of the causeway. These results indicate that juvenile Chinook salmon are distributed in brackish marshes in and around the river mouth (the first habitat type they encounter during their outmigration) to take advantage of food and refuge opportunities during a time of fast growth and to physiologically adapt to higher salinities. Transition to marine environments occurs gradually (and irrespective of the existing infrastructure) when juvenile Chinook salmon are larger in body size and tolerant of saline conditions.</p>

#	Submission section	Assertion	Response of the port authority
			The 2020 and 2021 findings align with peer-reviewed scientific literature as follows. Chalifour et al. (2021; Dave Scott is a co-author) report that 78% of salmon (sampled) were caught in the brackish marsh (Westham Island, Brunswick Point), which is the first estuarine habitat encountered and the one with the lowest salinity. This pattern was strong enough to suggest a true difference in abundance among habitats (other habitats surveyed included eelgrass and sandflat). The marine signature (at the otolith edge) increased both as Chinook salmon moved outward to more saline habitats and as they spent more days in the estuary, regardless of habitat. Harrison Chinook salmon were predominantly caught in the marsh at small sizes, after which they migrated out to the flats into more saline environments, as indicated by the larger size composition of Harrison fish in eelgrass and sand flat and the increase in catch in these outer habitats later in the season.
12	David Scott, "Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions", (2022), (Appendix 1, Section 4, p.8))	During the juvenile salmon outmigration period the majority of the higher tides occur during the night when the lights in the culvert would not be illuminated, therefore even during the portion of the tidal cycle when the breach would be connected a much smaller portion of that time would the lights be illuminated.	<p>The assumption in this assertion is that juvenile salmon outmigrate during the night. However, there is no literature that suggests that to be the case. Melnychuk and Welch (2018) found no diel pattern in outmigration of juvenile salmon to the Fraser River estuary. This was attributed to extreme silt loads in the Fraser River mainstem which reduce light levels to near zero within centimetres of the surface, and camouflaging from bottom-oriented predators, which reduces the risk of visual predation during daylight hours.</p> <p>In any event, during the night, everywhere in the marine environment will be dark, not just in the culverts. Proposing to light the culvert during the night is contrary to literature documenting increased predation under bright conditions at night. As described in the response to the review panel (IR5-25, CIAR #935), artificial lighting at night may increase the risk of juvenile salmon predation. Predators may be attracted by nighttime lighting to areas where juvenile salmon may congregate (Ginetz and Larkin 1976, Martel and Dill 1995, Yurk and Trites 2000, Nightingale et al. 2006, Ono et al. 2010). For example, Martel and Dill (1995) found that, under laboratory conditions, common mergansers took advantage of increased foraging activity higher in the water column under artificially lit conditions to prey on juvenile coho salmon. In the Puntledge River in B.C., harbour seals entered the river at dusk and appeared to use artificial nighttime lighting of overwater structures to prey heavily on migrating juvenile salmon (Yurk and Trites 2000).</p>
13	David Scott, "Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions", (2022), (Appendix 1, Section 4, p.8))	Instead, the terminal lights would be on which have the potential to disrupt juvenile salmon migration as noted by the VFPA, making it unlikely that juvenile salmon would use the breaches in the dark.	The port authority considers terminal lighting in its response to the minister's IR (IR2020-2.2, CIAR #2083). The port authority proposes to direct light away from the marine environment as required by draft condition 5.1. Further, draft condition 5.2 requires a follow-up program element be developed that will verify effectiveness of such mitigation, including consideration of spring-summer period when salmon are present at Roberts Bank (draft condition 5.2.2).
14	David Scott, "Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions", (2022), (Appendix 1, Section 4, p.8))	Overall, it is my professional opinion that it is highly unlikely that the scale, number and design of breaches being proposed will mitigate the project-related disruption of juvenile Chinook salmon migration caused by the project. To have a greater chance of effectively mitigating the migration disruption caused by the proposed expansion I would recommend a series of breaches in the causeway as well as the terminal breach at a minimum.	In this statement, Mr. Scott is expressing an opinion about the combined impact of the existing causeway and the RBT2 Project. The port authority conducted an objective, quantitative analysis of the potential for the project to impact juvenile salmon migration in response to the minister's IR (CIAR #2083). That analysis quantifies the potential effect from the Designated Project. As discussed above, a breach of either the terminal or the causeway will mitigate the predicted effect.
15	David Scott, "Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions", (2022), (Appendix 1, Section 5, p.9))	<p>Regarding the productivity approach, the VFPA (IR2020-1.2 page 2) states that "[e]cosystem modelling, supported by the review panel, demonstrates that the new RBT2 terminal will indirectly increase marsh and eelgrass productivity in the biophysical local assessment area (LAA)...</p> <p>However, the review panel in their final report found that the project would result in significant and adverse impacts to juvenile Chinook salmon, which demonstrates that the panel clearly does not support the results of the ecosystem modelling presented by the VFPA thus it should not have been further considered as a line of evidence when developing the offsetting plan.</p>	<p>The port authority notes that this assertion is misleading.</p> <p>In the response to the minister's IR (IR2020-1.2, CIAR #2083), the port authority refers to the review panel's support for an ecosystem model that was specific to marsh and eelgrass, not to juvenile salmon.</p> <p>The review panel concluded that the ecosystem model provided credible results for lower trophic levels including primary producers (these include marsh and eelgrass) and secondary consumers as well as stationary, habitat forming species. The review panel also acknowledged the use of multiple lines of evidence in the assessment. The review panel did not conclude that the ecosystem model outputs should be dropped from any further calculations.</p>

#	Submission section	Assertion	Response of the port authority
16	David Scott, "Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions", (2022), (Appendix 1, Section 5, p.9))	It is likely that juvenile chinook rely on a continuum of habitats during their estuary rearing period (Chalifour et al. 2019, Woo et al. 2019) and sand and mud flat and adjacent subtidal areas may provide important low tide refuges for juvenile salmon that cannot be appreciated using [the relative values] approach.	<p>The fish and fish habitat offsetting plan (IR2020-1.1, CIAR #2083) proposed by the port authority is based on the principles that:</p> <ul style="list-style-type: none"> • As Mr. Scott states, juvenile salmon rely on a continuum of habitats during the outmigration period. • The project will result primarily in the loss of offshore subtidal sand and mud, a habitat type that juvenile salmon do not associate with. There will only be some loss of intertidal sand and mud. • Marsh and eelgrass are more valuable habitats, and availability is constrained. <p>Consequently, the port authority proposes to offset the loss of less valuable, relatively more available sand and mud habitat with more valuable, less common marsh and eelgrass habitat, which have been found to be the most valuable habitats to estuarine-rearing juvenile salmon (Chalifour et al. 2019 and 2021).</p> <p>Based on their research from Chalifour et al. (2019; Mr. Scott is co-author):</p> <p>"In this system, marsh appears to be the most used habitat by emigrating salmon. Despite using a smaller net for marsh sampling, we consistently caught salmon in substantially higher numbers in marsh sites than eelgrass or sand flat sites throughout the emigration period... Sand flat supported high abundances of arrow goby and flatfish in the estuary (<i>no mention of juvenile salmon</i>)..."</p> <p>Mr. Scott mischaracterizes the habitat value of subtidal sand and mud, which will be predominantly affected by the project. In contrast, intertidal sand and mud provide some value to juvenile salmon as they connect with higher valued vegetative habitats (i.e., marsh and eelgrass). However, intertidal sand and mud habitats provide no food or cover to juvenile salmon as do marsh and eelgrass. Subtidal sand and mud are of lower value to juvenile salmon compared to intertidal sand and mud. When the flats are dry during low tide, juvenile salmon occupy near surface waters influenced by the Fraser River plume. This habitat type is expansive along the delta foreslope and not limiting. Juvenile salmon do not associate with subtidal sand and mud substrates. The relative value offshore and subtidal sand and mud were ranked accordingly in the minister's response to IR2020-1.2 (CIAR #2083). Thus, the claims made by Mr. Scott are unsubstantiated.</p>
17	David Scott, "Ecojustice Memo Re: RBT2 Final IR Responses and Draft Conditions", (2022), (Appendix 1, Section 5, p.11))	While this particular project [South Causeway Eelgrass project] may succeed in producing dense native eelgrass habitat it is likely that a significant portion of the juvenile Chinook impacted by the proposed expansion will not be able to access this particular offsetting habitat.	<p>Based on existing literature, native eelgrass is used by larger juvenile Chinook salmon that have transitioned to more saline environments. Chalifour et al. (2021; Mr. Scott is a co-author) report that Harrison Chinook salmon were predominantly caught in the marsh at small sizes, after which they migrated out to the flats into more saline environments, as indicated by the larger size composition of Harrison fish in eelgrass and sand flat and the increase in catch in these outer habitats later in the season. It is likely that the contribution of eelgrass to the productivity of smaller/younger Chinook juveniles is smaller than of those that have transitioned to nearshore coastal areas where eelgrass beds are present.</p> <p>The port authority notes that the offsetting calculations used to quantify the benefit of the proposed offsetting is not restricted to or focused on only the smaller Chinook individuals and includes those that are larger (IR2020-1.2, CIAR #2083). As a result, the contribution of eelgrass to the offsetting productivity calculations should not be discounted. Eelgrass in the outer bounds of the Fraser River estuary are greatly important to larger/older Chinook juveniles (providing food and refuge), thus contributing to their marine survival and recruitment to the adult population.</p>

Appendix 2.6-B Response to Veirs Report

Part 1 Port authority evaluation of Veirs Report

The coalition makes submissions on the port authority's response to the minister's IR regarding mitigation for southern resident killer whales (SRKW) (IR2020-2.3 and IR2020-3, [CIAR #2083](#)). In support of those submissions, the coalition relies on the report, Conservation Coalition review of "Agency conditions and VFPA responses to Minister's Information Requests", dated March 4, 2022, by Scott Veirs, Ph.D. and Val Veirs, Ph.D. (the "Veirs Report").

The primary focus of the Veirs Report is on uncertainty. In particular, the authors point to the potential for uncertainty in the estimates of i) acoustic effects and ii) effectiveness of mitigation measures presented in the IR responses. The authors base their views of uncertainty primarily on criticism of the validity and conservatism of the assumptions used in the effects and mitigation effectiveness models. They also suggested a number of potential additional mitigation measures.

The authors of the Veirs Report restate their commentary, unchanged from those presented by the coalition at the public hearing, including the following statements:

- a) The Veirs report states that the port authority has underestimated the potential acoustic and cumulative effects to SRKW from the project,
- b) The Veirs report states that the project effects will not be fully mitigated
- c) The Veirs report states that the project will jeopardize the survival and recovery of SRKW.

The authors base their conclusions on i) their previous work, which the review panel considered in reaching its conclusions, and ii) criticism of the IR response.

In respect of the decision facing the minister in this assessment, there is a fundamental limit to relevance of the information provided in the Veirs Report. The authors of the Veirs Report disagree with the certainty of the additional information provided in the IR response. However, any criticism of the uncertainty of the **additional** information cannot detract from the fact that the additional information can only add to the breadth, depth, and certainty of information made available to the minister.

Evaluation of the uncertainties identified in the Veirs Report

A detailed evaluation of the uncertainties brought forward in the Veirs Report was conducted by the port authority's experts. This evaluation is supported by the memo that follows in **Part 2** of this appendix, containing a technical evaluation of the Veirs report. The port authority's technical evaluation concludes that the Veirs Report does not demonstrate that there are any material flaws in the methods employed in estimating the potential acoustic effects to SRKW nor in the conclusions presented in the IR responses (IR2020-2.3 and IR2020-3, [CIAR #2083](#)). The evaluation supports the port authority's assertion that the assumptions used to estimate acoustic effects and evaluate mitigation effectiveness in the IR responses are valid and based on the best-available science.

The Veirs Report provides alternative assumptions for estimating acoustic effects. As discussed in the supporting memo below (**Part 2**), additional analyses were conducted to evaluate those assumptions to assess their validity and implications for the assessment of effects to SRKW. The proposed alternative assumptions presented by Veirs are founded solely on professional opinion or incorporate technical bases that are sometimes incorrect or unsubstantiated. Where suggestions were potentially valid, further analysis was performed that demonstrate the suggestions would not materially change the results or conclusions presented in the responses to the minister's IRs (see **Part 2**), including Veirs' suggestions

regarding assumptions for the Closest Point of Approach for SRKW transits and the behavioural disturbance thresholds.

Assumptions for Closest Point of Approach

Closest Point of Approach (CPA) for SRKW transits were used to estimate potential lost foraging time per killer whale from project construction and operation. The Veirs Report specifically expressed concerns regarding the assumptions of CPA location and SRKW densities. Their recommendations were evaluated:

- *CPA location*: additional modelling confirms that the location used to determine the CPA cannot be considered inappropriate and less precautionary than the alternative locations proposed by the Veirs Report. The CPA used in the acoustic modelling in the IR response yields similar or higher potential lost foraging time estimates (and is therefore similar or more conservative) than the alternatives proposed by the Veirs Report (see **Part 2**).
- *Assumption that maximum SRKW densities occur at the berth face*: the authors of the Veirs Report advocate for using a highly conservative assumption—that the maximum densities of SRKW (and modelled number of transits) occur at the berth face—to estimate project effects. Not surprisingly, this assumption would result in higher estimates of potential lost foraging time per killer whale. However, this suggestion is not supported by the long-term sightings data relied on to respond to the IR or additional evidence presented in the supporting memo below (**Part 2**). Revising estimates based on the suggested overly precautionary and unrealistic assumption is not warranted.

Assumptions for behavioural disturbance thresholds

The Veirs Report also suggests the behavioural disturbance thresholds applied by the port authority, which are based on broadband noise, are inappropriate to estimate effects to SRKW. They propose an alternative noise frequency band (10-50 kHz) to define behavioural disturbance thresholds based on hearing sensitivity and their professional opinion. The authors do not provide new or accurate data or analyses to support their opinion.

The threshold applied by the port authority is defensible and inclusive of effects within the frequency band proposed by the authors. Specifically, the thresholds used in the analyses to respond to the minister's IRs (i.e., 120 dB broadband, 8 – 70 kHz) incorporates the sensitive 10-50 kHz range and echolocation click masking thresholds at 20 kHz and 50 kHz, which are specifically within the sensitive range of SRKW. Further, the 120 dB threshold is supported by killer whale-specific data responding to large commercial vessel noise (see **Part 2**) and recommendations from Gomez et al. (2016) (Appendix IR2020-3-H, [CIAR #2083](#)). The Veirs' approach is limited to peak hearing sensitivity, which could ignore killer whale response to other noise frequencies and therefore is not necessarily appropriate or a better approach than using broadband noise, which assumes behavioural disturbance over a broad range of frequencies.

Recommendations regarding mitigation

The Veirs Report also makes recommendations regarding mitigation. The port authority notes the following:

- As described in IR2020-2.3 ([CIAR #2083](#)), stop work procedures will be implemented year-round and will be informed by all available sources of SRKW detections. The size of a suitable buffer zone for SRKW will be determined as part of the marine mammal detection and response plan (draft condition 8.2.6).
- DFO noted in their submission ([CIAR #2407](#)) that “The information provided in the response increases DFO’s confidence that technically and economically feasible measures to mitigate

underwater noise from Project construction have been explored and appropriate mitigation measures have been identified for further development. DFO would expect to further engage with the Proponent on the Underwater Noise Management Plan, including the SRKW detection plan and stop work procedures”.

- Veirs’ suggestion of restricting in-water construction to April (or March to May) is not well supported by data and not feasible based on overlap with the juvenile salmon fisheries-sensitive window (i.e., would not comply with draft condition 7.3.1.2) and other constraints presented in IR2020-2.3 ([CIAR #2083](#)).
- Some of the proposed mitigation measures by Veirs (e.g., nighttime unberthing, tug slowdowns), are addressed by the port authority in the suggested revisions and additions to the draft conditions in part 8 in Appendix 3.2-A.
- Many of the other mitigation measures suggested are outside the port authority’s care and control. However, there are numerous draft conditions that would require the port authority to participate in various regional initiatives that are intended to address regional cumulative effects to SRKW and from marine shipping incidental to the project. These draft conditions (with revisions and additions suggested by the port authority in Appendix 3.2-A of this submission) reflect an appropriate approach to addressing the project’s contribution to cumulative effects, in a manner consistent with the key principles outlined in Section 3.1 of this submission.

Part 2 Supporting memo: Technical evaluation of Veirs Report



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MEMORANDUM

TO: Vancouver Fraser Port Authority
FROM: Ecofish Research Ltd., SMRU Consulting, and JASCO Applied Sciences Ltd.
DATE: April 21, 2022
FILE: Roberts Bank Terminal 2 Project

RE: Technical Review of Conservation Coalitions' Submission Including Technical Papers and Identification of New Issues

1. SUMMARY

As part of the Conservation Coalition's submission regarding additional information and potential conditions for the Vancouver Fraser Port Authority (port authority) proposed Roberts Bank Terminal 2 (RBT2) Project, the Veirs Report (Appendix 2 of the submission) described a number of concerns related to the assumptions of the models used to estimate potential effects to southern resident killer whales (SRKW) from project construction, operation, and marine shipping incidental to the project, as well as effectiveness of mitigation measures proposed (IR2020-2.3¹ and IR2020-3², CIAR #2083). We examined these concerns and suggestions to assess their validity and conducted additional analyses to evaluate potential implications for the assessment of effects to SRKW. After detailed evaluation, we found that the proposed more conservative or alternative assumptions were primarily founded on professional opinion or included a technical basis that was incorrect or unsubstantiated. The analyses performed showed that these suggestions did not materially change the results or conclusions presented in the port authority's responses to the information request. This evaluation supports that the assumptions previously used to estimate acoustic effects are valid and based on the best-available science. In conclusion, the Veirs Report does not identify any critical flaws or uncertainties in the

¹ IR2020-2.3 Avoidance and mitigation measures for project construction - underwater noise and southern resident killer whales. <https://iaac-acic.gc.ca/050/documents/p80054/141572E.pdf>

² IR2020-3 Avoidance and mitigation measures for project operation and marine shipping incidental to the project. <https://iaac-acic.gc.ca/050/documents/p80054/141574E.pdf>

estimation of potential acoustic effects to SRKW or alter the conclusions of the port authority's responses to information requests.

2. INTRODUCTION

The Conservation Coalition provided a submission³ as part of the public comments on additional information and potential conditions for the RBT2 project. The submission is related to the port authority's responses (IR2020-2.3 and IR2020-3) to the minister of Environment and Climate Change Canada's information request (IR) (CIAR Document #2067⁴) regarding mitigation for SRKW.

The Veirs Report (Appendix 2 of the Conservation Coalition submission) focused on potential uncertainties in the estimates of acoustic effects to SRKW and the effectiveness of mitigation measures presented in IR2020-2.3 and IR2020-3 by critiquing the validity and conservatism of the assumptions used in the models. The concerns related to key themes that included SRKW movement patterns, buffer zones, frequency range of noise, closest point of approach, SRKW density assumptions, and stop work procedures. The authors also suggested a number of potential mitigation measures.

The objective of this memorandum is to provide a description of the key criticisms brought forward in the Veirs Report as well as the results and conclusions from our additional analyses in response to these criticisms. We evaluated the key points, arguments, and recommendations made in the Veirs Report to assess their validity and evaluated the implications for the assessment of potential effects to SRKW from the project using additional analyses.

The authors of this memorandum are key authors of the technical reports for the assessment of potential effects to SRKW from the project:

- Alejandro Buren, Ph.D. Marine Mammal Research Scientist, sub-consultant to Ecofish Research Ltd.
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- Alexander MacGillivray, M.Sc. Senior Scientist, JASCO Applied Sciences.
- Jason Wood, Ph.D. Managing Director, SMRU Consulting.
- Amy Johnson, Ph.D. Marine Scientist, Ecofish Research Ltd.
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³ CIAR Document #3322 Submissions on Behalf of David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation, & Wilderness Committee. <https://iaacaeic.gc.ca/050/evaluations/proj/80054/contributions/id/58142>

⁴ CIAR Document #2067 From the Minister of Environment and Climate Change to the Vancouver Fraser Port Authority re: Information Request. <https://www.ceaa-acee.gc.ca/050/documents/p80054/135827E.pdf>

3. EVALUATION OF KEY POINTS RAISED AND TECHNICAL RESPONSE

3.1. Sex differences in behavioural responses

The authors of the Veirs Report suggest that females have greater response to noise than males based on a recent publication (Holt et al. 2021) and therefore the acoustic effects model would underestimate effects on females and their offspring.

“...we think it is likely that females have a greater avoidance response to vessel noise than males. If correct, it would mean lost foraging time may be underestimated by the construction impact models which do not account for sex differences” (p. 5).

We have reviewed Holt et al. (2021), which showed that there are differences in responses to noise between males and females when responding specifically to multiple whale watching boats within 400 m. Sex is part of the context of the exposure of whales to noise and the results from the study are consistent with the findings of Gomez et al. (2016) that sex and other demographic factors are important considerations. As part of IR2020-3, we described how we addressed uncertainties identified in Gomez et al. (2016), as requested by the minister, and how we incorporated their recommendations into our assessment:

“For RBT2, data used to derive SRKW-specific behavioural response thresholds were from resident killer whales exposed to vessel noise, which addresses the recommendation by Gomez et al. to use species-specific data and a relevant sound source. These data were collected from whales with previous exposure to the sound source type that were captured at various distances to the noise sources and likely from different demographics (e.g., sex and age), which addresses the recommendation by Gomez et al. to consider contextual factors such as previous exposure, proximity, and demographic factors.” (p. 22, Appendix IR2020-3-H⁵, CIAR #2083).

Holt et al. (2021) do not provide the sound level data to incorporate into a sex-specific dose-response behavioural response function. Furthermore, data derived from close approaches of whale watching boats are contextually and spectrally (i.e., in noise frequencies emitted) very different from passing transits of large commercial vessels, which are more relevant to the project and on which the current dose-response functions are derived; therefore, the data would not likely be useful to improve our commercial vessel focused thresholds.

⁵ Appendix IR2020-3-H. Gomez et al.'s (2016) findings relevant to 2020 Minister's information request regarding avoidance and other mitigation measures for Southern Resident Killer Whales from RBT2 operations and marine shipping associated with the project. <https://iaac-aeic.gc.ca/050/documents/p80054/141575E.pdf>

As part of IR2020-3, we acknowledged that there is uncertainty in the probability of response to noise of individual whales, including between sexes. We used a dose-response function to assign probability of response, making conservative decisions wherever possible. To partially address uncertainty in the contextual severity of the effect, we adopted more conservative (higher) probability of response coefficients than for the Environmental Impact Statement (EIS), by basing the coefficients on the low behavioural dose-response curve rather than basing the coefficients on the moderate dose-response curve. In addition, we also conservatively used the arithmetic means of the probabilities of response within each acoustic effect zone considered, despite the fact that noise propagates in a logarithmic manner. We also assumed that SRKW forage 100% of the time, despite evidence that SRKW spend 40-67% of their time foraging (Ford et al. 2017) (which Veirs and Veirs “applauded” in their comments on p. 11 of their expert report). In addition, we carried out an assessment of uncertainty of the severity of SRKW behavioural response to noise by assigning the probability of feeding cessation from the upper confidence interval of the low behavioural dose-response curve (described in Appendix IR2020-3-D).

Regarding the consideration of demographic factors in the assessment of effects to SRKW, Fisheries and Oceans Canada (DFO), in their submission (CIAR 2407⁶), stated “The Proponent described how uncertainties identified in Gomez et al. in the assessment of behavioural disturbance of SRKW were considered” (p. 38) and had no further comments.

Conclusion: We consider that the conservative assumptions made and the assessment of uncertainty adequately captures the sex-specific uncertainty raised by the Veirs Report as it includes variability in response of individuals, including males, females, and offspring. The comments and new data identified are unlikely to affect the overarching results and conclusions presented in the port authority’s responses to the minister’s IR.

3.2. Upper limit of estimates

The authors suggest that the mean acoustic effect predictions are not precautionary enough and that the upper limit should be used.

“... modeling would be appropriately precautionary only if they were to use the proponent’s upper limit of lost foraging time (7.6 hours/whale over six years) instead of the approximate mean (2 hours/whale).” (p. 6).

We provided confidence intervals to describe the range of the magnitude of potential effects with and without mitigation. This is a standard approach to present results; upper limits are included in the results and inherently considered in the conclusions.

⁶ RBT2 - Public Comment Period - DFO Comments on VFPA IR Responses. <https://iaacacic.gc.ca/050/evaluations/proj/80054/contributions/id/57155>

Conclusion: The comment does not change the results or conclusions presented in the port authority’s responses to the minister’s IR.

3.3. Closest point of approach

The authors suggest that there is uncertainty related to the closest point of approach (CPA) estimated. They argue it is not precautionary and propose alternatives.

“A second source of uncertainty are key assumptions of the new models, including ... the “polygon strip” used to estimate the closest point of approach (CPA) of SRKW’s to the proposed pile driving activities” (p. 8).

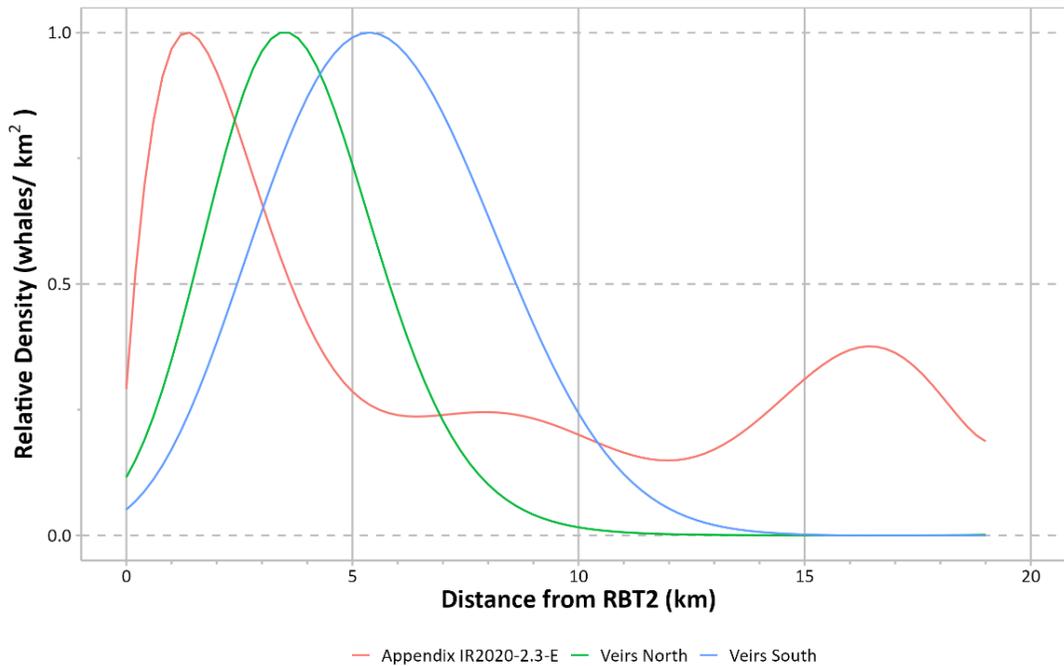
“We believe that this rectangular region, oriented by the proponents orthogonal to the terminal face, is one of the least precautionary assumptions that could be made in characterizing CPA” (p. 9).

“It would be more precautionary to assume that orthogonal to the berthing face, the foraging activity of SRKW’s is distributed spatially as Figure 4 depicts it north of the fan-shaped travel corridors associated with Active and Boundary Passes. This could be accomplished by orienting the strip orthogonal to the shoreline offshore from the south or north arms of the Fraser River mouth” (p. 9).

We are confident that the approach used to estimate CPA used the best available data to determine the proximity of SRKW to the RBT2 terminal berth face (i.e., the IR responses used the empirical sightings data available). This was estimated based on the 16-year comprehensive datasets ($n = 3,572$ sightings) of SRKW sightings from the BC Cetacean Sightings Network (for Canada) and Orca Master (for the U.S.) from 2002 to 2017. We consider the location of the “polygon strip” directly off the proposed berth face to be both logical and defensible.

Notwithstanding, we examined the Veirs Report suggestion to use two alternative strips. We compared the functions of relative whale density as a function of perpendicular distance from the RBT2 berth face. The resulting curves using the location of the strips suggested by the Veirs Report resulted in relative density functions with peaks located further away from the berth face (Figure 1). Both of the new Veirs’ strip selections have peak proximity much further away from the berth face (i.e., less precautionary) than the one used in the acoustic effects model, but neither predict any killer whale transits to occur beyond 14 km from the berth face. The Veirs strips do not reflect that some individuals that are present within 20 km of RBT2 transit on the western (Gulf Island) side of the Strait of Georgia (as documented by NOAA satellite tagging and through focal follow reports by the Centre of Whale Research), which are captured in the polygon strip used in our analyses. We note that these sightings were conservatively included to inform the total number of SRKW transits in the model.

Figure 1. Overlay of polygon strips used in Appendix IR2020-2.3-E and the two proposed strips in Figure 4 of the Veirs Report: at the north arm of the Fraser River (Veirs North) and at the sound arm (Veirs South).



To fully understand the implications of using the suggested alternate “polygon strips”, we repeated the simulations presented in the Appendix IR2020-2.3-E⁷ using the relative whale density functions for both of the proposed strip locations suggested in the Veirs Report (hereafter referred to as Veirs South and Veirs North). The estimates of potential lost foraging time per killer whale using the relative whale density function implemented in Appendix IR2020-2.3-E (Table 1) are similar to those using Veirs South (Table 3) or higher than those using Veirs North (Table 2) and are therefore similar or more conservative than the alternatives proposed in the Veirs Report.

⁷ Appendix IR2020-2.3-E. Assessing effectiveness of mitigation to reduce potential acoustic effects on Southern Resident Killer Whales from project construction (technical data report). <https://iaacacic.gc.ca/050/documents/p80054/141573E.pdf>

Table 1. Estimates of potential lost foraging time per killer whale using the polygon location for relative whale density from Appendix IR2020-2.3-E.

Appendix IR2020-2.3-E

Mitigation Strategy	Potential lost foraging time per killer whale		
	Median (h)	LCI (h)	UCI (h)
Reference Concept Design Schedule	42.0	35.1	49.3
Modified Schedule (Option 1) (MS)	29.1	23.7	34.7
MS + MMO NOAA	11.3	8.7	14.1
MS + PAM	10.0	6.8	13.7
MS + PAM & MMO NOAA	5.6	3.7	7.6
MS + Perfect Detection	2.3	1.2	3.6

Table 2. Estimates of potential lost foraging time per killer whale using the proposed Veirs North polygon as the location for relative whale density.

Veirs North

Mitigation Strategy	Potential lost foraging time per killer whale		
	Median (h)	LCI (h)	UCI (h)
Reference Concept Design Schedule	-	-	-
Modified Schedule (Option 1) (MS)	14.7	11.2	18.4
MS + MMO NOAA	7.7	5.6	10.0
MS + PAM	6.3	4.1	8.9
MS + PAM & MMO NOAA	4.6	3.1	6.3
MS + Perfect Detection	0.3	0.0	0.9

Table 3. Estimates of potential lost foraging time per killer whale using the proposed Veirs South polygon as location for relative whale density.

Veirs South

Mitigation Strategy	Potential lost foraging time per killer whale		
	Median (h)	LCI (h)	UCI (h)
Reference Concept Design Schedule	-	-	-
Modified Schedule (Option 1) (MS)	27.3	23.5	31.4
MS + MMO NOAA	11.9	9.7	14.3
MS + PAM	10.0	7.2	13.1
MS + PAM & MMO NOAA	6.1	4.6	7.9
MS + Perfect Detection	0.9	0.3	1.8

Our approach included individuals coming from Active Pass and Boundary Pass which may potentially travel in a route other than parallel to the berth face when at distances 10-20 km from the terminal.

Close to the terminal, we expect whales would likely follow the travel corridor parallel to the berth face and bathymetric contours, which are within distances where acoustic effects from the project are anticipated (i.e., <8 km).

Conclusion: Based on the additional analyses conducted, we confirm that our approach was empirically derived and logical and both reasonable and precautionary compared with alternative strip locations proposed in the Veirs Report. The additional modelling indicates that the location used to determine CPA cannot be considered inappropriate and less precautionary than the alternative locations proposed by the Veirs Report.

3.4. SRKW density

The authors suggest that the study should also assume the highest whale density at the berth face.

“Possibly even more dangerous is the additional assumption that the density of SRKWs is not maximum at the berth face.” (p. 10)

“ ... it would be much more precautionary to assume that the maximum observed density in either purple strip in Figure 4 represents the SRKW density at the berth face.” (p. 10)

Assuming that the maximum observed density represents the SRKW density at the berth face would be unrealistic. This suggestion is indeed a much more precautionary concept, but is not based on empirical evidence that supports its use. Importantly, using such an assumption would not change the potential risk (danger) of acoustic injury from impact piling (pile driving analyzer (PDA) testing), because, as indicated in Appendix IR2020-2.3-E, the potential for acoustic injury can be completely mitigated by implementing an effective sound attenuation method (as per draft condition 8.1.4). Where data were available to quantify acoustic effects, we have considered and incorporated them into the analyses, and where there were uncertainties or limited data, we incorporated conservatism and carried out sensitivity analyses. Given that we have used available empirical sightings data to estimate CPA, which showed a peak number of transits at ~1.5 km from the proposed terminal berth face (i.e., not at the berth face itself), we do not think it is appropriate to incorporate further conservatism for this assumption for the purpose of modelling potential effects and effectiveness of mitigation measures.

Conclusion: Using maximum densities at the proposed terminal berth face would be overly precautionary and unrealistic; this is not supported by the long-term sightings data we have relied on or additional evidence. Therefore, revising estimates based on this more precautionary assumption is not warranted.

3.5. SRKW speed

The authors argue that the speed of whales that was assumed in the acoustic effects model is not representative of foraging.

“A second source of uncertainty are key assumptions of the new models, including SRKW transit speed” (p. 8). “... the speed used to model the exposure to noise for SRKWs moving through the noise field is based on the traveling behavioral state. It would have been more precautionary to assume a slower speed through the modeled noise field during foraging than the mean speed of traveling SKRWs: 5.75 km/hr (Williams and Noren, 2009).” (p. 11-12).

We note that this statement is incorrect. The swimming speed that was used for the study was reported by Williams and Noren (2009) as the mean speed in travel/forage state. They specifically state “Data for this study were collected from NRKW’s in what we refer to as the travel/forage state, an activity state in which they are engaged for 60%–66.5% of their time (Williams et al. 2006). The average swimming speed reported in the current study (1.6 m/s) agrees well with the average foraging speed of 1.7 m/s observed at the surface by Ford (1989) and the mean travel/forage speeds of 1.8 m/s and 1.3 m/s for males and females, respectively, reported by Williams et al. (2002).”

Notwithstanding, we carried out a sensitivity analysis to assess the effect of swimming speed on the estimates of potential lost foraging time per killer whale. We compared our results presented in Appendix IR2020-2.3-E (Table 4) with the more conservative travel/forage speed as proposed in the Veirs Report. We used the speed from Williams et al. (2002) of 1.3 m/s for females (Table 5; results from 5,000 Monte Carlo iterations). The results with this more conservative speed (Table 5) would be slightly higher but the increase falls within the confidence intervals of the estimates presented in Appendix IR2020-2.3-E. When comparing results for the “Perfect Detection” scenarios, the results were not substantially different.

Table 4. Results presented in Appendix IR2020-2.3-E based on SRKW swimming speed of 1.6 m/s.

Mitigation Strategy	Potential lost foraging time per killer whale		
	Median (h)	LCI (h)	UCI (h)
Reference Concept Design Schedule	42.0	35.1	49.3
Modified Schedule (Option 1) (MS)	29.1	23.7	34.7
MS + MMO NOAA	11.3	8.7	14.1
MS + PAM	10.0	6.8	13.7
MS + PAM & MMO NOAA	5.6	3.7	7.6
MS + Perfect Detection	2.3	1.2	3.6

Table 5. Results from the sensitivity analysis based on SRKW swimming speed of 1.3 m/s.

Mitigation Strategy	Potential lost foraging time per killer whale		
	Median (h)	LCI (h)	UCI (h)
Reference Concept Design Schedule	-	-	-
Modified Schedule (Option 1) (MS)	34.9	28.1	41.8
MS + MMO NOAA	13.0	9.9	16.4
MS + PAM	12.3	8.2	16.9
MS + PAM & MMO NOAA	6.8	4.5	9.3
MS + Perfect Detection	2.6	1.3	4.1

Conclusion: The literature supports the speed assumption used in our analyses. Using a lower and more conservative swimming speed would increase our estimates of median potential lost foraging time slightly but the increase falls within the confidence intervals of the estimates presented in Appendix IR2020-2.3-E. Therefore, the comment does not change the results or conclusions presented in the port authority’s response to the minister’s IR.

3.6. Population disturbance hours

The authors argue that it is more appropriate to sum all the disturbance hours of individuals to obtain lost foraging time for the population per year.

“Also, we find the proponent’s unit of hours/whale less informative than if we convert to days lost for the population (~75 whales): 2 hours/whale over 6 years is equivalent to more than 1 day per year for the population; 7.6 hours/whale converts to almost 4 days/year.” (p. 6).

We disagree in principle with the approach proposed in the Veirs Report as it does not have a logical biological basis and, in isolation, the estimates would be misleading and harder to contextualize. The effect of feeding cessation or missed feeding opportunities are realized at the individual level. Those individual level effects may then lead to population level effects when considering cumulative effects. However, individual level effects may not always translate into population level effects, as individuals may have the ability to buffer or compensate some of these effects (i.e., make up for lost foraging opportunities at other times).

For these reasons, we consider that the metric to report the effects of behavioural response to acoustic disturbance should be expressed at the individual level. We reported the expected mean number of hours of potential lost foraging time, with their corresponding 95% confidence interval, with the aim

of providing a description of the expected potential lost foraging time any individual may incur and the effectiveness of mitigation.

Conclusion: The converted lost foraging time estimates presented in the Veirs Report are inappropriately derived. This comment does not change the results and conclusions presented by the port authority in IR2020-2.3.

3.7. SRKW peak use period

The authors indicate that SRKW movement patterns have changed and this introduces significant uncertainty in the effectiveness of detection and thus mitigation. They suggest the peak use period and avoidance of noisy activities be shifted (limit noisy activities to April or Mar-May compared to avoiding the peak use period of June-Sept. as proposed for the IR responses (draft condition 8.1.7).

“... other potential acoustic impacts during the construction phase remain of concern to us, especially given recent changes in SRKW movement patterns -- specifically an increased use of the southern Strait of Georgia during fall/winter relative to spring/summer (Olson et al. 2018; Canadian Science Advisory Secretariat 2021).” (p. 4).

“One emerging source of uncertainty is whether the SRKW movement patterns have changed significantly during the environmental assessment process.” (p. 6).

The authors state that the issue of shifting SRKW movement patterns was “...first raised by recent data from DFO that showed a higher likelihood of SRKW presence at Roberts Bank in September recently (DFO, 2021) than would be expected from the long-term historic means used in the proponent’s models (including most-recent data that are ~5 years old now).” (p. 6).

The authors argue that “An even more recent example of this change is 2021 opportunistic sightings of SRKWs within the Salish Sea (Figure 2) that show occurrence was the *opposite* of the seasonal habitat use statistics used by the proponent.” (p. 6).

“We are concerned that this emerging usage pattern could cause a significant departure from the proponent’s 16-year average of “~19 days in winter (November to April)” (Appendix IR2020-2.3-E, page 8, <https://iaac-aeic.gc.ca/050/documents/p80054/141573E.pdf>) upon which some of the construction mitigation measures are based.” (p. 7).

“Specifically, this new movement pattern calls into question the optimal timing for the noisiest construction activities described under mitigation evaluation” (p. 7).

“Thus, to take a more precautionary approach, we recommend that impact-pile driving and other construction activities that cause higher-risk in-water noise be limited to the month of April (or at least the Mar-May period).” (p. 7-8).

Recent shifts in SRKW movement patterns were considered in responding to the minister’s IR. As stated in Appendix IR2020-2.3-E, “Information recently published by DFO (2021) shows a high likelihood of SRKW presence at Roberts Bank in September, which focused on whale watching data from May to October 2009-2018. Similarly, when considering trends from recent years (2009-2017), the comprehensive sightings dataset used for this study identifies June 1 to September 30 as the peak use period for SRKW at Roberts Bank (Figure 2). This longer SRKW peak use period was used as the period to avoid, where feasible, when evaluating alternative timing for noisiest construction activities described under mitigation evaluation in Section 2.4.4.” (p. 9).

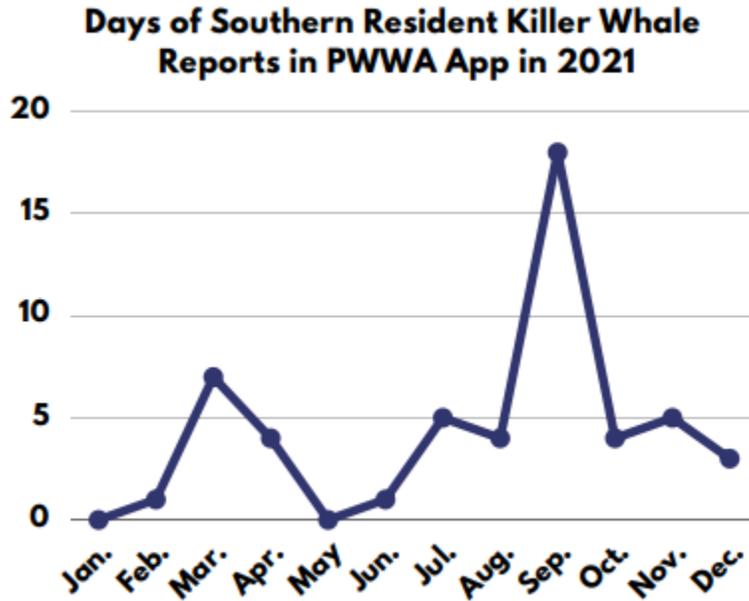
We reviewed data presented in Figure 2 of the Veirs Report. It was not possible to count the number of sightings within 20 km of RBT2 on the figure and directly compare with the data presented in Appendix IR2020-2.3-E because sources and methods differed. In addition, the order in which data are plotted in Figure 2 of the Veirs Report accentuates September to November sightings, as these are plotted last and will obscure the sightings from other seasons. Due to these challenges in interpreting Figure 2 of the Veirs Report, we investigated the data sources referenced in their figure that were available: Pacific Whale Watch Association report for 2021⁸ and sightings reports on OrcaNetwork for 2021⁹.

We examined the Pacific Whale Watch Association (PWWA) report for 2021 and found that SRKW were reported on 99 days in the entire waters of the Salish Sea, with a marked peak in September 2021 and relatively low sighting days for the rest of the year (Figure 2). This further supports our inclusion of September in the peak use period. We acknowledge an increased variability in SRKW sighting days in recent years but the 2021 PWWA data does not suggest an overall higher use in November to April, which we considered “winter”, than May to October, which we considered “summer” (i.e., it is not an *opposite* pattern to that described in the long-term dataset).

⁸ Pacific Whale Watch Association. 2021. 2021 sightings and sentinel actions. <https://static1.squarespace.com/static/581cbad4be6594d1fe23358b/t/6233dd1c776d87008fad2f26/1647566360133/PWWA+2021+Sightings+%26+Sentinel+Actions+Report.pdf>

⁹ Orca Network. 2021. <https://www.orcanetwork.org/sightings-network>

Figure 2. Days of SRKW reports in 2021 in the Pacific Whale Watch Association (PWWA) App from PWWA (2022).



We also examined sightings reports on OrcaNetwork for 2021. There were only five SRKW sighting days from January to April and November to December 2021 within ~20 km of RBT2 (winter). This is slightly more than the winter mean of 3.7 sightings across the 16 years summarised and reported in Table 1 of Appendix IR2020-2.3-E, but within the variability of the data, and well below the 19 winter transits actually modelled (based on the correction factors we included for “winter” sightings effort and night-time). Therefore, it is unlikely that our model would have underestimated potential effects to SRKW in winter if considering sighting days from 2021 (i.e., it would not likely be a significant departure from the 16-year average of ~19 winter transits in winter (November to April) with sightings effort and night-time corrections).

With regards to the proposed timing in the Veirs Report of April (or Mar-May) to conduct impact piling (PDA tests) or vibratory pile installation (the higher-risk in-water noise), the 2021 data examined does not support this suggestion. Moreover, this would not be feasible because it is outside the window of least risk for juvenile salmon (August 16 – February 28, per draft condition 7.3.1.2). Given that adult salmon is an important food source for SRKW, it would not be considered precautionary to conduct the work during that period.

As part of IR2020-2.3, we considered that SRKW can be present in the area year-round. As noted in the minister’s response, “Not all activities generating underwater noise could be planned to avoid the SRKW peak use period. Material delivery and placement, dredging the dredge basin, and pumping

ashore of dredgeate and Fraser River sand to fill the terminal are timed based on other environmental, economic, and technical constraints. These factors preclude these activities from being planned to entirely avoid the peak use period without compromising the viability of the project (Appendix IR2020-2.3-A). However, both during and outside the SRKW peak use period, the port authority will implement the full suite of mitigation measures, including the use of exclusion zones (Section 4.1), marine mammal detection (Section 4.2), and stop work procedures when SRKW are detected (Section 4.3) to avoid potential acoustic injury and avoid or further reduce potential behavioural effects to SRKW”. (p. 6).

Conclusions: Recent trends in SRKW movement were accounted for in the definition of the peak use period. In addition, 2021 data identified in the Veirs Report do not suggest notably larger numbers of SRKW within 20 km of Roberts Bank than were modelled in winter for IR2020-2.3. It is not feasible to restrict higher-risk in-water noise to April (nor Mar-May) as it would coincide outside the window of least risk for juvenile salmon (future prey of SRKW). Mitigation measures will be in place year-round to mitigate effects to SRKW if they are present outside the peak use period.

3.8. Stop work procedures

The authors recommended that stop work measures based on SRKW presence within the Salish Sea be a planned mitigation measure year-round (instead of based on monitoring and detection methods proposed closer to the project).

“Related to this, we recommend that stop work measures based on SRKW presence within the Salish Sea be a planned mitigation measure year-round, rather than a contingency plan with an ambiguous cessation area.” (p. 8).

Stop work measures will be applied year-round (not just as a contingency), as noted in IR2020-2.3, and will be informed by all available sources of SRKW detections (not just marine mammal observers). This will include sources of early detection, which may be relied upon to initiate a shut-down when exclusions zones including buffers are large or outside the effectiveness of on-site detection systems to ensure activities are stopped before SRKW enter the applicable activity-based exclusion zone.

This is described in IR2020-2.3:

“The port authority is proposing to effectively detect SRKW before they enter the applicable exclusion zones (Appendix IR2020-2.3-D). The marine mammal detection team will continuously monitor for the presence of SRKW relying on complementary detection techniques during the in-water construction period. The detection system will integrate multiple, complementary detection techniques, including proven technology as well as novel and emerging approaches.” (p. 11).

“The port authority will also apply a thorough early detection system making use of the broad range of available data from scientists, non-profit organizations, and the public on SRKW sightings and acoustic detections. The marine mammal detection team would actively use these early detection sources of information to track SRKW to identify when individuals are approaching Roberts Bank. Early detection sources could include shared sightings by the Canadian Coast Guard’s Marine Mammal Desk, community groups (e.g., Saturna Islanders), near real-time tracking by vessel operators via the BC Cetacean Sightings Network’s Whale Report Alert System application, or detections by non-project hydrophones such as from DFO’s Whale Tracking Network, Transport Canada’s Underwater Listening Station in Boundary Pass, Oceans Network Canada, Department of National Defence, or Saturna Island Marine Research and Education Society (SIMRES).” (p. 11-12).

Triggering a shut down or avoiding construction activities based on the mere presence of SRKW in the Salish Sea, as proposed in the Veirs Report, would not be reasonable because project construction would not affect the species if SRKW are, for example, in Haro Strait. As required as part of draft condition 8.2, a marine mammal detection and response plan will be developed that will define the area for early detection sources and where/when stop works will be implemented, including the size of the buffer zone (draft condition 8.2.6). Mitigation measures will be further developed as required by and in accordance with the draft conditions prior to the commencement of construction, and through the regulatory permitting process, in consultation with relevant authorities and Indigenous groups.

We note that DFO stated in their submission during the public comment period that the port authority identified appropriate and feasible mitigation measures and that DFO will further consult with the port authority on stop work procedures. Specifically, DFO noted that “The information provided in the response increases DFO’s confidence that technically and economically feasible measures to mitigate underwater noise from Project construction have been explored and appropriate mitigation measures have been identified for further development. DFO would expect to further engage with the Proponent on the Underwater Noise Management Plan, including the SRKW detection plan and stop work procedures” (p. 32).

Conclusion: Stop work procedures will be implemented year-round and will be informed by all available sources of SRKW detections, in addition to project specific methods. The area for the early detection sources and stop work procedures will be defined as part of the marine mammal detection and response plan as required through the regulatory permitting process.

3.9. Buffer zone

The authors recommend a 3+ km buffer beyond the SRKW exclusion zone and state it is likely feasible and effective.

“Pending a reassessment of the SRKW density function in the acoustic effects modeling, we recommend a radial buffer beyond the exclusion zone for a particular activity of at least +3 kilometers, or about half of an hour of SRKW traveling at their mean speed of ~6 km/hr. Based on the proponent’s estimate that “effective range of PAM system (~6 km) and MMO NOAA protocols (up to 6 km)” and typical exclusion zone radii for RBT2 activities, we think that reliable detection within this increased buffer will be feasible.” (p. 12).

This comment is consistent with port authority’s commitment to detect SRKW before they enter the exclusion zone. The size of suitable buffers has not been determined yet. As indicated by the Veirs Report, the proposed 3+ km may be reasonable to monitor given the average exclusion zone and detection range of passive acoustic monitoring and marine mammal observers. As described in IR2020-2.3, “...for most of the in-water construction period (for 31 of the 58 months of in-water construction), the exclusion zones will be less than 2 km, with the largest exclusion zone (>7 km) necessary for less than 5 of the 58 months of in-water construction (Table IR2020-2.3-1).” (p. 8).

The size of the buffer zone will depend on the in-water work activity or activities occurring and the time needed to modify and/or halt construction activities once a SRKW is detected. In Appendix IR2020-2.3-A¹⁰, potential equipment shut-down timing was estimated: “The operator’s ability to shut down noise-generating activities that could impact SRKW, and how long safe shut-down would take, depends on the specific type of equipment and construction activity. For example, the cutter suction dredge while dredging the dredge basin and the hopper dredge while pumping ashore are expected to require 10-15 minutes to safely shut down the pumps and clear the discharge piping during standard shut-down procedures, although this may be quicker in case of an emergency.” (p. 15). Other typical marine equipment shut-down times were <5 minutes. Based on the anticipated maximum of 15 minutes, the potential buffer zone required would be 1.5 km. Additional time may be warranted to account for communication with the construction crew and animals that may travel more rapidly.

Where exclusion zones are larger than about 4.5 km, a larger buffer is likely required to account for areas outside the effective detection range of the anticipated on-site detection systems (~6 km). The size of the buffer may depend on the coverage provided by early detection sources to supplement detection coverage and need to account for how long it takes to receive these notifications. In those

¹⁰ Appendix IR2020-2.3-A. Opportunities to avoid or further reduce construction activities effects on SRKW.
<https://iaac-aec.gc.ca/050/documents/p80054/141573E.pdf>

cases, a buffer larger than 3+ km would likely be considered to inform potential shut-down before SRKW are in the exclusion zone.

Conclusion: The size of a suitable buffer zone for SRKW will be determined as part of the marine mammal detection and response plan (draft condition 8.2.6) based on the in-water work activity or activities occurring at any given time. The size of the buffer zone will account for the time required to communicate to the contractor and modify or shut down the specific in-water construction activity(ies), as well as sufficient distance so that SRKW do not enter the exclusion zone boundary. The buffer zone will therefore likely vary in size over time based on activities.

3.10. Slow tugs

The authors state that there are benefits to slow tugs from a sound exposure level perspective that are not captured in Appendix IR2020-3-D. They recommend an optimal mitigation plan would stipulate not a fixed speed limit (e.g., 5 knots), but even lower minimum speeds for the tugs during each of their activities.

"The conclusion, summarized below, that faster tugs create a smaller acoustic disturbance seems to be incorrect. "We evaluated the effectiveness of a vessel-assist tug traveling at 5 knots rather than the typical 8 knots. This is because even though slower tugs have a smaller acoustic footprint, the time required for slower tugs to transit back and forth from the tug basin to the container vessel is longer thus there is a higher probability the traveling tug overlaps a transiting SRKW" (IR2020-3, pg. 28 <https://iaacaeic.gc.ca/050/documents/p80054/141574E.pdf>)

In a simple Monte Carlo simulation that we developed, a tug goes back and forth between two locations sometimes at 5 kts and sometimes at 8 kts leaving each station on the hour. The model suggests that it is actually better from a sound exposure level (SEL) perspective for the tug to go at the slower speed (by 3 dB SEL; see Attachment D)." (p. 15).

"The 3 dB difference predicted by our model is consistent with the 2.5-2.8 dB noise level reduction reported by ECHO due to the Haro Strait voluntary slowdown. If slowing commercial ships in Haro Strait works, then the same physics supports our model calculation that slower tugs will cause less disturbance than an equal number of faster tugs.

As a general rule, all classes of vessels should slow as much as possible to minimize their acoustic impact on SRKWs. In the case of tugs un/berthing container ships, an optimal mitigation plan would stipulate not a fixed speed limit (e.g., 5 knots), but even lower minimum speeds for the tugs during each of their activities: the guidance should be to use the lowest speed possible (below a set limit) at which they can still

accomplish their functions safely. For any given source level, the lower your speed, the more likely the noise level received by a SRKW will be below the natural background noise levels.” (p. 15-16).

The authors of the Veirs Report suggest that it is incorrect for slow tugs to create potentially higher acoustic disturbance. They provide an example of their own simulation showing lower sound exposure levels, which suggest benefits to the whales. The simulation used a different sound metric (sound exposure levels) instead of the potential lost foraging time metric used in Appendix IR2020-3-D¹¹. Although whales could experience lower sound exposure levels based on the simulation in the Veirs Report, the results do not provide an estimate of effects of that exposure on the whale, which makes it difficult to determine magnitude of potential benefits.

We agree that for a given transit, if there is spatio-temporal overlap between the SRKW transit and a travelling tug, there could be benefits in terms of noise exposure when tugs travel slower. However, the defining feature of whales transiting through the zone and vessels moving to and from the terminal is that they are ephemeral (i.e., they only occur during a small portion of the time). Thus, given that both are ephemeral, the probability that they overlap in time and space must be accounted for any time the interaction between them is simulated. We accounted for this in our simulation and found that although the acoustic footprint of a tug travelling at 5 knots (slow tug) is smaller than that of a tug travelling at 8 knots, it takes a slow tug longer to complete its journey, therefore increasing the probability of spatio-temporal overlap with transiting whales. The Veirs Report presents the sound exposure level experienced by a whale estimated in one instance when they overlap. Thus, by not considering the probability of spatio-temporal overlap, the estimated sound exposure level benefits presented in the Veirs Report are biased.

IR2020-3 noted the potential small benefit of slow tugs and that slow tugs would be feasible for the port authority to implement but this was not proposed as a mitigation measure because of the small modelled benefits and possibility that it might increase effects in some cases when considering potential exposures of whales. The Veirs supplemental analysis supports the conclusion that there could be a benefit from tug slow downs in terms of noise reduction for the whales when they overlap but this does not support a higher overall benefit than modelled when considering the probability of overlap.

In their submission, DFO indicated that if feasible, slow tugs should be implemented despite small modelled benefits. In response, the port authority proposed a new sub-condition under draft condition 8.5 to require tugs to reduce speeds when transiting between tug basin and the arrival and berth areas

¹¹ Appendix IR2020-3-D. Technical data report – Assessing effectiveness of mitigation at the terminal to reduce potential acoustic effects on Southern Resident Killer Whales from project operation. <https://iaac-aeic.gc.ca/050/documents/p80054/141575E.pdf>

when SRKW are present, if feasible and safe to do so, which is consistent with potential benefits we modelled and described by the Veirs Report when there is spatio-temporal overlap.

With regards to the optimal tug speeds and the suggestion to go as slow as safely possible, the modelling for Appendix IR2020-3-C¹² showed variability in the noise reduction from slowdowns for different types of tugs. The specific tugs operating at the terminal may exhibit different trends of noise with speed. The effectiveness of slowdowns at mitigating noise from these vessels would need to be assessed and considered in setting speed limits for tugs at Roberts Bank.

Conclusion: There could be a small benefit from tug slowdowns in terms of noise reduction for the whales when they overlap but not likely a higher benefit than previously modelled because the analysis from the Veirs Report did not take into account the low probability that tugs and SRKW overlap in time and space in their analysis. The port authority has suggested revisions to draft condition 8.5 to require tugs to reduce speeds when SRKW are present, if feasible and safe to do so. The optimal speed for tugs would need to be determined at a later stage once tugs are selected.

3.11. Frequency range of noise

The authors argue it is not appropriate to use broadband noise levels to assess behavioural effects and that the analysis of noise from Mega-Max ships likely underestimates lost foraging time.

“The acoustic effects model is not appropriate, in part because it assumes noise above 1 kHz does not have any behavioural effect. Broadband evaluations must include energy in the hearing range of the SRKW.” (p. 13).

“While it is conventional to use the 120 dB broadband level as a threshold of disturbance, there is no real behavioural science behind applying this number for killer whales. The only peer reviewed direct observation of underwater noise correlating with change of behaviour in SRKW is the discovery that the source level (loudness) used by orcas increases as the broadband noise around those orcas increases (Holt et al. 2009). However, the 120 dB broadband level does give a reference level that is helpful for making relative comparisons (Richardson et al.1995).”

“It must be noted that SRKW are relatively insensitive to noise with frequencies less than about 1 kHz. Hence, the 120 dB ‘broadband threshold’ is actually affecting SRKW because of the acoustic power at the high frequencies used for communication and echolocation, especially where SRKW hearing is most sensitive (Figure 7). Most of the acoustic energy, measured in dB, that is emitted by large ships is in the ‘low frequency’

¹² Appendix IR2020-3-C. Technical data report – Underwater Noise Modelling of RBT2 Project Operation.
<https://iaac-aec.gc.ca/050/documents/p80054/141575E.pdf>

regime, with peak noise power well below 1000 Hz. Noise at these low frequencies is not within the hearing range of the SRKW. But, ship noise extends well into the frequency ranges where SRKWs hear well, communicate, and echolocate (Veirs, Veirs, and Wood 2016).”

A frequency band ~10-50 kHz approximately (Figure 7) is the band of frequencies that the SRKW use for communication and for echolocation. It is noise in this frequency region that affects the ability of SRKW to communicate with their conspecifics and to use echolocation clicks to find the salmon prey that they desperately need. The use of the 120 dB broadband threshold of disturbance is predicated on the assumption that broadband noise has high frequency components that affect SRKW behaviour.” (p. 13).

“Thus, it is inaccurate for the proponents to state “Consequently, vessel size has a greater influence on echolocation click masking thresholds (above 1 kHz) than on behavioural response thresholds (which are dominated by noise below 1 kHz).” (Appendix IR2020-3-A, pg. 311, <https://iaac-aeic.gc.ca/050/documents/p80054/141574E.pdf>). Behavioural response evaluations must include the portions of acoustic energy that SRKW can hear and hence respond to, with needed assumptions spelled out.” (p. 14)

“The proponents predict that Mega-Max container ships will not radiate increased broadband levels of underwater noise. But, their modeled source level frequency spectra show that the Mega-Max ships will be 5-10 dB more intense at frequencies precisely in the frequency range where the SRKW hear best. It is essential that all comparisons between the acoustic impacts of Mega-Max ships and other container ships incorporate this difference in high-frequency emissions (see Attachment C).

We conclude that the proponent’s analysis of noise from Mega-Max ships likely results in the acoustic effects model underestimating lost foraging time.” (p. 15).

“All future modeling should incorporate the most sensitive hearing range of the SRKW into evaluating potential acoustic impacts on these whales. In contrast, the proponents propose to model only broadband levels when estimating SRKW exposures to noise...” (p. 16)

We disagree with the statement that “there is no real behavioural science behind applying this number (i.e., the 120 dB threshold) for killer whales”. We did not simply apply this as a generic multispecies marine mammal behavioural disturbance threshold, but because it was supported by killer whale-specific data responding to large commercial vessel noise. As noted in IR2020-3, we used an

approach consistent with the recommendations from Gomez et al. (2016) to use a species-specific and sound source-specific (e.g., vessel noise) approach and both observational and acoustic data to inform thresholds (Appendix IR2020-3-H). Gomez et al. (2016) also identified other contextual factors that should be considered such as previous exposure to the noise source, proximity to it, and demographic factors (e.g., sex and age). The studies completed for the RBT2 EIS incorporated the key recommendations from Gomez et al. (2016). For RBT2, data used to derive SRKW-specific behavioural response thresholds were from resident killer whales exposed to vessel noise, which addresses the recommendation by Gomez et al. (2016) to use species-specific data and a relevant sound source. These data were collected from killer whales with previous exposure to the sound source type that were captured at various distances to the noise sources and likely from different demographics (e.g., sex and age), which addresses the recommendation by Gomez et al. (2016) to consider contextual factors such as previous exposure, proximity, and demographic factors (see Appendix IR2020-3-H for more details). The use of 120 dB for SRKW in the models to support the IR responses was supported by the killer whale-specific dose-response functions developed for the EIS. The dose-response predicted a 1% probability of response for moderate severity behavioural response and 10% probability of response for low severity behavioural responses. This is further described in Appendix IR2020-2.3-E and in Appendix IR2020-3-H in relation to Gomez et al. (2016)'s recommendations. Further, DFO previously described the approach adopted by the port authority in the EIS for deriving behavioural response thresholds as superior to using generic thresholds (DFO 2017).

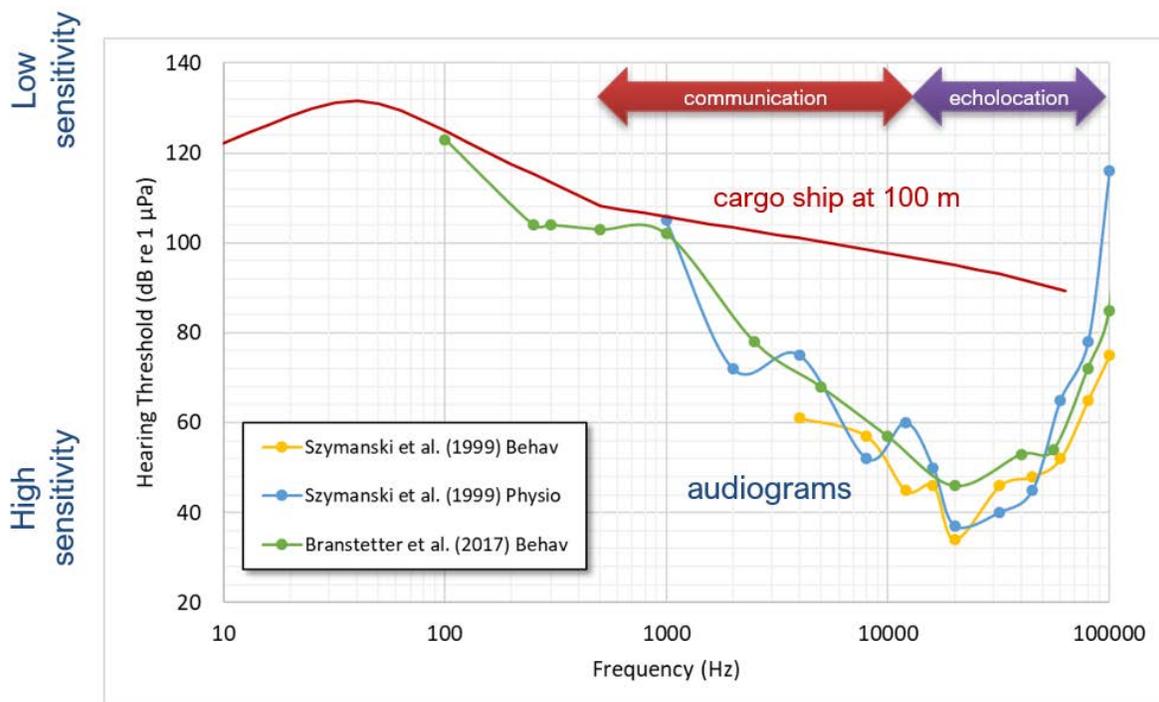
The statement “The acoustic effects model is not appropriate, in part because it assumes noise above 1 kHz does not have any behavioural effect” is incorrect. Broadband noise levels used in the acoustic modelling included frequencies up to 70 kHz, and not just noise below 1 kHz. The quote from Appendix IR2020-3-E (p. 15) referred to in the Veirs Report was related solely to frequency differences in vessel size, which occurred above 1 kHz. We did not assume that no behavioural responses occurred above 1 kHz in the assessment of behavioural responses.

Regarding the Veirs Report suggestion that “A frequency band ~10-50 kHz” should be used, we note that the important frequencies that SRKW use for communication and for echolocation are fully incorporated in broadband noise levels (i.e., 8 Hz to 70 kHz) that we used to define behavioural disturbance thresholds to respond to the minister’s IR. In addition to disturbance thresholds based on broadband noise, we also assessed additional potential effects from vessel noise on SRKW foraging within two echolocation click masking bands at 20 kHz and 50 kHz in IR2020-3. We note that these bands are within the range suggested by the Veirs Report. We also note that DFO did not have additional comments in their submission to the public comment period related to behavioural and masking thresholds.

Furthermore, the communication band for killer whales is generally considered to be broader (0.5 to 15 kHz) (Heise et al. 2017) than that suggested by the Veirs Report and extends to frequencies below

1000 Hz. Also, audiogram data show that SRKW can hear at frequencies lower than 1000 Hz, although their hearing is much less sensitive in this range (Figure 3). Therefore, the statement that “Noise at these low frequencies (below 1000 Hz) is not within the hearing range of the SRKW.” (p. 13) is incorrect.

Figure 3. Killer whale hearing sensitivity and communication and echolocation frequency ranges.



To further support the selection of a broadband noise threshold as appropriate for SRKW, we note that when developing the dose-response curves to inform behavioural response thresholds for the EIS (SMRU 2014), we found a better relationship between acoustic effects (specifically the Lombard effect the Veirs Report mentioned when citing killer whale responses to elevated noise in the publication by Holt et al. 2009) and broadband noise than when considering data weighted based on the killer whale’s audiogram or other hearing weighting approaches (i.e., considering the sensitivity to noise at different frequencies), which is why a broadband approach was selected for developing dose-response thresholds for SRKW. As described in SMRU (2014), “The regression of SRKW SL (source level) with the four frequency weighted and frequency band noise measurements selected for comparison resulted in linear slopes from 1 (SRKW audiogram weighted) to 1.2 (1 to 40 kHz band noise) (Figures 11 to 14). The R-squared values for these regressions were all lower than the regression

with broadband noise (0.82; Figure 7) and ranged from 0.67 (SRKW audiogram weighted) to 0.78 (M-weighted), which indicate a poorer fit. This suggests that broadband noise measurement of RL [received level] is better at predicting vocal compensation (in this case the Lombard effect) than the other noise metrics” (p. 244). This finding suggests that there are contextual aspects to noise. As an example, Kastelein et al. (2022) found that porpoises respond to noise at frequencies in lower hearing sensitivity range, further illustrating that using a threshold based on frequencies within peak hearing sensitivity could ignore killer whale responses to other noise frequencies and therefore would not necessarily be appropriate or a better approach than using broadband noise.

With regards to the suggestion from the Veirs Report to incorporate the most sensitive hearing range of the SRKW into evaluating potential acoustic impacts in future modelling and follow-up monitoring, the port authority suggests (in Appendix 3.2-A of the port authority’s submission) that noise monitoring metrics for the follow-up program will be developed and finalized in consultation with DFO, Transport Canada, Indigenous groups, and other relevant authorities.

Conclusion: The 120 dB broadband and echolocation click masking thresholds (at 20 kHz and 50 kHz) used in our analyses are inclusive of effects within the frequency band proposed in the Veirs Report. Focusing our analyses on the narrow band (~10-50 kHz) suggested in the Veirs Reports is not substantiated by the literature and would offer no additional certainty over the methods applied to respond to the minister’s IRs.

4. CONCLUSION

After detailed evaluation, we found that the proposed alternative assumptions in the Veirs Report were primarily founded on professional opinion or included a technical basis that was sometimes incorrect or unsubstantiated. Where suggestions were potentially valid, further analysis was performed that demonstrated the suggestions would not materially change the results or conclusions presented in the responses to the minister’s IRs. We conclude that the Veirs Report does not identify any critical flaws in how SRKW potential acoustic effects were estimated or in the conclusions of the IR responses.

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Yours truly,

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Appendix 2.6-C Response to comments by non-government organizations on draft conditions

Preface

In submissions during the public comment period, several non-government organizations have included specific suggestions to revise or add to the draft potential conditions. The port authority has reviewed these suggestions to evaluate the technical and economic feasibility of any suggested measures, in addition to considering other relevant factors, such as the key principles that must underlie the conditions, as described in Section 3.1 of this submission. The port authority has provided a response to some suggestions by non-government organizations, where a response may be helpful to IAAC in drafting conditions. The port authority's responses are provided below in **Tables 1** through **5** as follows:

- Table 1 – Response to comments of Birds Canada
- Table 2 – Response to comments of Pacific Whale Watch Association
- Table 3 – Response to comments of Worldocean Consulting
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- Table 5 – Response to comments of Ecojustice on behalf of David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation, and Wilderness Committee

Table 1 – Response to comments of Birds Canada

Posted March 14, 2022. [CIAR #3133](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
BC-1	N/A		1.1 A Draft Condition be included requiring the Port of Vancouver to contribute \$1.1 million a year ³ in funding to “implement intergovernmental management programs for the improvement and long-term environmental management of the Fraser River estuary and the Salish Sea. The programs should include: a governance body made up of public and private sector stakeholders and representatives of Indigenous groups....” ¹	<p>The port authority notes that under CEAA 2012 and the <i>Impact Assessment Act</i> it is not appropriate to impose direct financial requirements in conditions.</p> <p>Intergovernmental management of both the Fraser River estuary and the Salish Sea is a shared responsibility. The draft Whole of Government Response outlines a number of initiatives underway and in development by the Government of Canada that may support future consideration of intergovernmental management programs. The Government of Canada acknowledged that any such program would need to be a joint effort between government, Indigenous groups, and stakeholders.</p> <p>The port authority was an active participant of the previous management of the Fraser River estuary aimed to assist in the management of ecological health of the Fraser River and its estuary (Fraser River Estuary Management Plan, FREMP). As stated in the closing remarks (CIAR #2045), the port authority is committed to participating and collaborating in future iterations of FREMP.</p> <p>The port authority is actively involved in regional and environmental sustainability initiatives, and has a community investment fund that provides funding to specific projects, including bird projects.</p>
BC-2	N/A		1.2 A Draft Condition be included requiring the Port of Vancouver to contribute \$500,000 in funding to and participate in “two regional environmental assessments for the Fraser River estuary and the Salish Sea to establish an environmental baseline, identify environmental and cumulative effects of the areas, and mitigation and follow up requirements.” ²	<p>Addressing cumulative effects is a shared responsibility. The draft Whole of Government Response outlines the many initiatives and measures that have been, are being, and will be taken by the Government of Canada to address cumulative effects.</p> <p>The port authority notes that there are numerous draft conditions (e.g., 8.10, 8.11, 8.12, 8.13, 12.5, 13.8) that would require the proponent to participate in various regional initiatives that are intended to address regional cumulative effects. These draft conditions (with revisions and additions suggested by the port authority in Appendix 3.2-A of this submission) reflect an appropriate approach to addressing the project’s contribution to cumulative effects, in a manner consistent with the key principles outlined in Section 3.1 of this submission.</p>
BC-3	N/A		1.3 A Draft Condition be included requiring the Port of Vancouver to acknowledge and contribute \$50,000 a year in funding to conservation efforts and reporting requirements associated with Canada meeting its international commitments “wise use” of the Fraser River Estuary as a Ramsar Site of International Significance.	See preceding response.
BC-4	N/A		1.4 A Draft Condition be included that the Port of Vancouver identify thresholds of ecological function for the Fraser Delta and calculate cumulative risk to those thresholds as part of implementing a long- term environmental management plan.	The draft conditions (with revisions and additions suggested by the port authority in Appendix 3.2-A of this submission) reflect an appropriate approach to addressing the project’s contribution to cumulative effects, in a manner consistent with the key principles outlined in Section 3.1 of this submission.

¹ Review Panel for the Roberts Bank Terminal 2 Project

² Ibid.

#	Section	Original condition	Comment and suggested amendment	Port authority response
BC-5	N/A		1.5 That all Draft Conditions be reviewed and revised with consideration of how public accountability can be enhanced through direct participation.	The port authority notes that the draft conditions include extensive consultation and reporting requirements that would provide transparency and accountability with respect to the port authority's implementation of the conditions.
BC-6	18.1 – Environmental Monitoring Committee	The Proponent shall participate, during all phases of the Designated Project and at the request of relevant federal authorities, in any Environmental Monitoring Committee (EMC), should one be established in relation to the Designated Project.	1.6 That Draft Condition 18.1 be altered to require the Port of Vancouver make a financial commitment as defined by relevant federal authorities to maintain the ongoing function of the Environmental Monitoring Committee for as long as environmental effects associated with this proposed project are being monitored.	The port authority notes that under CEAA 2012 and the <i>Impact Assessment Act</i> it is not appropriate to impose direct financial requirements in conditions.
BC-7	18.1 – Environmental Monitoring Committee	The Proponent shall participate, during all phases of the Designated Project and at the request of relevant federal authorities, in any Environmental Monitoring Committee (EMC), should one be established in relation to the Designated Project.	1.7 That Draft Condition 18.1 be altered to identify a commitment to the creation of a community based monitoring sub-committee that includes members of the public.	The requirement of draft condition 18.1 is for the port authority to participate in an EMC, at the request of relevant federal authorities, should one be established. It is anticipated that details such as sub-committees would be determined in the development of a terms of reference for the committee.
BC-8	18.2, 18.3, 18.4 & 18.5 - Environmental Monitoring Committee	<p>18.2 – The Proponent shall provide to the EMC, upon request, information relating to the mitigation measures and follow-up programs set out in this document to the EMC. If requested by the EMC, the Proponent shall also provide non-proprietary data files of the results of the follow-up programs.</p> <p>18.3 – When provided with a written recommendation by the EMC, the Proponent shall provide a response in writing to the EMC, which set out whether the Proponent accepts the recommendation, and if it does not, the reasons for not accepting the recommendation.</p> <p>18.4 – The Proponent shall report to the Agency as part of the annual report referred to in condition 2.10, or more frequently if required by the Agency, on the Proponent's actions with respect to the EMC and the associated outcomes of the Proponent's actions.</p> <p>18.5 - The Proponent shall allow access to the Designated Project area, to the extent that such access is safe, to any monitor(s) established as part of the EMC. The Proponent shall communicate with monitor(s) regarding coordination of monitoring activities.</p>	1.8 That Draft Conditions 18.2 – 18.5 be amendment to include the community based monitoring sub- committee.	See response above.
BC-9	10.3 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the	2.1 That the "and/or" phrase within condition 10.3 be clarified to simply "and" ensuring no confusion of area to be covered by condition 10.3 occurs.	<p>The suggested change to the condition would require installation of barriers in both the local and regional assessment areas, regardless of whether barriers in those areas would be effective or feasible.</p> <p>Based on clarification provided by IAAC, the port authority understands the intent of this condition is to require the proponent to identify suitable locations for barriers that would mitigate road-associated mortality risk for</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).		barn owls as a result of the project, which may be in either the local assessment area or the regional assessment area or both. The condition should maintain the flexibility necessary to ensure barriers are installed only where they will be effective, address the potential localized project effect, and are technically and economically feasible.
BC-10	10.3 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).	2.2 That wording in condition 10.3 be modified from "to mitigate road-associated mortality risk" to "to mitigate road and rail associated mortality risk" throughout known Barn Owl foraging habitat.	The EIS assessed potential "vehicle" mortality risk to barn owls as mortality risk from both road vehicles and trains (CIAR #181). Draft condition 10.3 purposefully requires the installation of a physical barrier to avoid or reduce road mortality risk, as it would not be feasible to install a barrier(s) along the railway line due to space, access, and legal constraints. There are other draft conditions requiring mitigation for potential vehicle (road and rail) mortality risk due to the project, which includes mortality risk from trains (10.4 and 10.5).
BC-11	10.3 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo</i>	2.3 That the area covered by condition 10.3 not be defined by the Regional Assessment Area but rather based on overlap between Barn Owl foraging habitat and modeled routes of increased traffic incidental to the Roberts Bank Terminal 2 Project. Appendix UT3-B of Undertaking #3 Traffic Projections through George Massey Tunnel demonstrates there is extensive container related traffic through-out the Fraser Delta including up the South Fraser Perimeter Road and along Highway 99. ³ These routes require increased mitigation to account for increased RBT2 related traffic.	The port authority notes that draft condition 10.3 states that suitable locations for physical barriers will be determined in consultation with several parties, including Birds Canada. This input will be considered as part of the consultation process; however, a revision to the draft condition to specify location would preclude input from the other listed parties, including Environment and Climate Change Canada, Ministry of Transportation and Infrastructure, and Indigenous groups.

³ Vancouver Fraser Port Authority Undertaking #3 – Traffic Projections through George Massey Tunnel Roberts Bank Terminal 2 Project May 29, 2019. Online [Road and Rail Activities Incidental to the Proposed GCT Deltaport Expansion – Berth Four Project January 6, 2022_2022-01-07 8 03 11 PM.pdf \(windows.net\)](#) Accessed February 25, 2022.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<i>rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).		
BC-12	10.4 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada and Indigenous groups and to the satisfaction of a qualified professional, the number and locations of artificial nest structures that shall be installed within the regional assessment area to enhance barn owl (<i>Tyto alba</i>) habitat. The Proponent shall install at least five nest structures during the first year of construction and shall maintain the nest structures throughout construction and operation.	2.4 That the role of public naturalist groups in building, installing and monitoring Barn Owl nest boxes be acknowledged by requiring the Port of Vancouver to engage relevant naturalists in the consultation associated with condition 10.4	The port authority notes that compliance with a condition to consult 'relevant naturalists' is not certain enough to be included in condition. Such a requirement would also assume that relevant naturalists would be willing to be consulted. As noted in the key principles described in section 3.1, compliance by the proponent cannot be dependent on the action of a third party. However, we understand that Birds Canada has expertise with barn owls and are listed under draft condition 10.3 as one of the parties to be consulted. The port authority has suggested a revision to draft condition 10.4 to include Birds Canada as a party to be consulted (see Appendix 3.2-A of this submission).
BC-13	N/A		2.5 That role of public naturalist groups in building, installing and monitoring Barn Owl nest boxes be supported by requiring the Port of Vancouver to contribute \$80,000 a year to support to third party programs to install, maintain, and monitor Barn Owl nest boxes.	The port authority notes that under CEAA 2012 and the <i>Impact Assessment Act</i> , it is not appropriate to impose direct financial requirements in conditions. Draft condition 10.4 requires the installation and maintenance of up to five nest boxes for barn owls. As noted above, compliance with a condition cannot be dependent on the action of a third party. However, the condition does not prevent the port authority from retaining a third party, such as a naturalist group(s), to support the port authority in building and installing barn owl nest boxes. The port authority has retained third parties to build and install nest boxes for previous projects. Draft condition 10.15 relates to the follow-up program designed to verify the effectiveness of the mitigation of installing and maintaining nest boxes for barn owls through a thorough monitoring design. This is the responsibility of the port authority.
BC-14	N/A		2.6 That a condition be included requiring the Port of Vancouver to contribute funding and expertise to a regional approach to Barn Owl mitigation that addresses the cumulative impacts of trade traffic from vehicles and rail on Barn Owls.	The draft conditions (with revisions and additions suggested by the port authority in Appendix 3.2-A of this submission) reflect an appropriate approach to addressing the project's contribution to cumulative effects, in a manner consistent with the key principles outlined in Section 3.1 of this submission.
BC-15	N/A		2.7 That a condition be added requiring all associated bird monitoring data be submitted to the publicly accessible Nature Counts portal.	The data related to barn owl nest boxes will be reported on as part of draft conditions 10.15, 2.10 and 2.12 and shared publicly pursuant to draft condition 2.13. The port authority is open to discussing collaboration with third parties, such as Birds Canada, to enter into data sharing agreements or to identify other mechanisms to share the information. A requirement to provide monitoring data for use in a third-party database would not be consistent with key principles outlined in Section 3.1; conditions cannot be dependent on the action of a third party, and must be related to the environmental effects of the project.

#	Section	Original condition	Comment and suggested amendment	Port authority response
BC-16	10.3 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).	2.8 That the organizational name in 10.3 changed from Bird Studies Canada to Birds Canada.	The port authority has no concern with this suggested revision and has included this suggestion in Appendix 3.2-A of this submission.
BC-17 through BC-24, BC-27, and BC-34 through BC-39	N/A	N/A	N/A	The port authority will respond to comments on the draft conditions pertaining to salinity, biofilm, and western sandpiper (including those in BC-17 through BC-24, BC-27, and BC-34 through BC-39) in a separate submission.
BC-25	N/A		3.1 A condition be included that sets temporal traffic thresholds should the proponent and identify parties be unable to agree on an adequate number of "technically feasible" physical barriers to avoid road based mortality of Barn Owls.	The draft condition does not (nor could it) require agreement to be reached with the specified parties. Rather, the draft condition would require the proponent to develop, in consultation with the specified parties, and implement the specified measure to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project; this is appropriate and consistent with the key principles outlined in Section 3.1 of this submission. Moreover, a temporal traffic threshold is not a feasible measure that could be implemented by the port authority.
BC-26	N/A		3.2 A condition be added requiring the Port of Vancouver identify the seasonal use and dietary composition of Dunlin foraging on the Roberts Bank mudflats to determine whether overwintering and migrating Dunlin may also be impacted by changes in polyunsaturated fatty acid production at Roberts Bank.	The assessment of potential project effects on coastal birds identified two representative species for the shorebird subcomponent, Pacific dunlin and western sandpipers (EIS, CIAR #181). The port authority conducted studies on Pacific dunlin, including a multi-year overwintering Pacific dunlin foraging study (Appendix 15-C, CIAR #181). The port authority predicted that the project would result in a negligible adverse effect on Pacific dunlin, which the review panel considered in their recommendation report (CIAR #2062). The review panel acknowledged the importance of biofilm to western sandpiper diet and made several recommendations related to biofilm and western sandpipers. The port authority will respond to the proposed new

#	Section	Original condition	Comment and suggested amendment	Port authority response
				condition related to mudflats and biofilm (including fatty acid production) in a separate submission. The review panel did not make any recommendations or express any concerns related to Pacific dunlin.
BC-28	10.3 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).	4.1 Draft Condition 10.3 be adjusted to indicate the Port of Vancouver work with Birds Canada, Environment and Climate Change Canada, Indigenous Peoples and Communities and the public to undertake movement research on Barn Owls to identify timing and frequency of exposure Barn Owls to vehicle and rail strikes.	Draft condition 10.16 requires the port authority to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to barn owl in the local assessment area, and refers to Table C17 of Appendix G of the review panel's report. The follow-up program will quantify and verify barn owl road and rail collision mortalities pre-construction, during construction, and during project operation. Monitoring program methods will be determined, in consultation with listed parties, during the development of the follow-up program, pursuant to draft condition 2.5. As noted in draft condition 10.16, the follow-up program will be developed in consultation with ECCC, BC Ministry of Environment and Climate Change Strategy and MOTI, and Indigenous groups.
BC-29	10.4 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada and Indigenous groups and to the satisfaction of a qualified professional, the number and locations of artificial nest structures that shall be installed within the regional assessment area to enhance barn owl (<i>Tyto alba</i>) habitat. The Proponent shall install at least five nest structures during the first year of construction and shall maintain the nest structures throughout construction and operation.	4.2 Draft Condition 10.4 and sub-conditions be expanded to require the Port of Vancouver work with Birds Canada, Environment and Climate Change Canada, Indigenous Communities and the public to undertake research into seasonal usage of Roberts Bank by overwintering and migrating Dunlin.	The port authority conducted studies to assess seasonal usage of Roberts Bank by overwintering and migrating Pacific dunlin for the EIS (CIAR #181). These studies include the Shorebird Abundance and Foraging Use in the Fraser River Estuary during Migration (CIAR #388) and Abundance and Distribution of Overwintering Shorebirds in the Fraser River Estuary (Hemmera 2014g, CIAR #181). As noted in the response to BC-26, the review panel's report states that the port authority predicted that the project would result in a negligible adverse effect on Pacific dunlin (CIAR #2062). The review panel did not make any recommendations or express any concerns related to Pacific dunlin.
BC-30	10.8 - Avifauna	The Proponent shall determine, in consultation with British Columbia's Ministry of Transportation and Infrastructure and Environment and Climate Change Canada, if the implementation of measures to decrease the potential for bird-vehicle collisions within the local and regional assessment area indicated by the Proponent on figures 15-1 and 15-2 of the environmental impact statement (including reduced speed limits) is technically and economically feasible. If technically and economically feasible, the Proponent shall provide these measures to the Agency prior to construction. The Proponent shall ensure vehicles associated with the Designated Project adhere to these measures during construction and operation within the Designated Project area.	4.3 Draft Condition 10.8, be adjusted to include potential collisions associated with rail based collisions.	As noted in the response to BC-10, "vehicles" refers to both road-vehicles and trains as defined in the EIS (CIAR #181). The addition of "rail based" is therefore not required.

#	Section	Original condition	Comment and suggested amendment	Port authority response
BC-32	N/A		5.1 The Port of Vancouver contribute \$50,000 a year in funding to third party efforts to treat raptors injured in collisions or other stressors on the Fraser River Delta.	<p>The port authority notes that under CEAA 2012 and the <i>Impact Assessment Act</i>, it is not appropriate to impose direct financial requirements in conditions.</p> <p>Further, as outlined in Section 3.1 of this submission, conditions must be focused on the effects of the Designated Project.</p> <p>However, note that the port authority is actively involved in regional and environmental sustainability initiatives, and has a community investment fund that provides funding to specific projects, which has included bird-related projects in the past.</p>
BC-33	N/A		5.2 The Port of Vancouver contribute funding to third party research into mechanism to increase recruitment of breeding adult Barn Owls onto the Fraser River Delta.	<p>The port authority notes that under CEAA 2012 and the <i>Impact Assessment Act</i>, it is not appropriate to impose direct financial requirements in conditions.</p> <p>Several draft conditions are proposed to mitigate potential effects of the project on barn owls, including but not limited to mitigating potential vehicle collisions (10.3), installing nest boxes (10.4), and establishing and maintaining foraging habitat (10.5), all of which will support the barn owl population. In addition, the follow-up program will verify the effectiveness of the mitigation of nest boxes (10.15) and physical barrier(s) installed to reduce vehicle collision (10.16.1).</p> <p>The port authority acknowledges the regional context of the concern with ongoing recruitment of breeding adult barn owls. The port authority is actively involved in regional and environmental sustainability initiatives, and has a community investment fund that provides funding to specific projects, which has included bird-related projects in the past.</p>
BC-40	2.13 – Information Sharing	The Proponent shall publish on the Internet the annual reports and the executive summaries referred to in conditions 2.10 and 2.12, greenhouse gas reduction plan and monitoring results referred to in conditions 3.2 and 3.3, biofilm follow-up program results referred to in conditions 10.14, the reports related to accidents and malfunctions referred to in conditions 19.6.3 and 19.6.4, the accident and malfunction communication plan referred to in condition 19.7, the schedules referred to in conditions 20.1 and 20.2, and any update or revision to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 15 years following their publication. The Proponent shall notify the Agency and Indigenous groups of the availability of these documents within two business days of their publication	6.2 Draft Condition 2.13 be altered to include a requirement for the Port of Vancouver to send notification to all retailers and shipping companies that use of Roberts Bank Terminal 2 will undermine corporate objectives related to sustainability within their respective supply chains.	No comment.
BC-41	2.13 – Information Sharing	The Proponent shall publish on the Internet the annual reports and the executive summaries referred to in conditions 2.10 and 2.12, greenhouse gas reduction plan and monitoring results referred to in conditions 3.2 and 3.3,	6.3 Draft Condition 2.13 be altered to require the Port of Vancouver to include the Ramsar Secretariat, the Western Hemisphere Shorebird Reserve Network Executive Office, the North American Migratory Bird Initiative, the Pacific Birds Habitat Joint Venture, the Trilateral Committee for Wildlife and Ecosystem Conservation and Management, the Pacific	The port authority notes that the information that would be published on the internet in accordance with this draft condition would be publicly available and therefore available to the groups identified in this comment.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		biofilm follow-up program results referred to in conditions 10.14, the reports related to accidents and malfunctions referred to in conditions 19.6.3 and 19.6.4, the accident and malfunction communication plan referred to in condition 19.7, the schedules referred to in conditions 20.1 and 20.2, and any update or revision to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 15 years following their publication. The Proponent shall notify the Agency and Indigenous groups of the availability of these documents within two business days of their publication	Flyway Council and the Puget Sound Ecosystem Monitoring Program in the reporting requirements identified in condition 2.13.	

Table 2 – Response to comments of Pacific Whale Watch Association

Posted March 15, 2022. [CIAR #3300](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
PWWA-1	8.1.7- Marine Mammals	<p>avoid, from June 1 or the date Southern Resident Killer Whale (<i>Orcinus orca</i>) are confirmed by marine mammal observers to be present in the Salish Sea, whichever is later, to September 30:</p> <p>8.1.7.1 - all vibratory and impact pile driving;</p> <p>8.1.7.2 - vibro-densification of the caisson foundation mattress rock; and</p> <p>8.1.7.3 - removal of the piles for the temporary barge ramps;</p>	<p>Section 8.1.7. of the draft potential conditions calls for the avoidance of activities such as pile-driving and vibro-densification from June 1 (or the date when SRKW are confirmed in the area) until September 30. In recent years, SRKW usage of the Salish Sea has shifted dramatically due to declines in Fraser River Chinook (Shields et al. 2018). Southern Residents are now less likely to be seen during summer months and more likely to be seen during fall, winter, or early spring. While the potential conditions do describe protocols for monitoring for SRKW outside of the summer months, the PWWA wishes to emphasize that SRKW can appear at any time of year and that their forays into the Salish Sea are becoming less and less predictable. It is crucial that mitigation procedures pertaining to SRKW be consistent throughout the year and that they be rapidly implemented in the event SRKW are seen in the vicinity.</p> <p>The area surrounding Roberts Bank is utilized even more frequently by other species that may also be affected by construction activities. Bigg's killer whales, humpback whales, and gray whales can also be present at any time of year. Though the draft potential conditions do briefly mention an exclusion zone for other marine mammals, the mitigation procedures for non-Southern Resident killer whales are not described in detail. The PWWA requests more information on mitigation efforts and proposed thresholds for other whales and marine mammals near Roberts Bank that will be impacted by this project.</p>	<p>Recent trends in SRKW presence are accounted for in the definition of the peak use period, which is consistent with recent trends from the B.C. Cetacean Sightings Network and OrcaMaster sightings databases, DFO data, and the Pacific Whale Watch Association data (IR2020-2.3, CIAR #2083). Please see Appendix 2.6-B of this submission for more information on temporal considerations regarding SRKW movement patterns.</p> <p>As noted by PWWA, the port authority will implement year-round monitoring and stop-work procedures before SRKW enter exclusion zones. These measures will reduce potential overlap between construction noise and SRKW if they are present outside the peak use period. Further, the port authority suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.</p> <p>The port authority notes that the draft conditions, with the revisions and additions suggested by the port authority, would serve to mitigate potential adverse effects of the project on SRKW whenever they may occur in the vicinity of the project. The port authority also notes that other measures that have been, are being, and will be implemented by the Government of Canada will also serve to mitigate adverse effects, including cumulative effects, on SRKW.</p> <p>The port authority notes that the draft conditions already would require the establishment of thresholds, exclusion zones based on these thresholds, year-round monitoring, stop work procedures, and development and implementation of mitigation measures for marine mammals other than SRKW. The proposed thresholds for other whales and marine mammals include hearing group-specific injury threshold(s) for impulse and continuous (non-impulse) noise (described in detail in Appendix IR2020-2.3-C, CIAR #2083). In addition, other mitigation efforts relevant to non-SRKW marine mammals include measures such as the use of soft start procedures, minimizing impulse noise by using vibratory piling, the use of sound attenuation technology, and participation in the ECHO Program (e.g., vessel slowdowns to reduce underwater noise and risk of vessel strikes).</p>
PWWA-2	8.2.7.5 - Marine Mammals	<p>develop and implement procedures for marine mammal observer(s) to receive any available information on the presence of cetaceans in the area surrounding the local assessment area from whale sighting networks, and use this information to inform observation requirements in condition 8.2.7;</p>	<p>Section 8.2.7.5. of the potential conditions calls for the project to <i>“develop and implement procedures for marine mammal observer(s) to receive any available information on the presence of cetaceans in the area surrounding the local assessment area from whale sighting networks, and use this information to inform observation requirements in condition 8.2.7.”</i></p> <p>The PWWA currently utilizes the private PWWA App to share real-time whale and wildlife sightings internally among its membership. The PWWA also extends PWWA App access to select authorized users, such as the Canadian Coast Guard's Marine Mammal Desk and marine mammal observers (MMO's) that work in conjunction with the Royal Canadian Navy. The PWWA proposes a similar arrangement with MMO's working on a potential Roberts Bank Terminal 2 project so that approved MMO's could better anticipate and prepare for whales entering the terminal area, providing more effective protections for the region's marine mammals.</p>	<p>The port authority welcomes PWWA's willingness to discuss enabling access to the PWWA App for marine mammal observers engaged for RBT2. The port authority will connect with PWWA when developing the marine mammal detection and response plan, as required by draft condition 8.2.</p>

Table 3 – Response to comments of Worldocean Consulting

Posted March 14, 2022. [CIAR #3096](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
WOC-1	19.1.1 – Accidents and malfunctions	consider sensitive time periods for vulnerable species found in the vicinity of the Designated Project (including juvenile salmon and migratory birds); and	<p>Should this Project proceed, which I sincerely hope it does not, a significant increase in commercial shipping activity would result in the Salish Sea- critical habitat for endangered, SARA-protected Southern Resident Killer Whales. The cumulative effects of shipping activity from this Project, as well as Trans Mountain Tanker Terminal expansion and other expansion projects within the Port of Vancouver, pose an existential threat to these orcas- an iconic symbolic of the Pacific Northwest. A catastrophic marine oil spill associated with either a Project-related or Trans Mountain-related vessel could essentially wipe out these endangered orcas overnight.</p> <p>For this reason, I propose that Section 19.1.1 in 19- Accidents and Malfunctions (Pages 44-47) be reworded as follows:</p> <p>"consider sensitive time periods for vulnerable species found in the vicinity of the Designated Project, including its construction and operation (including Southern Resident Killer Whales, juvenile salmon and migratory birds); and, in the case of Southern Resident Killer Whales, whenever they are present in the Southern Strait of Georgia, as determined by the Canadian Coast Guard's Marine Mammal Desk in Sidney, suspend all incoming and outgoing shipping activity associated with the terminal until such time as these whales have left the area."</p>	<p>The proposed condition would extend beyond the scope of the RBT2 Project. It is not feasible, and cannot be imposed as a condition.</p> <p>As discussed in Section 2.2 of this submission, the updated projections prepared on behalf of the port authority demonstrate that, for the most-realistic scenario, the number of container vessels calling at the Port of Vancouver in the future will be the same with or without RBT2 (see IR2020-3, CIAR #2083). By 2045, in the most realistic scenario, it is projected that the project will not change the total number of container vessels calling at the Port of Vancouver overall and will not change the number of container vessels transiting the marine shipping area between the Port of Vancouver and the 12 nautical mile limit of Canada's territorial sea, but an increase in the number of vessels calling at RBT2 and a corresponding decrease at Deltaport and Burrard Inlet terminals is projected. Thus, the "significant increase in commercial shipping activity" referenced in this comment is not likely to occur as a result of the project.</p> <p>Moreover, suspending all incoming and outgoing shipping activity associated with RBT2 is not a feasible measure that could be implemented by the port authority. Nonetheless, as per draft condition 8.6, daytime departures of RBT2 container vessels will be delayed to mitigate effects to SRKW. Further, the port authority addresses project effects to SRKW and suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.</p> <p>As noted in the key principles, Section 3.1 of this submission, conditions can only be imposed on the proponent.</p>

Table 4 – Response to comments of Garden City Conservation Society

Posted March 15, 2022. [CIAR #3338](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
GCCS-1	10.1 & 10.2 - Avifauna	<p>10.1 – The Proponent shall carry out the Designated Project in a manner that protects migratory birds and avoids injuring, killing or disturbing migratory birds, destroying or disturbing their nests or eggs, or taking them. In this regard, the Proponent shall take into account Environment and Climate Change Canada’s <i>Avoidance Guidelines</i> to reduce the risk to migratory birds. The Proponent’s actions when carrying out the Designated Project shall be in compliance with the <i>Migratory Birds Convention Act, 1994</i>, the <i>Migratory Birds Regulations</i> and with the <i>Species at Risk Act</i>.</p> <p>10.2 - The Proponent shall document, prior to construction and in consultation with internationally recognized and published experts on biofilm ecology, Indigenous groups, and Environment and Climate Change Canada, methods and best practices to create biofilm habitat, including details about the production of lipids, with specific reference to fatty acids in the Fraser river estuary. The Proponent shall publish a document compiling the results of its research on its website and shall provide it to the Agency prior to construction. The Proponent shall incorporate current knowledge peer-reviewed science in the document and shall update the document at years 2, 5, and 10 following the end of construction based on emerging knowledge and science, including science developed as part of condition 10.14.</p>	<p>If the federal ECCC Minister and Cabinet approve RBT2, there will be pre-set conditions. In the 48 pages of potential RBT2 conditions, only the above two conditions are re Western Sandpipers.</p> <p>They are also the only hint “the unmitigable species-level risk to Western Sandpipers” exists:</p> <ul style="list-style-type: none"> • 10.1, a condition that the Proponent follow Canadian law (already the law) • 10.2, a condition to publish, on a VFPA website, current research about biofilm habitat, etc. <p>In contrast, robust conditions in this matter would require measured achievement of a set of standards. In other words, they would require proven steps and demonstrated results. Together they would end the serious unmitigable species-level risk to Western Sandpipers. For example, they might require, prior to approval, (a) completion of a working prototype of the set of methods and (b) a bond of a sufficient amount to ensure the set of methods get implemented well.</p> <p>Or VFPA could redesign so the habitat isn’t lost, as ECCC has suggested for 18 years.</p> <p>The weak “potential conditions” re Western Sandpipers epitomize the RBT2 farce. It is still possible to get beyond that, but time is short.</p>	<p>The port authority will respond to comments on the draft conditions pertaining to salinity, biofilm, and western sandpiper in a separate submission.</p>

Table 5 – Response to comments of Ecojustice on behalf of David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation, and Wilderness Committee

Posted March 15, 2022. [CIAR #3322](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
COALITION-1	General		307. The Conservation Coalition is concerned that many of the Draft Potential Conditions leave crucial measures to be developed at a later time by VFPA, and are insufficiently prescriptive (e.g. Conditions 7.6, 7.11, 8.2, 8.4, 8.6, 8.9). The conditions must require specifics, otherwise parties such as the Conservation Coalition cannot meaningfully assess how successful the conditions are likely to be, and the Minister or Governor in Council cannot be confident in their outcomes if they approve the Project.	The port authority notes that the general scheme of, and level of detail in, the draft conditions are consistent with those in decision statements issued for other projects, including other marine terminal projects. Underlying the scheme for the draft conditions is a recognition that detailed requirements can and should be determined at an appropriate time when detailed information is available in consultation with the appropriate authorities and Indigenous groups. For example, see general follow-up program requirements for the development of details in consultation (draft condition 2.5)
COALITION-2	General		310. Every Project condition that applies to SARA-listed species must be drafted to clearly specify which SARA-listed species are covered, including by naming all those species. While there are 19 SARA-listed birds in the Project and Marine Shipping Area there are only conditions in relation to four of these species – barn owl, barn swallow, great blue heron, and western sandpiper. While it may be appropriate to take a representative species approach generally under CEAA 2012, section 79(2) of SARA requires a consideration of impacts to all SARA-listed species and requires measure to ensure <u>all</u> mitigation of all impacts on SARA-listed species.	Section 79 of SARA does not require that every SARA-listed species that benefits from a condition be identified in that condition, nor does section 79 SARA impose requirement on the minister issuing a decision statement to impose a specific condition for every listed species. Therefore, a change is not required.
COALITION-3	General		311. Finally, while the Panel's recommendations addressed cumulative effects there is a general absence of conditions directed at cumulative effects. Given the highly developed state of the Fraser Estuary and the already degraded state of the Salish Sea, the Project is contributing to significant and challenging pre-existing problems that in many cases are already threatening species' survival and ecosystem collapse	This assertion is incorrect. Every condition that serves to mitigate the potential adverse effects of the project also serves to mitigate the project's contribution to cumulative effects. Further, there are numerous draft conditions (e.g., 8.10, 8.11, 8.12, 8.13, 12.5, 13.8) that would require the port authority to participate in various regional initiatives that are intended to address regional cumulative effects. These draft conditions (with revisions and additions suggested by the port authority in Appendix 3.2-A of this submission) reflect an appropriate approach to addressing the project's contribution to cumulative effects, in a manner consistent with the key principles outlined in Section 3.1 of this submission. Addressing cumulative effects is a shared responsibility. The draft Whole of Government Response outlines the many initiatives and measures that have been, are being, and will be taken by the Government of Canada to address regional cumulative effects.
COALITION-4	2.5 – Follow-up requirements	The Proponent shall, where a follow-up program is a requirement of a condition set out in this document, determine, as part of the development of each follow-up program and in consultation with the party or parties being consulted during the development, the following information, unless already specified in the condition: 2.5.1 - the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program;	312. Condition 2.5: This condition leaves VFPA to determine crucial details of follow-up programs. a) The condition leaves it to VFPA to determine thresholds for when further measures are needed (2.5.4) and what measures are to be implemented in the event that those thresholds are exceeded (2.5.5), and what the follow-up program needs to achieve before it can stop in these cases (2.5.6). These decisions should not be at VFPA's discretion, especially when they relate to SARA-listed species such as the critically endangered Southern Residents and their Chinook salmon prey.	These comments mischaracterize the process of follow-up program development contemplated by the draft conditions. This draft condition must be read and understood together with other potential conditions that would govern follow-up program development (draft condition 2.6, 2.7, 2.8, 2.9, 2.10.4, 2.10.5, 2.16.2, and 2.17). The draft conditions would require the follow-up program elements to be developed in consultation with the parties specified in each condition, which typically include one or more relevant authorities with specialist or expert information or knowledge about the subject matter and/or regulatory responsibility, Indigenous groups and other parties. Through the implementation of other draft conditions, notably

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>2.5.2 – the scope, content and frequency of reporting of the results of the follow-up program;</p> <p>2.5.3 – the frequency at which the follow-up program must be updated;</p> <p>2.5.4 – the levels of environmental change relative to baseline that are caused by the Designated Project and that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities causing the environmental change to be stopped;</p> <p>2.5.5 - the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.5.4 have been reached or exceeded; and</p> <p>2.5.6 - the specific and measureable end points that must be achieved before the follow-up program can end. Those end points should indicate that the accuracy of the environmental assessment has been verified and/or that the mitigation measures are effective.</p>	<p>b) Without specific requirements included in the conditions, it is not realistic to expect VFPA to identify a precautionary point at which it would “stop” the activities causing environmental damage in these cases (2.5.4).</p> <p>c) This condition inappropriately focuses impacts only on “levels of environmental change relative to the baseline that are caused by the Designated Project”, which ignores the reality of cumulative effects.</p>	<p>2.3, the port authority would be required to undertake an impartial consideration of all views and information presented by the party or parties being consulted and to advise the party or parties on how the views and information have or have not been integrated into the follow-up program elements, including a rationale for why the views have or have not been integrated. Further, the port authority would be required to document and report on these matters in accordance with other draft conditions (e.g., 2.8 and 2.10). The final follow-up program also must be provided to IAAC and the consulted parties prior to its implementation. These draft conditions, working together, provide a robust framework that appropriately places the responsibility for follow-up program development on the proponent while ensuring that follow-up programs are collaboratively developed and appropriately integrate specialist and expert information and knowledge from relevant authorities, Indigenous knowledge from Indigenous groups, and relevant feedback from other consulted parties.</p> <p>With respect to comment 312(c), as outlined in Section 3.1 of this submission, conditions must be focused on the effects of the project; therefore, no change is required.</p>
COALITION-5	7.2 – Fish and fish habitat	<p>The Proponent shall install and maintain a breach to allow fish passage through either the existing and proposed widened areas of the causeway, if determined feasible pursuant to condition 7.1, or at the east end of the marine terminal identified on figure IR2020-2.2-1 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall determine to the satisfaction of Fisheries and Oceans Canada which breach location to implement if both are technically and economically feasible.</p>	<p>313. Condition 7.2: This condition appears to require VFPA to either install a breach in the causeway if that is deemed feasible, or install a breach of the terminal if a breach of the causeway is not deemed feasible. As explained above, this would be inadequate to mitigate the disruption to juvenile salmon migration that will result from the Project. A single breach, 10 metres in diameter, will be insufficient to mitigate the loss of connectivity between the inter-causeway area and the area north of the causeway. This insufficiency is magnified by the fact that the four potential breach locations proposed by VFPA in IR2020-2.2 have highly differing abilities to restore connectivity to the inter-causeway area due to increasing tide height further from shore, making breaches closer to shore less effective. Condition 7.2 should instead require VFPA to construct multiple breaches, in series. For example, the Proponent should be required to construct and maintain three side- by-side culverts 10 metres in diameter at the terminal end, as well as one or more breaches of the causeway. This would reflect the expert evidence of salmon biologist David Scott, whose field work with breaches in other parts of the Fraser Estuary shows that breaches need to be multiple and as wide-open as possible to facilitate juvenile salmon migration.</p>	<p>The port authority notes that this comment conflates the potential effect of the project—a potential disruption of juvenile salmon migration around the new terminal—with the existing effect of the existing causeway and terminal (loss of connectivity between the inter-causeway area and the area north of the causeway). As explained in the port authority’s IR response (IR2020-2.2, CIAR #2083), the marine terminal breach would mitigate the potential effect of the project. A causeway breach would mitigate the existing effect and a decision to implement a causeway breach for that purpose would be a public policy decision.</p> <p>The detailed design of a fish passage breach would be undertaken following a decision to allow the project to proceed and confirmation of feasibility.</p> <p>The port authority notes, as stated in Appendix 3.2-A of this submission, if a causeway breach is found to be feasible, the determination of which breach to implement will be purely a public policy decision and should be made by the appropriate authority. Given the purpose a breach is intended to serve, the port authority assumes the public policy objective is to enhance overall juvenile salmon productivity and that DFO is the appropriate authority to</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
				make a technical determination about which location would provide the greater relative benefit.
COALITION-6	7.5 - Fish and fish habitat	The Proponent shall implement underwater noise monitoring during in-water work activities during construction to ensure sound levels remain below 206 decibels at a reference pressure of one micropascal within 10 metres of in-water pile driving for finfish	<u>314. Condition 7.5:</u> This condition should spell out what happens if noise monitoring detects an exceedance, such as shut down of work or other immediate action to address the exceedance.	The port authority notes that the measures to be implemented to mitigate an underwater noise exceedance, if one were to occur, would depend on the circumstances of the exceedance, including, for example, the activities that may be contributing to the exceedance, the location, and environmental conditions at the time, as well as the relative effectiveness of available measures in those circumstances. These measures cannot and should not be pre-determined, as that may preclude the most effective measure(s) from being implemented in any given circumstance. The requirement in the draft condition to “ensure sound levels remain below...” provides assurance that action would be taken if an exceedance were detected and therefore no change is required.
COALITION-7	7.11 - Fish and fish habitat	The Proponent shall develop, prior to construction, as required by Fisheries and Oceans Canada for authorization under the <i>Fisheries Act</i> , and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River), Environment and Climate Change Canada and British Columbia’s Ministry of Forests, Lands, Natural Resource Operations and Rural Development, any offsetting plan(s) related to the alteration, destruction or disturbance of fish habitat, and death of fish associated with the carrying out of the Designated Project based on the draft offsetting plan (IR2020-1.2, Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall implement the plan(s) during construction and operation. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation. The plan shall include: 7.11.1 – a description of anticipated losses of fish and fish habitat remaining after avoidance, reduction, and other mitigation measures have been implemented; 7.11.2 – a description of the amount and type of offsets required and the selection of offsetting sites, including consideration of Indigenous priorities; 7.11.3 – an assessment of the projected benefits of the offsetting measures, using more than one approach; 7.11.4 – a description of how potential eutrophication, anoxia and changes in	<u>315. Condition 7.11:</u> This offsetting condition is highly flawed. a) The condition requires VFPA to develop any plans “prior to construction”, but only requires it to <u>implement</u> any plans “during construction and operation”. This undermines the effectiveness of this condition by potentially allowing adverse effects to occur before offsets are in place and functional, and it puts this condition offside the Federal Court of Appeal’s interpretation of s. 79(2) of SARA, explained above, which requires measures to be in place before Project approval. At a minimum, the plans should be implemented <u>prior to construction</u> . However, there is a high degree of uncertainty regarding whether the offsetting plan proposed by VFPA will function as predicted, according to the expert evidence of salmon biologist David Scott. Therefore, this condition should require VFPA to <u>demonstrate that the offsets are fully functional before Project construction and operations</u> that will cause adverse effects to salmon take place. Given that VFPA has already identified offsetting initiatives, the condition as drafted is under-ambitious, and this amendment would not be overly onerous. b) Sub-condition 7.11.3 requires VFPA to assess the projected benefits of offsetting measures, using more than one approach. This condition should prescribe the assessment approaches that VFPA must use, such as the more common approach of comparing “net overall habitat area”. As explained above and in the Scott Report, the “multiple lines of inquiry” chosen by VFPA in the IRs are quite similar and are all based on a common assumption about relative productivity of habitats. ⁴ To highlight and compensate for the limitations of assumptions inherent in any approach or model, the approaches used to assess the offset plan should be different, and in the case of Roberts Bank which already suffers significant habitat loss, include “net overall habitat area” approach.	As fully explained in Section 2.6.1 of this submission, section 79(2) of SARA does not require that measures be in place before a project can be approved. Further, DFO indicates in their submission that “the substantial improvement to the offsetting plan, the identification of additional available offsetting opportunities, as well as the progress made by the Proponent in evaluating offsetting equivalency, improves DFO’s confidence that a final offsetting plan could be developed that is consistent with DFO policy” (CIAR #2407 , p.24). With respect to comment 315(a), the port authority notes that the offsetting plan includes offsetting projects from the port authority’s habitat bank. As noted in IR2020-1.2 (CIAR #2083), approximately 8.3 hectares of habitat bank area has been identified as part of the project’s proposed offsetting plan (~10% of the current proposal). These projects are already in place and functioning, some for over three decades. Work on other offsetting projects is also already underway. Further, the development of the offsetting plan has included consideration of uncertainty regarding the updated Roberts Bank ecosystem model and temporal lags to account for the time that may be required for predicted indirect gains in fish and fish habitat productivity to be realized, as well as the time required to construct offsetting habitats and for offsets to become functional once constructed. Even when uncertainty and temporal lags are accounted for, implementation of avoidance, reduction, and 86 hectares of offsetting currently being advanced will counterbalance effects in fish and fish habitat productivity with a net gain of 1,773 t/year. With respect to comment 315(b), as noted in DFO’s guidance document (Equivalency metrics for the determination of offset requirements for the Fisheries Protection Program, Bradford et al., 2016), the use of an areal approach when determining the amount of offsetting needed may not be appropriate if multiple habitat types are affected by the project, and replacement habitats cannot be assumed to be equal to those lost, as is the case for RBT2. RBT2 is a large-

⁴ Scott Report, supra note 5 at p 9.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>water drainage have been considered in the design of the offsetting measures; and</p> <p>7.11.5 - offsetting measures to compensate for effects to fish and fish habitat remaining after avoidance, reduction, and other mitigation measures have been implemented.</p>	<p>c) Given the uncertainty inherently associated with the of the out-of-kind offsetting proposed by VPFA, and the limited options for onsite restoration or offsetting, VFPA should be required to develop offsets covering a significantly larger area than that destroyed by the Project to account for the likelihood that some of the proposed offsets will not prove useful for the populations of Chinook salmon affected by the Project. This is consistent with DFO's recommendation that DFO's opinion that "given the substantial habitat loss at Roberts Bank due to the Project footprint, additional onsite offsetting opportunities should be advanced and included in the final offsetting plan if they are feasible and beneficial to fish."⁵</p>	<p>scale port development project in a setting where the coastal wetlands are dynamically changing and interconnected. Determining offsetting compensation requirements for larger projects where multiple habitat types are affected thus requires a complex equivalency analysis that considers not just spatial extent but also habitat function, biomass and abundance of species comprising and dependent on the habitat, and other factors affecting habitat productivity. For these reasons, a habitat area approach to determination of offsetting requirements is not appropriate for this project.</p> <p>With respect to comment 315(c), the port authority notes that the final offsetting plan will be developed in consultation with DFO and Indigenous groups.</p> <p>As noted in IR2020-1.1 (CIAR #2083), and in alignment with Musqueam's vision, the RBT2 offsetting plan is designed to provide a network of interconnected habitats to support increased feeding, rearing, and refuge for a range of priority species and life stages (including out-migrating juvenile salmon) throughout the Fraser River estuary. The proposed RBT2 offsetting projects prioritize tidal marsh (and eelgrass) habitats, which have been found to be the most valuable habitats to estuarine-rearing juvenile salmon (Chalifour et al. 2019 and 2021), and to provide a variety of other key ecological functions (e.g., detrital food web support, shoreline erosion protection) (Appendix IR2020-1.1-C, CIAR #2083). In contrast, subtidal sand/mud are considered of lower value for juvenile salmon.</p> <p>DFO's offsetting policy provides the opportunity and flexibility for out-of-kind offsets and guidance regarding equivalency (DFO 2021).⁶ Per DFO's offsetting policy, biomass is considered a "common currency" that can be used in equivalency analyses (as has been adopted for the RBT2 proposed offsetting plan). Habitat functions and ecosystem services may also be considered as metrics to assess equivalency. The port authority showed that out of 13 key ecological functions examined in terms of equivalency, marsh and eelgrass offsetting habitat provides all 13 (Table IR2020-1.1-C1 in Appendix IR2020-1.1-C, CIAR #2083), whereas intertidal and subtidal sand/mud habitats provide only two.</p> <p>As noted in Section 2.4 of this submission, the port authority shares DFO's confidence that a final offsetting plan consistent with DFO policy can and will be developed.</p>
COALITION-8	8.1.4 - Marine Mammals	use sound attenuation method(s) and/or technology(ies) when impact pile-driving underwater;	<u>317. Condition 8.1.4:</u> Drs. Scott and Val Veirs specifically recommend that for the estimated four pilings that will use impact and not vibratory methods, Reinhall or BOSS pilings are used, as they are preferable for reducing source levels during impact pile driving.	The port authority does not recommend specifying Reinhall or BOSS pilings as part of the draft conditions. These novel double-wall piling techniques have not yet been applied in large-scale marine development projects. These proposed noise attenuation techniques were identified and evaluated by the port authority in its response to the ministers' IR, as potential noise attenuation measures (Appendix IR2020-2.3-B, CIAR #2083). The port authority suggests not limiting

⁵ DFO Submissions, supra note 77 at PDF p 16.

⁶ DFO (Fisheries and Oceans Canada). 2021. Policy for applying measures to offset adverse effects on fish and fish habitat under the *Fisheries Act*. Available at: <https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/policies-politiques-eng.html>. Accessed: April 2022.

#	Section	Original condition	Comment and suggested amendment	Port authority response
				<p>sound attenuation to specific methods, as the specificity may affect the feasibility of implementing this condition. Moreover, other techniques/measures are or may be available at the time of construction that attenuate noise as well or better than the proposed piles.</p>
COALITION-9	8.1.7 - Marine Mammals	<p>avoid, from June 1 or the date Southern Resident Killer Whale (<i>Orcinus orca</i>) are confirmed by marine mammal observers to be present in the Salish Sea, whichever is later, to September 30:</p> <p>8.1.7.1 - all vibratory and impact pile driving;</p> <p>8.1.7.2 - vibro-densification of the caisson foundation mattress rock; and</p> <p>8.1.7.3 - removal of the piles for the temporary barge ramps;</p>	<p><u>318. Condition 8.1.7:</u> As suggested by Drs. Scott and Val Veirs, this condition should be amended to avoid the listed activities from September 30 through June 1, for periods beginning at any time that Southern Resident presence is confirmed in the Salish Sea and lasting until at least one to two weeks after the last confirmed observation. This will in turn make condition 8.2.7 more precautionary and less dependent on only marine mammal observers for its success by stipulating that all possible confirmation sources in the Salish Sea will be able to inform mitigation measures at the terminal, not only locally stationed marine mammal observers monitoring buffer zones. They further suggest that these activities be limited to the month of April, with the above precautions in place.</p> <p>319. The above is further supported by DFO's evidence, which states based on analysis of May to October only that "there is a high likelihood of [Southern Resident] occurrence in areas within 20 km of the Project in May and October", and further states more broadly that Southern Residents are "consistently observed in the winter including in the RBT2 construction area."⁷</p> <hr style="width: 20%; margin: 10px auto;"/>	<p>319. The port authority will be implementing year-round monitoring and stop-work procedures before SRKW enter exclusion zones, which will reduce potential overlap between construction noise and SRKW if they are present outside the peak use period.</p> <p>The port authority notes that DFO stated in their response that the port authority identified appropriate and feasible mitigation measures for project construction and that DFO will further consult on stop work procedures. Specifically, DFO stated that "The information provided in the response increases DFO's confidence that technically and economically feasible measures to mitigate underwater noise from Project construction have been explored and appropriate mitigation measures have been identified for further development. DFO would expect to further engage with the Proponent on the Underwater Noise Management Plan, including the SRKW detection plan and stop work procedures" (CIAR #2407).</p> <p>318. As discussed in Appendix 2.6-B of this submission, the port authority notes that avoiding the listed activities from September 30 through June 1, for periods beginning at any time that SRKW presence is confirmed in the Salish Sea and lasting until at least one to two weeks after the last confirmed observation, would not be feasible, as this would cause significant delays to the project. It would also not be reasonable to avoid or stop work simply because SRKW are present anywhere in the Salish Sea because project construction would not affect the species if SRKW are, for example, in Haro Strait.</p> <p>It would also not be feasible to limit all the listed activities to April (or Mar to May) because this period is outside the timing window (August 16 - February 28) of least risk for juvenile salmon, an important future food source for SRKW, for the activities above -5 m chart datum and would add considerable delays to the project given the anticipated duration of the activities and other constraints presented in Appendix IR2020-2-3-A (CIAR #2083). For example, mattress rock densification requires approximately 12 months of active work, so limiting this to only one month per year would extend the overall project construction by at least 12 years.</p> <p>Recent trends in SRKW presence were accounted for in the definition of the peak use period (see the port authority's response to PWWA-1 above)</p>
COALITION-10	8.1.8 & 8.22 - Marine Mammals	8.1.8 – limit, to the extent feasible as determined by a qualified professional, the number of dredge equipment in use and tug and barge movements required for dredging activities when Southern Resident Killer Whale (<i>Orcinus orca</i>) are confirmed	<u>320. Condition 8.1.8 and 8.22:</u> The conditions related to dredging fail to incorporate VFPA's statement that it will avoid dredging during the "SRKW peak use period". This should be formalized, and the peak use period should be defined, in a condition.	<p>The avoidance of dredging during the peak use period was stated specifically in relation to future terminal operations dredging, not construction dredging, as described in IR2020-3 (CIAR #2083).</p> <p>The port authority suggests revisions to draft condition 7.4 in Appendix 3.2-A of this submission to clarify that operations</p>

⁷ *Ibid* at PDF pp 28-29.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>present in the Salish Sea by marine mammal observers.</p> <p>8.2.2 - identify the in-water work activities that are predicted to generate impulse and continuous (non-impulse) underwater noise (which shall include pile driving and dredging) during construction;</p>		<p>maintenance dredging at the terminal will also avoid the SRKW peak use period.</p> <p>For project construction, the port authority notes that it is not feasible to completely avoid dredging in the SRKW peak use period due to constraints related to the Dungeness crab fisheries-sensitive window and the expected duration of the activity. Avoiding dredging the dredge basin to construct the terminal would extend the duration of construction substantially (four or more years), as the activity would be limited to two months a year (April and May), as described in Appendix IR2020-2.3-A (CIAR #2083).</p>
COALITION-11	8.2 - Marine Mammals	<p>The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups and Indigenous groups (marine shipping), a marine mammal detection and response plan to reduce adverse effects to marine mammals caused by construction, consistent with any Fisheries and Oceans authorization under the <i>Fisheries Act</i>. The Proponent shall implement the plan during all in-water work activities during construction that pose a risk to marine mammals, and have a qualified professional oversee the implementation of the plan. As part of the marine mammal detection and response plan, the Proponent shall:</p>	<p><u>321. Condition 8.2:</u> Consistent with DFO's warnings with respect to the effectiveness of exclusion zones being dependent on successful detection of Southern Residents, and DFO's caution that there are gaps in passive acoustic monitoring, that the other methods of detection are unlikely to be as effective in winter as they are in summer, and that VFPA has likely overestimated its modelled detection ranges, VFPA should be required to adopt DFO's suggestion of "placing acoustic detection receivers much further away from the construction zone and at water depths that are in-line with where the whales may be located when calling (10-20m depth)" to allow for detection of Southern Residents before they enter a location where they can be impacted by construction noise.⁸</p>	<p>The port authority notes that the modelled detection ranges for marine mammal observers (Appendix IR2020-2.3-E, CIAR #2083) considered killer whale specific detection ranges and variation based on weather conditions, which varied by season (e.g., winter conditions). Therefore, this variability is accounted for in the estimates of the effectiveness of this mitigation measure and the detection ranges are not anticipated to be overestimated.</p> <p>The port authority notes that DFO indicates in its submission (CIAR #2407, p.32) that it is available to discuss placement of acoustic receivers with the proponent during the application for a <i>Fisheries Act</i> Authorization. The design of the passive acoustic monitoring (PAM) array would include discussion regarding seasonal/weather considerations, water depth, and receiver locations. The port authority notes that measures to mitigate potential effects on SRKW will be specified by DFO in any SARA-compliant <i>Fisheries Act</i> Authorization that may be issued for the project. In addition, once selected and design the commissioning of the PAM array will include testing the capabilities of the system to verify that it meets the intended requirements, which will be outlined in the marine mammal detection and response plan (draft condition 8.2 and 8.2.7.3).</p>
COALITION-12	8.2.5 - Marine Mammals	<p>at the start of each new in-water work activity identified pursuant to condition 8.2.2 that generates continuous noise, validate the exclusion zone(s) established based on the behavioral disturbance threshold(s) for continuous noise for Southern Resident Killer Whale (<i>Orcinus orca</i>) referred to in condition 8.2.1 to confirm it is of appropriate size. If the exclusion zone is not of the appropriate size, the Proponent shall expand the exclusion zone;</p>	<p><u>322. Condition 8.2.5:</u> This should include validation of the exclusion zone for impulsive noise as well as continuous noise, as Drs. Scott and Val Veirs advise.</p>	<p>The port authority proposed validation of the SRKW exclusion zone for impulsive noise in its response to the minister's IR (see IR2020-2.3, CIAR #2083). It does note that this requirement was not explicitly captured in the draft conditions. The port authority has suggested revisions to draft condition 8.2.5 in Appendix 3.2-A of this submission to clarify that this will include validation of the exclusion zone for impulsive noise as well as continuous noise.</p>
COALITION-13	8.2.6 - Marine Mammals	<p>establish a monitoring buffer zone around the exclusion zone implemented for Southern Resident Killer Whale (<i>Orcinus orca</i>) to account for the time needed to initiate stop/modify work procedures before Southern Resident Killer Whale (<i>Orcinus orca</i>) enter the applicable exclusion zone;</p>	<p><u>323. Condition 8.2.6:</u> The expert evidence of Drs. Scott and Val Veirs is that the buffer zone for Southern Residents should be 3 km or more, which represents about 30 minutes of Southern Residents travelling at their mean speed of about 6 km per hour.</p>	<p>The size of a suitable buffer zone for SRKW will be determined as part of the marine mammal detection and response plan (draft condition 8.2.6) based on the in-water work activity or activities occurring at any given time. The size of the buffer zone will account for the time required to communicate to the contractor and modify or shut down the specific in-water construction activity(ies), as well as sufficient distance so that SRKW do not enter the exclusion zone boundary. The buffer zone will therefore likely vary in size over time based on activities (see Appendix 2.6-B of this submission).</p>

⁸ *Ibid* at PDF pp 31-32.

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				Specifying the size of the buffer in the condition would preclude its development in consultation with all the specified parties under draft condition 8.2 and is therefore premature.
COALITION-14	8.2.8 - Marine Mammals	develop and implement stop work procedures to shut down or modify in-water work activities identified pursuant to condition 8.2.2 when marine mammals exclusion zone(s) are present within their applicable exclusion zone(s) established pursuant to condition 8.2.3, including communication protocols to facilitate stop work procedures. In doing so, the Proponent shall:	<u>324. Condition 8.2.8:</u> This condition should require that the stop-work procedures stop all noise- generating activities and not merely some when the Southern Residents are nearby, reflecting DFO’s concern that the Southern Residents could move into the reduced exclusion zone if some activities continue. ⁹	<p>The port authority notes that it may not be feasible, for safety reasons, to immediately stop certain activities (e.g., a tug under tow). In such cases, it may be possible to modify the activity to avoid or reduce potential effects on observed marine mammals. For example, if the early detection sources identify SRKW approaching the construction area, the contractor may delay that activity until the whales are sufficiently distant from the project or reduce the potential area of acoustic effects and applicable exclusion zone by stopping other activities.</p> <p>The port authority notes that DFO stated in their response that the port authority identified appropriate and feasible mitigation measures and that DFO will further consult with the port authority on stop work procedures during the application for a <i>Fisheries Act</i> Authorization (CIAR #2407).</p>
COALITION-15	8.3 - Marine Mammals	The Proponent shall require container vessels calling on the Designated Project to participate in the <i>Enhancing Cetacean Habitat and Observation Program</i> , or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:	<p><u>325. Condition 8.3:</u> The weakness of the condition for vessels calling on the Project to participate in ECHO is that there is no condition or other guarantee that ECHO or a direct equivalent will continue for the life of the Project. Nor is there a condition or other guarantee as to what minimum standard ECHO will require of participants from year to year, as the program’s specifics are announced each year for that year only, and could theoretically be less stringent in one or more future years.¹⁰ As drafted, the condition provides no guarantee of what participation in ECHO will entail in terms of specific measures from year to year.</p> <p>326. The condition should therefore be amended to require that VFPA continue ECHO (or another equivalent future program developed in consultation with Fisheries and Oceans Canada and Transport Canada) for the lifetime of the Project. It must also be amended to require minimum annual ECHO program requirements (i.e., a slowdown to at least a specified speed, during specified months), so that there is a guarantee of minimum stringency, and so that innovation and improvement can occur with the guarantee that measures will never become <u>less</u> ambitious.</p>	<p>Draft condition 8.3 requires container vessels calling RBT2 to participate in the ECHO Program or future equivalent program. The condition itself requires future participation for the life time of the project “to reduce the potential effects of container vessels calling on the Designated Project on cetacean species.”</p> <p>As outlined in Section 3.1 of this submission, project-specific conditions cannot be imposed on third parties and cannot make compliance by the proponent dependent on the action of a third party. Therefore, given the collaborative nature of the ECHO Program, it would not be appropriate, nor would it be feasible for the port authority to unilaterally establish minimum annual ECHO Program requirements.</p> <p>In addition, the port authority does not have the statutory ability to mandate vessels to slow down to specified speeds in the marine shipping area through the ECHO Program or any other means. That statutory authority lies with Transport Canada. If the Government of Canada determines such minimum performance measures are warranted to mitigate effects of marine shipping incidental to the project or cumulative effects, it can implement those measures.</p> <p>However, the long-term goal of the ECHO Program is to develop and implement initiatives that result in a quantifiable reduction in threats to whales as a result of shipping activities. ECHO Program initiatives are regularly evaluated to determine effectiveness and to inform subsequent initiatives and work plans to support continuous improvement in underwater noise reduction.</p>

⁹ *Ibid* at PDF pp 32.

¹⁰ See, for example, the following on slowdowns and lateral displacements, respectively, showing a year-to-year approach: Port of Vancouver, “2021 Haro Strait and Boundary Pass voluntary vessel slowdown”, available online at <https://www.portvancouver.com/environmental-protection-at-the-port-of-vancouver/maintaining-healthy-ecosystems-throughout-our-jurisdiction/echo-program/projects/haro-slowdown/>; Port of Vancouver, “2021 Strait of Juan de Fuca voluntary inshore lateral displacement”, available online at <https://www.portvancouver.com/environmental-protection-at-the-port-of-vancouver/maintaining-healthy-ecosystems-throughout-our-jurisdiction/echo-program/projects/lateral-displacement/>.

#	Section	Original condition	Comment and suggested amendment	Port authority response
COALITION-16	8.3 - Marine Mammals	The Proponent shall require container vessels calling on the Designated Project to participate in the <i>Enhancing Cetacean Habitat and Observation Program</i> , or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:	327. Alternatively, or additionally, rather than rely on ECHO, Condition 8.3 could simply require mandatory speed reductions (with exemptions to allow for safety designed in consultation with Transport Canada). Condition 8.4.3 indicates that VFPA can implement mandatory speed reductions; therefore, there is no need to rely on ECHO as the mechanism.	As noted above, the port authority does not have the statutory ability to mandate vessels to slow down to specified speeds in the marine shipping area through the ECHO Program or any other means. That statutory authority lies with Transport Canada. If the Government of Canada determines such minimum performance measures are warranted to mitigate effects of marine shipping incidental to the project or cumulative effects, it can implement those measures. The port authority notes that tug slowdowns (within the area for which the port authority has jurisdiction) are addressed in DFO's submission (CIAR #2407); please see the port authority's suggested revisions and additions to draft condition 8.5 in Appendix 3.2-A of this submission.
COALITION-17	8.3 - Marine Mammals	The Proponent shall require container vessels calling on the Designated Project to participate in the <i>Enhancing Cetacean Habitat and Observation Program</i> , or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:	328. Regardless of whether or slowdowns and related measures are done through ECHO, the minimum requirements set out in the conditions should be more ambitious than what VFPA currently proposes, as set out in the expert report of Drs. Scott and Val Veirs, and described above.	The port authority notes that potential effects of the project and of marine shipping incidental to the project will be addressed through the measures to be implemented by the proponent, including those outlined in the draft conditions, and by the many initiatives and actions that have been, are being, and will be undertaken by the Government of Canada, as outlined in the draft Whole of Government Report (discussed in Section 3.3 of this submission), which are over and above the measures to be implemented by the proponent. With the revisions and additions suggested by the port authority in Appendix 3.2-A of this submission, the draft conditions are appropriate and commensurate with the predicted effects of the project, including the project's contribution to cumulative effects.
COALITION-18	8.3 - Marine Mammals	The Proponent shall require container vessels calling on the Designated Project to participate in the <i>Enhancing Cetacean Habitat and Observation Program</i> , or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:	329. With respect to time of year of slowdowns and related measures, Drs. Scott and Val Veirs have further cautioned that the Southern Residents' patterns of seasonal use of their habitat may be changing. ¹¹ As a result, the May to September or October summer season can no longer be assumed to be the only or even primary time of year that protective measures are needed. Drs. Scott and Val Veirs recommend that conditions specifying times of year should therefore go beyond May to October to include any month of the year when observations or models suggest the Southern Residents may be present. ¹² With respect to area, they advise that slowdowns should extend from Boundary Pass to the terminal and further north into and from Burrard Inlet, and that commercial traffic should be as far from the Fraser Delta as possible to avoid areas of higher Southern Resident density.	The timing of the ECHO Program slowdowns is outside the port authority's care and control. Currently, the timing is determined annually by the ECHO Program through collaboration with its many advisors and considers both long-term historical presence and more recent observations of SRKW within the Salish Sea. The ECHO Program adaptively manages its initiatives as new information becomes available and the timing of future slowdowns would take changing patterns into consideration. The condition would capture changes made to slowdown periods as part of the ECHO Program (or any future equivalent) adaptive management approach. With respect to the spatial extent of slowdowns, the port authority notes that it does not have the statutory ability to mandate vessel slowdowns in the marine shipping area or within marine shipping lanes north of RBT2. That statutory authority lies with Transport Canada. If the Government of Canada determines that expansion of the vessel slowdown area(s) is warranted to mitigate effects of marine shipping incidental to the project or cumulative effects, it can implement those measures. See Section 3.3 of this submission for additional detail. The port authority applies rules and regulations in its navigational jurisdiction, which includes Burrard Inlet, Roberts Bank, and the

¹¹ *Veirs Report*, *supra* note 6 at pp 6-7.

¹² *Ibid* at pp 8, 17-18.

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				Fraser River, to contribute to the safe, efficient and environmentally responsible handling of shipping traffic. This includes applying Canadian rules and regulations such as the <i>Canada Marine Act</i> , and the Marine Transportation Security Regulations. As per the Port Information Guide, every vessel or ship in the port must at all times, approach areas of known or suspected marine wildlife activity with caution and follow the 'be whale wise' guidelines. Further, there are vessels speed limits within Burrard Inlet.
COALITION-19	8.4 - Marine Mammals	The Proponent shall develop, prior to operations, in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada, a plan to address effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) due to underwater noise produced as a result of the operations of the Designated Project, including both marine shipping and operations at the marine terminal. The Proponent shall implement the plan in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada during operation. As part of the plan, the Proponent shall:	330. Condition 8.4: A noise budget is a valuable idea, and the Conservation Coalition supports the concept of setting a hard cap on underwater noise in Southern Resident critical habitat, at levels that do not destroy or otherwise impair critical habitat, which would necessarily be lower than current levels, which pose an imminent threat to survival and recovery. However, the use of a noise budget in this condition is fatally undermined by being proponent-determined, not determined based on the Southern Residents' actual needs, and by the absence of enforceability or any consequences for exceedance.	<p>The port authority addresses the matter of underwater noise levels and suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.</p> <p>The port authority notes that the conditions, with revisions and additions suggested by the port authority in Appendix 3.2-A, would be feasible, appropriate, and commensurate with the predicted effects of the project, including the project's contribution to cumulative effects, taking into consideration the updated container vessel projections. In the matter of underwater noise levels and monitoring, as noted in the suggested revisions, the means and methods will be developed in consultation with the parties specified in the condition, which typically include one or more relevant authorities with specialist or expert information or knowledge about the subject matter and/or regulatory responsibility, and Indigenous groups.</p> <p>Additional measures that have been, are being, or will be implemented by other federal authorities, to be outlined in the Whole of Government Response, are addressing and will continue to address the existing and future cumulative effects associated with all marine shipping, including container vessels, in the marine shipping area, and are expected to make material improvements to the health of the Salish Sea (see Section 3.3.2 of this submission).</p>
COALITION-20	8.4 - Marine Mammals	The Proponent shall develop, prior to operations, in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada, a plan to address effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) due to underwater noise produced as a result of the operations of the Designated Project, including both marine shipping and operations at the marine terminal. The Proponent shall implement the plan in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada during operation. As part of the plan, the Proponent shall:	331. DFO has similarly noted the need for "enforceable conditions that hold the Proponent accountable" with respect to underwater noise in its comments. ¹³	The port authority addresses the matter of underwater noise levels and suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-21	8.4.1 - Marine Mammals	establish a budget for underwater noise for the operation of the Designated Project, specifying the amount, locations, and timing of underwater noise that will be generated, reduced, and/or offset, in	332. Condition 8.4.1: The noise budget to be established should be specified in the condition, not left to be determined by VFPA. As the Panel found, the Salish Sea is already too noisy for the Southern Residents. ¹⁴ The Project will increase noise to some degree under	The port authority addresses the matter of underwater noise levels and suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.

¹³ DFO Submissions, *supra* note 77 at PDF p 43

¹⁴ Panel Report, *supra* note 2 at PDF p 132.

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		order to meet the predicted effects to Southern Resident Killer Whales (<i>Orcinus orca</i>) due to underwater noise described in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672);	<p>any interpretation of the evidence. The noise budget must reflect the fact that current conditions in the Salish Sea are already too loud for the Southern Residents, and it must go beyond ensuring “no net increase” from the Project to eliminate substantially more noise than the Project adds. It must be specified before approval, in the conditions, and it must be based on the Southern Residents’ actual needs, keeping in mind that the status quo poses an imminent threat to their survival and recovery.</p> <p>333. The expert report of Drs. Scott and Val Veirs explains that the current status and trajectory of the Southern Resident population requires an overall <u>reduction</u> of noise, or, a “more than mitigate” budget, not just “no net increase”.¹⁵ DFO agrees that a net overall decrease is needed.¹⁶</p>	The port authority notes that the conditions, with revisions and additions suggested by the port authority in Appendix 3.2-A, would be feasible, appropriate, and commensurate with the predicted effects of the project, including the project’s contribution to cumulative effects, taking into consideration the updated container vessel projections. Additional measures that have been, are being, or will be implemented by other federal authorities, to be outlined in the Whole of Government Response, are addressing and will continue to address the existing and future cumulative effects associated with all marine shipping, including container vessels, in the marine shipping area, and are expected to make material improvements to the health of the Salish Sea (see Section 3.3.2 of this submission).
COALITION-22	8.4.1 - Marine Mammals	establish a budget for underwater noise for the operation of the Designated Project, specifying the amount, locations, and timing of underwater noise that will be generated, reduced, and/or offset, in order to meet the predicted effects to Southern Resident Killer Whales (<i>Orcinus orca</i>) due to underwater noise described in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672);	334. Drs. Scott and Val Veirs further caution that no individual noise source should be permitted to cause noise at the location of a Southern Resident to rise above 120 dB, and they indicate that it could be precautionary to ensure that the broadband noise level received by foraging Southern Residents stays below 100 dB, and in the frequency bands relevant to the Southern Residents, below 50 dB for calls (near 1 kHz) and below 40 dB for echolocation clicks (near 20-30 kHz). The conditions should reflect this.	<p>Ensuring that no individual noise source (i.e., vessels) be permitted to cause noise at the location of a SRKW to rise above 120 dB or less, or above other proposed thresholds considered relevant to SRKW is not feasible nor within the care and control of the port authority. For example, as noted in IR2020-3 (CIAR #2083), existing background noise levels near the proposed terminal are already elevated (i.e., above 120 dB, see Table IR2020-3-3, CIAR #2083) due to existing shipping traffic and marine terminals at Roberts Bank (such as Westshore and Deltaport).</p> <p>The port authority addresses the matter of underwater noise levels and suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.</p> <p>The port authority notes that the draft conditions, with revisions and additions suggested by the port authority in Appendix 3.2-A, would be feasible, appropriate, and commensurate with the predicted effects of the project, including the project’s contribution to cumulative effects, taking into consideration the updated container vessel projections. Additional measures that have been, are being, or will be implemented by other federal authorities, to be outlined in the Whole of Government Response, are addressing and will continue to address the existing and future cumulative effects associated with all marine shipping, including container vessels, in the marine shipping area, and are expected to make material improvements to the health of the Salish Sea (see Section 3.3.2 of this submission).</p>
COALITION-23	8.4.3 - Marine Mammals	implement modified or additional mitigation measures, and report to the Agency, Transport Canada, and Fisheries and Oceans, if the results of the monitoring and modelling referred to in condition 8.4.2 demonstrate that levels of underwater noise are nearing exceedance of the budget established in condition 8.4.1. Measures may include:	335. <u>Condition 8.4.3</u> : Rather than rely on this condition for additional measures only if monitoring reveals that VFPA is nearing exceedance of the noise budget, the conditions must require VFPA to take <u>all feasible measures</u> to reduce noise <u>immediately</u> , especially given that Transport Canada has deemed them feasible – though they cannot be relied on as effective at this time, as DFO has identified uncertainties and states that their effectiveness still needs to be evaluated. ¹⁷ Saving feasible measures for later is contrary to s.	<p>The port authority notes that Section 79(2) requires that “...that measures are taken...”, not “all” measures. See Section 2.6.1 of this submission for the port authority’s detailed response.</p> <p>The port authority notes that that the conditions, with revisions and additions suggested by the port authority in Appendix 3.2-A, would be feasible, appropriate, and commensurate with the predicted effects of the project, including the project’s contribution to</p>

¹⁵ Veirs Report, supra note 6 at p 21.

¹⁶ DFO Submissions, supra note 77 at PDF p 43

¹⁷ Transport Canada Submissions, supra note 224 at PDF pp 6, 15; DFO Submissions, ibid at PDF pp 46-47.

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			79(2) of SARA and does not represent a precautionary approach to protecting the critically endangered Southern Residents.	<p>cumulative effects, taking into consideration the updated container vessel projections.</p> <p>The port authority notes that certain measures described in the IR response (IR2020-3, CIAR #2083) are measures that are within the statutory authority of the Government of Canada, and would be implemented by federal authorities, including Transport Canada,. This is recognized by Transport Canada in its submission; for example:</p> <p style="padding-left: 40px;">“To support the evaluation of the updated forecasted container vessel traffic, the Vancouver Fraser Port Authority also submitted new detailed underwater noise modelling, and additional feasible mitigation and/or adaptive management measures (requiring Canada’s implementation on a regional basis) have been assessed by Transport Canada to ensure feasibility of underwater noise reduction options are available in the future, if required” (emphasis added) (CIAR #2298, p.3)</p> <p>Transport Canada also referred to its “commitment to continue to work with the proponent on implementing additional mitigation and/or adaptive management measures” (CIAR #2298, p.3).</p> <p>If the Government of Canada determines that the feasible measures are warranted to mitigate effects of marine shipping incidental to the project or cumulative effects, it can implement those measures. See Section 3.3 of this submission for additional detail.</p>
COALITION-24	8.4.3 - Marine Mammals	implement modified or additional mitigation measures, and report to the Agency, Transport Canada, and Fisheries and Oceans, if the results of the monitoring and modelling referred to in condition 8.4.2 demonstrate that levels of underwater noise are nearing exceedance of the budget established in condition 8.4.1. Measures may include:	336. This condition must also define “nearing exceedance” so that there is a clear trigger for backstop measures.	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-25	8.4.3.3 - Marine Mammals	limits on container vessel calls to the Designated Project; and	337. The backstop measures should be clearly spelled out in mandatory language in the sub- conditions. They could include, for example, a mandatory emergency backstop, such as limiting vessel calls, as per 8.4.3.3 – but with the number of vessels specified.	The port authority addresses this draft condition in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-26	8.4.3.2 - Marine Mammals	additional offsets for underwater noise in Southern Resident Killer Whale (<i>Orcinus orca</i>) critical habitat in the Salish Sea;	<u>338. Condition 8.4.3.2:</u> The reference to “offsets” falsely suggests that it is possible to “offset” underwater noise in Southern Resident critical habitat and should therefore be removed. DFO has stated in its response that “the concept of offsetting underwater noise is relatively new and in development”, and that “[t]he quantification of equivalency reductions in one location to offset noise inputs elsewhere is complicated and it is important to consider the biological meaningfulness of noise inputs and reductions over space and time.” ¹⁸	<p>The port authority addresses this draft condition in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.</p> <p>As noted by DFO in their submission, offsetting underwater noise is new, (CIAR #2407) not impossible. The Government of Canada is currently working on underwater noise offsetting for the Trans Mountain Expansion (TMX) Project and is developing methods to evaluate its effectiveness. As part of the TMX project, the</p>

¹⁸ DFO Submissions, *ibid* at PDF p 45

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				<p>“Government is currently implementing multiple initiatives” to “address the threats to the SRKW and its critical habitat”, including “to more than offset the impacts of Project-related traffic including vessel noise” (recommendation 5¹⁹).</p> <p>DFO stated in its response (CIAR #2407) that “DFO agrees with the Proponent that Project increases in underwater noise and associated effects on SRKW following avoidance and mitigation need to be counterbalanced (offset) by reductions in underwater noise and associated effects on SRKW” (p. 45).</p> <p>DFO also recommends that the port authority, “in consultation with DFO, further consider methods for evaluating the effectiveness of underwater noise offsets to counterbalance impacts of underwater noise from Project operations (berthing), building on the work that is being undertaken by DFO for the Trans Mountain Expansion Project” (p. 46).</p>
COALITION-27	8.4.3.2 - Marine Mammals	additional offsets for underwater noise in Southern Resident Killer Whale (<i>Orcinus orca</i>) critical habitat in the Salish Sea;	339. The Agency should amend the condition to specify the measures to which it refers.	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-28	8.4.3.2 - Marine Mammals	additional offsets for underwater noise in Southern Resident Killer Whale (<i>Orcinus orca</i>) critical habitat in the Salish Sea;	340. Drs. Scott and Val Veirs have further suggested that this condition include consultation with the Canadian Coast Guard and/or Transport Canada about moving the shipping lanes and BC ferry routes away from the high-density Southern Resident usage areas within the Fraser delta and southern Strait of Georgia, given that this area is essential to Southern Resident foraging success for returning Fraser River salmon.	<p>Statutory authority for establishing—and moving—shipping lanes and ferry routes rests with other federal authorities and, if deemed by the Government of Canada to be warranted to mitigate effects of marine shipping incidental to the project or cumulative effects, should be implemented by it.</p> <p>As noted in Section 3.1 of this submission, conditions can only be imposed on the proponent.</p>
COALITION-29	8.4.3.3 - Marine Mammals	limits on container vessel calls to the Designated Project; and	<u>341. Condition 8.4.3.3:</u> If a cap on vessel calls is an effective measure, which Drs. Scott and Val Veirs believe it is, there should be a condition for it to be automatically applied if VFPA is nearing exceedance of the noise budget. The benchmark for nearing exceedance must also be clearly defined.	The port authority addresses this draft condition in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-30	8.4.4 - Marine Mammals	identify measures, out of the care and control of the Proponent, that could be undertaken by relevant authorities in order to achieve the budget for underwater noise established in condition 8.4.1 or to limit effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) to those predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672) should the Proponent be of the opinion that measures developed and implemented pursuant to condition 8.4.3 have been exhausted.	<u>342. Condition 8.4.4:</u> This indicates that the Agency considers it possible VFPA will not be able to achieve the noise budget, in spite of Conditions 8.4.2 and 8.4.3. The Conservation Coalition reminds the Agency and the Minister that 1) underwater noise is already too high, and increases in noise are likely to constitute destruction of Southern Resident critical habitat, which is an offence under s. 58(1) of SARA, and that the Minister of Fisheries and Oceans will not be able to approve this Project if in her opinion it will jeopardize survival or recovery (which it will, as critical habitat is already too loud); and 2) effects of this kind on the SARA-listed Southern Residents are not justifiable under CEAA 2012. Failure with respect to noise budgets is not an acceptable outcome. Therefore, there must be a mandatory condition to achieve the noise budget, with an emergency backstop available if it appears that VFPA is “nearing exceedance.”	<p>The comment is premised on legal and factual misconceptions. See Section 2.6.1 of this submission for the port authority’s detailed response.</p> <p>The port authority notes that potential effects of the project and of marine shipping incidental to the project will be addressed through the measures to be implemented by the proponent, including those provided for in the draft conditions, and by the many initiatives and actions that have been, are being, and will be undertaken by the Government of Canada, as outlined in the draft Whole of Government Report (discussed in Section 3.3 of this submission).</p> <p>As noted above, certain measures to mitigate effects, including cumulative effects, on SRKW, are measures that are within the statutory authority of other federal authorities, including Transport</p>

¹⁹ Canada Gazette, Part I, Volume 153, Number 25: Orders in Council. June 22, 2019. Department of Natural Resources. National Energy Board Act. <https://gazette.gc.ca/rp-pr/p1/2019/2019-06-22/html/sup1-eng.html>

#	Section	Original condition	Comment and suggested amendment	Port authority response
				<p>Canada, and would have to be implemented by them. If the Government of Canada determines that measures are warranted to mitigate effects of marine shipping incidental to the project or cumulative effects on SRKW, it should address those measures in the Whole of Government Response. See Section 3.3 of this submission for additional detail.</p> <p>With the revisions and additions suggested by the port authority in Appendix 3.2-A of this submission, the draft conditions are appropriate and commensurate with the predicted effects of the project, including the project's contribution to cumulative effects.</p> <p>There is no basis in fact for concluding that elevated levels of noise is "destruction". See Section 2.6.1 of this submission for the port authority's detailed response.</p>
COALITION-31	8.5 - Marine Mammals	<p>The Proponent shall implement, in consultation with Transport Canada and Fisheries and Oceans Canada, technically and economically feasible technologies for reducing underwater noise related to berthing activities. In doing so, the Proponent shall:</p> <p>8.5.1 - evaluate, prior to operation, the effectiveness of technologies to reduce underwater noise associated with berthing activities, including the use of electric tugs. The Proponent shall determine, as part of its evaluation, whether the use of the technology would increase the extent to which environmental effects, other than underwater noise, are adverse. The Proponent shall submit the evaluation to the Agency one year prior to the start of operation and shall include the sources of information and methodology used;</p> <p>8.5.2 - upon completion of the initial evaluation referred to in condition 8.5.1, conduct a review every three years in order to identify and evaluate any new and emerging underwater noise reduction technologies for berthing activities. The Proponent shall conduct a review until such time that the Proponent has determined, in consultation with Transport Canada and Fisheries and Oceans Canada, that a review is no longer warranted. The results of the review shall be included as part of the annual report referred to condition 2.10; and</p> <p>8.5.3 - implement any technically and economically feasible new or emerging underwater noise reduction technologies for berthing activities determined by the Proponent, as part of a review conducted</p>	<p><u>343. Condition 8.5 and sub-conditions:</u> This must be amended to require VFPA to not only evaluate but also implement measures before operations begin. It must also be amended to require VFPA to implement "<u>all</u> technically and economically feasible technologies", to comply with s. 79(2) of SARA.</p>	<p>Section 79(2) requires that "...that measures are taken...", not "all" measures. See Section 2.6.1 of this submission for the port authority's detailed response.</p> <p>The port authority notes that draft condition 8.5.3 already requires implementation of any technically and economically feasible new or emerging underwater noise reduction technologies for berthing activities determined to be effective at reducing underwater noise associated with berthing activities, subject to the referenced criteria. Such measures may not be determined to be feasible prior to the commencement of operation and therefore could not be implemented prior to operation.</p> <p>Further, as noted above, certain measures to mitigate effects, including cumulative effects, are measures that are within the statutory authority of other federal authorities, and would have to be implemented by them.</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		pursuant to condition 8.5.2, to be effective at reducing underwater noise associated with berthing activities, without increasing the extent to which other environmental effects are adverse, and to meet requirements for safe operations. The Proponent shall submit these measures to the Agency prior to implementing them		
COALITION-32	8.5.1 - Marine Mammals	evaluate, prior to operation, the effectiveness of technologies to reduce underwater noise associated with berthing activities, including the use of electric tugs. The Proponent shall determine, as part of its evaluation, whether the use of the technology would increase the extent to which environmental effects, other than underwater noise, are adverse. The Proponent shall submit the evaluation to the Agency one year prior to the start of operation and shall include the sources of information and methodology used;	<u>344. Condition 8.5.1:</u> Drs. Scott and Val Veirs suggest amending this measure to include assessment of to the underwater noise from electric tugs and design constraints to ensure that neither the electric motors nor operation with them would radiate additional noise in the frequencies where Southern Resident hearing is most sensitive (i.e. ~20 kHz).	Draft condition 8.5.1 includes the requirement to evaluate the effectiveness of electric tugs at reducing underwater noise, and draft condition 8.5.3 requires the port authority to implement such vessels when evaluations indicate that they are effective and feasible. The evaluation would involve assessment of the underwater noise from electric tugs at relevant frequencies, which includes 20 kHz as assessed by the port authority in its response to the minister's IR (IR2020-3, CIAR #2083) to ensure that these vessels are effective at reducing underwater noise and acoustic effects on SRKW.
COALITION-33	8.5.3 - Marine Mammals	implement any technically and economically feasible new or emerging underwater noise reduction technologies for berthing activities determined by the Proponent, as part of a review conducted pursuant to condition 8.5.2, to be effective at reducing underwater noise associated with berthing activities, without increasing the extent to which other environmental effects are adverse, and to meet requirements for safe operations. The Proponent shall submit these measures to the Agency prior to implementing them.	<u>345. Condition 8.5.3:</u> This sub-condition is currently not drafted to require VFPA to actually implement technologies for quieter berthing, should its reviews indicate that it is feasible. The condition should be amended so that the Agency decides, based on VFPA's reviews and input from Transport Canada, when this technology is feasible and effective, and at that time can instruct VFPA to implement it, which VFPA is then required to do.	This assertion is incorrect: the draft condition clearly would require the port authority to implement underwater noise reduction technologies for berthing activities determined to be feasible if they are effective at reducing underwater noise associated with berthing activities, without increasing the extent to which other environmental effects are adverse, and meet requirements for safe operations.
COALITION-34	8.6 - Marine Mammals	The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada, Canadian Coast Guard, Pacific Pilotage Authority, and other relevant authorities, procedures to delay, where necessary, the daytime departure of container vessels calling on the Designated Project to mitigate effects to Southern Resident Killer Whale (<i>Orcinus orca</i>). The procedures shall include communication protocols, monitoring and criteria for determining whale presence, and safety and regulatory requirements. As part of the development of the procedures, the Proponent shall take into account the potential impacts of the implementation of the criteria and procedures on the Proponent's tenants and users of the Proponent's facilities at Roberts Bank.	<u>346. Condition 8.6:</u> This condition is excessively open-ended. It must specify the outcomes it intends the procedures to achieve, and criteria for the procedures themselves.	The outcome of this measure is described in the response to IR2020-3 (CIAR #2083): "If SRKW are in the vicinity of the terminal at the time of a planned vessel departure, its departure (including deployment of tugs) would be delayed until the SRKW have left the area of potential acoustic disturbance. This mitigation measure would avoid potential acoustic effects on SRKW by reducing the overlap between SRKW and noise emissions from unberthing and departure activities (Appendix IR2020-3-D)." Specifying details of the procedures in the condition would preclude the procedures from being developed in consultation with all the specified parties and is therefore premature.
COALITION-35	8.6 - Marine Mammals	The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada, Canadian Coast Guard, Pacific Pilotage Authority, and other relevant authorities,	<u>347.</u> Furthermore, as Drs. Scott and Val Veirs suggest, if VFPA does not attempt to detect Southern Residents at night, it must pause unberthing until daylight hours. This is consistent with DFO's advice that "an acoustic monitoring system be implemented if it is feasible"	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		procedures to delay, where necessary, the daytime departure of container vessels calling on the Designated Project to mitigate effects to Southern Resident Killer Whale (<i>Orcinus orca</i>). The procedures shall include communication protocols, monitoring and criteria for determining whale presence, and safety and regulatory requirements. As part of the development of the procedures, the Proponent shall take into account the potential impacts of the implementation of the criteria and procedures on the Proponent's tenants and users of the Proponent's facilities at Roberts Bank.	or alternatively VFPA "should explore avoidance of nighttime berthing." ²⁰ 348. Therefore, this condition must explicitly require either the use of passive acoustic monitoring to detect Southern Residents at night and the avoidance of unberthing when they are present at night, or it must require avoidance of unberthing at night and postponement until daylight hours when visible marine mammal observation is more effective. The same could be done for berthing, not just unberthing, if incoming ships could anchor until daylight.	
COALITION-37	8.9 - Marine Mammals	8.9 – The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as a result of operation of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall: 8.9.1 – monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (<i>Orcinus orca</i>). The Proponent shall conduct monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring; 8.9.2 – evaluate and determine whether meeting the underwater noise budget established pursuant to condition 8.4 is mitigating effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672); and 8.9.3 – monitor the effectiveness of any technologies implemented pursuant to condition 8.5.	<u>349. Condition 8.9:</u> VFPA states that "the Minister can be confident that" additional actions will be taken under the follow-up program if the increase in sound exposure for SRKW is higher than expected under VFPA's "most-realistic" scenario, and that VFPA has "assessed potential contingency mitigation options that could be implemented if underwater noise from container vessels calling at the Port of Vancouver is higher than predicted under the most-realistic scenario." ²¹ However, despite the possibility that this scenario could occur, and despite VFPA's apparent willingness to implement contingency mitigation in this scenario, this follow-up program condition contains no requirement for any action in the event that the follow-up program reveals that the increase in sound is higher than predicted, the noise budget is not being met, or technology implemented under 8.5 is not effective.	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-38	8.9 - Marine Mammals	8.9 – The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and	350. The Conservation Coalition submits that this condition must be amended to include how success or failure is to be measured in order to determine whether action is needed, as well as the action to	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.

²⁰ *Ibid* at PDF p 44.

²¹ IR2020-3, *supra* note 180 at PDF pp 2-3.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as a result of operation of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:</p> <p>8.9.1 – monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (<i>Orcinus orca</i>). The Proponent shall conduct monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring;</p> <p>8.9.2 – evaluate and determine whether meeting the underwater noise budget established pursuant to condition 8.4 is mitigating effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672); and</p> <p>8.9.3 – monitor the effectiveness of any technologies implemented pursuant to condition 8.5.</p>	<p>be taken. DFO echoes this concern, recommending enforceable conditions that require additional mitigation measures to be implemented if underwater noise exceeds VFPA’s predictions for its “most-realistic” scenario.</p>	
COALITION-39	8.9 - Marine Mammals	<p>8.9 – The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as a result of operation of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:</p> <p>8.9.1 – monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (<i>Orcinus orca</i>). The Proponent shall conduct monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring;</p>	<p>351. Further, with respect to Condition 8.9, as Drs. Scott and Val Veirs suggest, VFPA should be required to verify the accuracy of underwater noise predictions that include not just broadband levels, as VFPA proposes, but also frequencies in the most sensitive hearing range of the Southern Residents.²² All future modelling should incorporate the most sensitive hearing range of Southern Residents into evaluating potential acoustic impacts, and further, field observations should be done to ensure that underwater noise does not exceed predictions.</p>	<p>In Appendix 3.2-A of this submission, the port authority suggests that noise monitoring metrics will be developed and finalized in consultation with DFO, Transport Canada, Indigenous groups, and other relevant authorities. As noted in Appendix 2.6-B of this submission, broadband noise does include frequencies in the most sensitive hearing range of SRKW and is considered an appropriate monitoring metric for this species.</p> <p>Sound source field verification, as described by the port authority in its response to the minister’s IR (Appendix IR2020-3-I, CIAR #2083), includes field observations to ensure that underwater noise does not exceed predictions. Specifically, the port authority states that it “will collect noise source level measurements from container vessels calling at the Port of Vancouver to confirm the model assumptions. For example, sound source level measurements would be collected using Transport Canada’s underwater listening station in Boundary Pass, provided it is still in operation. If the Boundary Pass underwater listening station is not available, the port authority would seek an alternative station or deploy alternative hydrophones, if needed, to verify container vessel underwater noise source levels.”</p>

²² Veirs Report, supra note 6 at pp 13-15.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>8.9.2 – evaluate and determine whether meeting the underwater noise budget established pursuant to condition 8.4 is mitigating effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672); and</p> <p>8.9.3 – monitor the effectiveness of any technologies implemented pursuant to condition 8.5.</p>		
COALITION-40	8.7 to 8.13 - Marine Mammals	<p>8.7 – The Proponent shall distribute, prior to and throughout operation, the marine mammal awareness pamphlet <i>Marine Mammals of the Roberts Bank Area and Mariner's Guide to Whales, Dolphins, Porpoises of Western Canada, or any future equivalent document, to marine pilots working within the Port of Vancouver.</i></p> <p>8.8 – The Proponent shall document Indigenous knowledge it has received and how it was considered in the development and implementation of measures to mitigate effects on Southern Resident Killer Whales (<i>Orcinus orca</i>) throughout all phases of the Designated Project. The Proponent shall respect Indigenous knowledge protocols and shall keep Indigenous knowledge it has received confidential, if requested, and/or if required by legal and regulatory requirements.</p> <p>8.9 – The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as a result of operation of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:</p> <p>8.9.1 – monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (<i>Orcinus orca</i>). The Proponent shall conduct monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring;</p> <p>8.9.2 – evaluate and determine whether meeting the underwater noise budget established pursuant to condition 8.4 is</p>	<p>352. The Conservation Coalition does not object to the inclusion of Conditions 8.7-8.13 but reminds the Agency and the Minister that, in light of the meaning of mitigation as explained above, these are not considered mitigation under CEAA 2012 and they cannot satisfy the SARA s. 79(2) requirement. More specifically, these conditions include initiatives the Panel confirmed not to be mitigation (Condition 8.7 pamphlets, Condition 8.10 Conservation Agreement, Conditions 8.11-8.13 potential participation in regional initiatives by the federal government), initiatives that are follow-up programs (Condition 8.9), and initiatives that involve documentation as opposed to action (Condition 8.8).</p>	<p>As discussed in Section 3.3.4 of this submission, there is no rational basis for concluding that the measures proposed will not in fact mitigate the impacts to SRKW. They are in fact mitigation and must be considered as such.</p> <p>Section 79(2) requires only that measures be taken, acknowledging that a benefit can be gained regardless of who implements a particular measure.</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>mitigating effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672); and</p> <p>8.9.3 – monitor the effectiveness of any technologies implemented pursuant to condition 8.5.</p> <p>8.10 – The Proponent shall sign on, as a party to the <i>Species at Risk Act Section 11 Conservation Agreement to Support the recovery of the Southern Resident Killer Whale</i>, to an additional five year term of the agreement, or equivalent, if the other parties of the agreement also agree.</p> <p>8.11 – The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at effective management and recovery of the Southern Resident Killer Whale (<i>Orcinus orca</i>), including the Oceans Protection Plan, the Whales Initiative, or equivalent, and any other initiative supporting the recovery objectives for the Southern Resident Killer Whale (<i>Orcinus orca</i>) outlined in the <i>Southern Resident Killer Whale Action Plan</i>.</p> <p>8.12 – The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at managing underwater noise due to commercial vessel traffic.</p> <p>8.13 - The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at identifying the portions of the Salish Sea where marine shipping overlaps spatially and temporally with Southern Resident Killer Whale (<i>Orcinus orca</i>) habitat use.</p>		
COALITION-41	8 - Marine Mammals		354. With respect to gaps and the need for additional conditions, Drs. Scott and Val Veirs recommend the addition of a condition reducing tugboat speed by as much as safely possible – an idea VFPA rejected and which is absent from the conditions. DFO similarly stated that, despite VFPA’s position that the benefit would be small, this measure should “be implemented if feasible.” ²³	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-42	8 - Marine Mammals		355. Drs. Scott and Val Veirs further recommend staging inbound vessels on the outer shelf of Canada and anchoring temporarily within the Salish Sea to schedule their arrival in groups, timed to avoid spatiotemporal overlap with the Southern Residents, to create beneficial quiet periods and to reduce long-term average noise levels.	This measure is unrealistic, goes well beyond the scope of the project, and is not within the ability of the port authority to implement. As noted above, certain measures to mitigate effects, including cumulative effects, on SRKW, are measures that are within the statutory authority of other federal authorities, including Transport Canada, and would have to be implemented by them. If the Government of Canada determines that measures are warranted to

²³ DFO Submissions, supra note 77 at PDF p 44.

#	Section	Original condition	Comment and suggested amendment	Port authority response
				mitigate effects of marine shipping incidental to the project or cumulative effects on SRKW, it can implement those measures. See Section 3.3 of this submission for additional detail.
COALITION-43	8 - Marine Mammals		356. Finally, the Conservation Coalition submits that the conditions should require emergency response vessels with firefighting capabilities and emergency towing vessels, both capable of responding to container vessels of the size that would call at the Project, to be on standby on the shipping route, including at Sidney, BC, year-round. Container vessel fuel has the potential to cause a catastrophic spill in the event of an accident, and carries a fire risk. ²⁴ In the recent case of the 2021 fire on the <i>Zim Kingston</i> , a much smaller container vessel than those that would call at the Project (4253 TEU), two tugs with firefighting capabilities were coincidentally at a nearby dock and were able to prevent a large-scale environmental disaster.	The port authority notes that responsibility for emergency firefighting and towing along shipping routes is held by the Canadian Coast Guard. As such, this is a matter for consideration by the Government of Canada in the Whole of Government Response. See Section 3.3 of this submission for additional detail.

²⁴ Justine Hunter and Xiao Xu, "Misadventures of container ship MV ZIM Kingston highlight the risks of marine traffic off B.C.'s ecologically fragile coast", *The Globe and Mail* (29 October 2021), available online at <https://www.theglobeandmail.com/canada/british-columbia/article-bad-luck-and-trouble-the-misadventures-of-the-mv-zim-kingston/>; Tim Robertson et al., "Vessel Drift and Response Analysis for the Strait of Juan de Fuca to the Southern Strait of Georgia", (April 2021), at p.ii, available online at <https://www.sanjuanlio.com/wp-content/uploads/2021/04/Vessel-Drift-and-Response-Analysis-Inland-Waters-SJC-Apr21.pdf>.

Appendix 2.6-C Response to comments by non-government organizations on draft conditions

Preface

In submissions during the public comment period, several non-government organizations have included specific suggestions to revise or add to the draft potential conditions. The port authority has reviewed these suggestions to evaluate the technical and economic feasibility of any suggested measures, in addition to considering other relevant factors, such as the key principles that must underlie the conditions, as described in Section 3.1 of this submission. The port authority has provided a response to some suggestions by non-government organizations, where a response may be helpful to IAAC in drafting conditions. The port authority's responses are provided below in **Tables 1** through **5** as follows:

- Table 1 – Response to comments of Birds Canada
- Table 2 – Response to comments of Pacific Whale Watch Association
- Table 3 – Response to comments of Worldocean Consulting
- Table 4 – Response to comments of Garden City Conservation Society
- Table 5 – Response to comments of Ecojustice on behalf of David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation, and Wilderness Committee

Table 1 – Response to comments of Birds Canada

Posted March 14, 2022. [CIAR #3133](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
BC-1	N/A		1.1 A Draft Condition be included requiring the Port of Vancouver to contribute \$1.1 million a year ³ in funding to “implement intergovernmental management programs for the improvement and long-term environmental management of the Fraser River estuary and the Salish Sea. The programs should include: a governance body made up of public and private sector stakeholders and representatives of Indigenous groups....” ¹	<p>The port authority notes that under CEAA 2012 and the <i>Impact Assessment Act</i> it is not appropriate to impose direct financial requirements in conditions.</p> <p>Intergovernmental management of both the Fraser River estuary and the Salish Sea is a shared responsibility. The draft Whole of Government Response outlines a number of initiatives underway and in development by the Government of Canada that may support future consideration of intergovernmental management programs. The Government of Canada acknowledged that any such program would need to be a joint effort between government, Indigenous groups, and stakeholders.</p> <p>The port authority was an active participant of the previous management of the Fraser River estuary aimed to assist in the management of ecological health of the Fraser River and its estuary (Fraser River Estuary Management Plan, FREMP). As stated in the closing remarks (CIAR #2045), the port authority is committed to participating and collaborating in future iterations of FREMP.</p> <p>The port authority is actively involved in regional and environmental sustainability initiatives, and has a community investment fund that provides funding to specific projects, including bird projects.</p>
BC-2	N/A		1.2 A Draft Condition be included requiring the Port of Vancouver to contribute \$500,000 in funding to and participate in “two regional environmental assessments for the Fraser River estuary and the Salish Sea to establish an environmental baseline, identify environmental and cumulative effects of the areas, and mitigation and follow up requirements.” ²	<p>Addressing cumulative effects is a shared responsibility. The draft Whole of Government Response outlines the many initiatives and measures that have been, are being, and will be taken by the Government of Canada to address cumulative effects.</p> <p>The port authority notes that there are numerous draft conditions (e.g., 8.10, 8.11, 8.12, 8.13, 12.5, 13.8) that would require the proponent to participate in various regional initiatives that are intended to address regional cumulative effects. These draft conditions (with revisions and additions suggested by the port authority in Appendix 3.2-A of this submission) reflect an appropriate approach to addressing the project’s contribution to cumulative effects, in a manner consistent with the key principles outlined in Section 3.1 of this submission.</p>
BC-3	N/A		1.3 A Draft Condition be included requiring the Port of Vancouver to acknowledge and contribute \$50,000 a year in funding to conservation efforts and reporting requirements associated with Canada meeting its international commitments “wise use” of the Fraser River Estuary as a Ramsar Site of International Significance.	See preceding response.
BC-4	N/A		1.4 A Draft Condition be included that the Port of Vancouver identify thresholds of ecological function for the Fraser Delta and calculate cumulative risk to those thresholds as part of implementing a long- term environmental management plan.	The draft conditions (with revisions and additions suggested by the port authority in Appendix 3.2-A of this submission) reflect an appropriate approach to addressing the project’s contribution to cumulative effects, in a manner consistent with the key principles outlined in Section 3.1 of this submission.

¹ Review Panel for the Roberts Bank Terminal 2 Project

² Ibid.

#	Section	Original condition	Comment and suggested amendment	Port authority response
BC-5	N/A		1.5 That all Draft Conditions be reviewed and revised with consideration of how public accountability can be enhanced through direct participation.	The port authority notes that the draft conditions include extensive consultation and reporting requirements that would provide transparency and accountability with respect to the port authority's implementation of the conditions.
BC-6	18.1 – Environmental Monitoring Committee	The Proponent shall participate, during all phases of the Designated Project and at the request of relevant federal authorities, in any Environmental Monitoring Committee (EMC), should one be established in relation to the Designated Project.	1.6 That Draft Condition 18.1 be altered to require the Port of Vancouver make a financial commitment as defined by relevant federal authorities to maintain the ongoing function of the Environmental Monitoring Committee for as long as environmental effects associated with this proposed project are being monitored.	The port authority notes that under CEAA 2012 and the <i>Impact Assessment Act</i> it is not appropriate to impose direct financial requirements in conditions.
BC-7	18.1 – Environmental Monitoring Committee	The Proponent shall participate, during all phases of the Designated Project and at the request of relevant federal authorities, in any Environmental Monitoring Committee (EMC), should one be established in relation to the Designated Project.	1.7 That Draft Condition 18.1 be altered to identify a commitment to the creation of a community based monitoring sub-committee that includes members of the public.	The requirement of draft condition 18.1 is for the port authority to participate in an EMC, at the request of relevant federal authorities, should one be established. It is anticipated that details such as sub-committees would be determined in the development of a terms of reference for the committee.
BC-8	18.2, 18.3, 18.4 & 18.5 - Environmental Monitoring Committee	<p>18.2 – The Proponent shall provide to the EMC, upon request, information relating to the mitigation measures and follow-up programs set out in this document to the EMC. If requested by the EMC, the Proponent shall also provide non-proprietary data files of the results of the follow-up programs.</p> <p>18.3 – When provided with a written recommendation by the EMC, the Proponent shall provide a response in writing to the EMC, which set out whether the Proponent accepts the recommendation, and if it does not, the reasons for not accepting the recommendation.</p> <p>18.4 – The Proponent shall report to the Agency as part of the annual report referred to in condition 2.10, or more frequently if required by the Agency, on the Proponent's actions with respect to the EMC and the associated outcomes of the Proponent's actions.</p> <p>18.5 - The Proponent shall allow access to the Designated Project area, to the extent that such access is safe, to any monitor(s) established as part of the EMC. The Proponent shall communicate with monitor(s) regarding coordination of monitoring activities.</p>	1.8 That Draft Conditions 18.2 – 18.5 be amendment to include the community based monitoring sub- committee.	See response above.
BC-9	10.3 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the	2.1 That the "and/or" phrase within condition 10.3 be clarified to simply "and" ensuring no confusion of area to be covered by condition 10.3 occurs.	<p>The suggested change to the condition would require installation of barriers in both the local and regional assessment areas, regardless of whether barriers in those areas would be effective or feasible.</p> <p>Based on clarification provided by IAAC, the port authority understands the intent of this condition is to require the proponent to identify suitable locations for barriers that would mitigate road-associated mortality risk for</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).		barn owls as a result of the project, which may be in either the local assessment area or the regional assessment area or both. The condition should maintain the flexibility necessary to ensure barriers are installed only where they will be effective, address the potential localized project effect, and are technically and economically feasible.
BC-10	10.3 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).	2.2 That wording in condition 10.3 be modified from "to mitigate road-associated mortality risk" to "to mitigate road and rail associated mortality risk" throughout known Barn Owl foraging habitat.	The EIS assessed potential "vehicle" mortality risk to barn owls as mortality risk from both road vehicles and trains (CIAR #181). Draft condition 10.3 purposefully requires the installation of a physical barrier to avoid or reduce road mortality risk, as it would not be feasible to install a barrier(s) along the railway line due to space, access, and legal constraints. There are other draft conditions requiring mitigation for potential vehicle (road and rail) mortality risk due to the project, which includes mortality risk from trains (10.4 and 10.5).
BC-11	10.3 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo</i>	2.3 That the area covered by condition 10.3 not be defined by the Regional Assessment Area but rather based on overlap between Barn Owl foraging habitat and modeled routes of increased traffic incidental to the Roberts Bank Terminal 2 Project. Appendix UT3-B of Undertaking #3 Traffic Projections through George Massey Tunnel demonstrates there is extensive container related traffic through-out the Fraser Delta including up the South Fraser Perimeter Road and along Highway 99. ³ These routes require increased mitigation to account for increased RBT2 related traffic.	The port authority notes that draft condition 10.3 states that suitable locations for physical barriers will be determined in consultation with several parties, including Birds Canada. This input will be considered as part of the consultation process; however, a revision to the draft condition to specify location would preclude input from the other listed parties, including Environment and Climate Change Canada, Ministry of Transportation and Infrastructure, and Indigenous groups.

³ Vancouver Fraser Port Authority Undertaking #3 – Traffic Projections through George Massey Tunnel Roberts Bank Terminal 2 Project May 29, 2019. Online [Road and Rail Activities Incidental to the Proposed GCT Deltaport Expansion – Berth Four Project January 6, 2022_2022-01-07 8 03 11 PM.pdf \(windows.net\)](#) Accessed February 25, 2022.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<i>rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).		
BC-12	10.4 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada and Indigenous groups and to the satisfaction of a qualified professional, the number and locations of artificial nest structures that shall be installed within the regional assessment area to enhance barn owl (<i>Tyto alba</i>) habitat. The Proponent shall install at least five nest structures during the first year of construction and shall maintain the nest structures throughout construction and operation.	2.4 That the role of public naturalist groups in building, installing and monitoring Barn Owl nest boxes be acknowledged by requiring the Port of Vancouver to engage relevant naturalists in the consultation associated with condition 10.4	The port authority notes that compliance with a condition to consult 'relevant naturalists' is not certain enough to be included in condition. Such a requirement would also assume that relevant naturalists would be willing to be consulted. As noted in the key principles described in section 3.1, compliance by the proponent cannot be dependent on the action of a third party. However, we understand that Birds Canada has expertise with barn owls and are listed under draft condition 10.3 as one of the parties to be consulted. The port authority has suggested a revision to draft condition 10.4 to include Birds Canada as a party to be consulted (see Appendix 3.2-A of this submission).
BC-13	N/A		2.5 That role of public naturalist groups in building, installing and monitoring Barn Owl nest boxes be supported by requiring the Port of Vancouver to contribute \$80,000 a year to support to third party programs to install, maintain, and monitor Barn Owl nest boxes.	The port authority notes that under CEAA 2012 and the <i>Impact Assessment Act</i> , it is not appropriate to impose direct financial requirements in conditions. Draft condition 10.4 requires the installation and maintenance of up to five nest boxes for barn owls. As noted above, compliance with a condition cannot be dependent on the action of a third party. However, the condition does not prevent the port authority from retaining a third party, such as a naturalist group(s), to support the port authority in building and installing barn owl nest boxes. The port authority has retained third parties to build and install nest boxes for previous projects. Draft condition 10.15 relates to the follow-up program designed to verify the effectiveness of the mitigation of installing and maintaining nest boxes for barn owls through a thorough monitoring design. This is the responsibility of the port authority.
BC-14	N/A		2.6 That a condition be included requiring the Port of Vancouver to contribute funding and expertise to a regional approach to Barn Owl mitigation that addresses the cumulative impacts of trade traffic from vehicles and rail on Barn Owls.	The draft conditions (with revisions and additions suggested by the port authority in Appendix 3.2-A of this submission) reflect an appropriate approach to addressing the project's contribution to cumulative effects, in a manner consistent with the key principles outlined in Section 3.1 of this submission.
BC-15	N/A		2.7 That a condition be added requiring all associated bird monitoring data be submitted to the publicly accessible Nature Counts portal.	The data related to barn owl nest boxes will be reported on as part of draft conditions 10.15, 2.10 and 2.12 and shared publicly pursuant to draft condition 2.13. The port authority is open to discussing collaboration with third parties, such as Birds Canada, to enter into data sharing agreements or to identify other mechanisms to share the information. A requirement to provide monitoring data for use in a third-party database would not be consistent with key principles outlined in Section 3.1; conditions cannot be dependent on the action of a third party, and must be related to the environmental effects of the project.

#	Section	Original condition	Comment and suggested amendment	Port authority response
BC-16	10.3 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).	2.8 That the organizational name in 10.3 changed from Bird Studies Canada to Birds Canada.	The port authority has no concern with this suggested revision and has included this suggestion in Appendix 3.2-A of this submission.
BC-17 through BC-24, BC-27, and BC-34 through BC-39	N/A	N/A	N/A	The port authority will respond to comments on the draft conditions pertaining to salinity, biofilm, and western sandpiper (including those in BC-17 through BC-24, BC-27, and BC-34 through BC-39) in a separate submission.
BC-25	N/A		3.1 A condition be included that sets temporal traffic thresholds should the proponent and identify parties be unable to agree on an adequate number of "technically feasible" physical barriers to avoid road based mortality of Barn Owls.	The draft condition does not (nor could it) require agreement to be reached with the specified parties. Rather, the draft condition would require the proponent to develop, in consultation with the specified parties, and implement the specified measure to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project; this is appropriate and consistent with the key principles outlined in Section 3.1 of this submission. Moreover, a temporal traffic threshold is not a feasible measure that could be implemented by the port authority.
BC-26	N/A		3.2 A condition be added requiring the Port of Vancouver identify the seasonal use and dietary composition of Dunlin foraging on the Roberts Bank mudflats to determine whether overwintering and migrating Dunlin may also be impacted by changes in polyunsaturated fatty acid production at Roberts Bank.	The assessment of potential project effects on coastal birds identified two representative species for the shorebird subcomponent, Pacific dunlin and western sandpipers (EIS, CIAR #181). The port authority conducted studies on Pacific dunlin, including a multi-year overwintering Pacific dunlin foraging study (Appendix 15-C, CIAR #181). The port authority predicted that the project would result in a negligible adverse effect on Pacific dunlin, which the review panel considered in their recommendation report (CIAR #2062). The review panel acknowledged the importance of biofilm to western sandpiper diet and made several recommendations related to biofilm and western sandpipers. The port authority will respond to the proposed new

#	Section	Original condition	Comment and suggested amendment	Port authority response
				condition related to mudflats and biofilm (including fatty acid production) in a separate submission. The review panel did not make any recommendations or express any concerns related to Pacific dunlin.
BC-28	10.3 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).	4.1 Draft Condition 10.3 be adjusted to indicate the Port of Vancouver work with Birds Canada, Environment and Climate Change Canada, Indigenous Peoples and Communities and the public to undertake movement research on Barn Owls to identify timing and frequency of exposure Barn Owls to vehicle and rail strikes.	Draft condition 10.16 requires the port authority to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to barn owl in the local assessment area, and refers to Table C17 of Appendix G of the review panel's report. The follow-up program will quantify and verify barn owl road and rail collision mortalities pre-construction, during construction, and during project operation. Monitoring program methods will be determined, in consultation with listed parties, during the development of the follow-up program, pursuant to draft condition 2.5. As noted in draft condition 10.16, the follow-up program will be developed in consultation with ECCC, BC Ministry of Environment and Climate Change Strategy and MOTI, and Indigenous groups.
BC-29	10.4 - Avifauna	The Proponent shall identify, in consultation with Environment and Climate Change Canada and Indigenous groups and to the satisfaction of a qualified professional, the number and locations of artificial nest structures that shall be installed within the regional assessment area to enhance barn owl (<i>Tyto alba</i>) habitat. The Proponent shall install at least five nest structures during the first year of construction and shall maintain the nest structures throughout construction and operation.	4.2 Draft Condition 10.4 and sub-conditions be expanded to require the Port of Vancouver work with Birds Canada, Environment and Climate Change Canada, Indigenous Communities and the public to undertake research into seasonal usage of Roberts Bank by overwintering and migrating Dunlin.	The port authority conducted studies to assess seasonal usage of Roberts Bank by overwintering and migrating Pacific dunlin for the EIS (CIAR #181). These studies include the Shorebird Abundance and Foraging Use in the Fraser River Estuary during Migration (CIAR #388) and Abundance and Distribution of Overwintering Shorebirds in the Fraser River Estuary (Hemmera 2014g, CIAR #181). As noted in the response to BC-26, the review panel's report states that the port authority predicted that the project would result in a negligible adverse effect on Pacific dunlin (CIAR #2062). The review panel did not make any recommendations or express any concerns related to Pacific dunlin.
BC-30	10.8 - Avifauna	The Proponent shall determine, in consultation with British Columbia's Ministry of Transportation and Infrastructure and Environment and Climate Change Canada, if the implementation of measures to decrease the potential for bird-vehicle collisions within the local and regional assessment area indicated by the Proponent on figures 15-1 and 15-2 of the environmental impact statement (including reduced speed limits) is technically and economically feasible. If technically and economically feasible, the Proponent shall provide these measures to the Agency prior to construction. The Proponent shall ensure vehicles associated with the Designated Project adhere to these measures during construction and operation within the Designated Project area.	4.3 Draft Condition 10.8, be adjusted to include potential collisions associated with rail based collisions.	As noted in the response to BC-10, "vehicles" refers to both road-vehicles and trains as defined in the EIS (CIAR #181). The addition of "rail based" is therefore not required.

#	Section	Original condition	Comment and suggested amendment	Port authority response
BC-32	N/A		5.1 The Port of Vancouver contribute \$50,000 a year in funding to third party efforts to treat raptors injured in collisions or other stressors on the Fraser River Delta.	<p>The port authority notes that under CEAA 2012 and the <i>Impact Assessment Act</i>, it is not appropriate to impose direct financial requirements in conditions.</p> <p>Further, as outlined in Section 3.1 of this submission, conditions must be focused on the effects of the Designated Project.</p> <p>However, note that the port authority is actively involved in regional and environmental sustainability initiatives, and has a community investment fund that provides funding to specific projects, which has included bird-related projects in the past.</p>
BC-33	N/A		5.2 The Port of Vancouver contribute funding to third party research into mechanism to increase recruitment of breeding adult Barn Owls onto the Fraser River Delta.	<p>The port authority notes that under CEAA 2012 and the <i>Impact Assessment Act</i>, it is not appropriate to impose direct financial requirements in conditions.</p> <p>Several draft conditions are proposed to mitigate potential effects of the project on barn owls, including but not limited to mitigating potential vehicle collisions (10.3), installing nest boxes (10.4), and establishing and maintaining foraging habitat (10.5), all of which will support the barn owl population. In addition, the follow-up program will verify the effectiveness of the mitigation of nest boxes (10.15) and physical barrier(s) installed to reduce vehicle collision (10.16.1).</p> <p>The port authority acknowledges the regional context of the concern with ongoing recruitment of breeding adult barn owls. The port authority is actively involved in regional and environmental sustainability initiatives, and has a community investment fund that provides funding to specific projects, which has included bird-related projects in the past.</p>
BC-40	2.13 – Information Sharing	The Proponent shall publish on the Internet the annual reports and the executive summaries referred to in conditions 2.10 and 2.12, greenhouse gas reduction plan and monitoring results referred to in conditions 3.2 and 3.3, biofilm follow-up program results referred to in conditions 10.14, the reports related to accidents and malfunctions referred to in conditions 19.6.3 and 19.6.4, the accident and malfunction communication plan referred to in condition 19.7, the schedules referred to in conditions 20.1 and 20.2, and any update or revision to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 15 years following their publication. The Proponent shall notify the Agency and Indigenous groups of the availability of these documents within two business days of their publication	6.2 Draft Condition 2.13 be altered to include a requirement for the Port of Vancouver to send notification to all retailers and shipping companies that use of Roberts Bank Terminal 2 will undermine corporate objectives related to sustainability within their respective supply chains.	No comment.
BC-41	2.13 – Information Sharing	The Proponent shall publish on the Internet the annual reports and the executive summaries referred to in conditions 2.10 and 2.12, greenhouse gas reduction plan and monitoring results referred to in conditions 3.2 and 3.3,	6.3 Draft Condition 2.13 be altered to require the Port of Vancouver to include the Ramsar Secretariat, the Western Hemisphere Shorebird Reserve Network Executive Office, the North American Migratory Bird Initiative, the Pacific Birds Habitat Joint Venture, the Trilateral Committee for Wildlife and Ecosystem Conservation and Management, the Pacific	The port authority notes that the information that would be published on the internet in accordance with this draft condition would be publicly available and therefore available to the groups identified in this comment.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		biofilm follow-up program results referred to in conditions 10.14, the reports related to accidents and malfunctions referred to in conditions 19.6.3 and 19.6.4, the accident and malfunction communication plan referred to in condition 19.7, the schedules referred to in conditions 20.1 and 20.2, and any update or revision to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 15 years following their publication. The Proponent shall notify the Agency and Indigenous groups of the availability of these documents within two business days of their publication	Flyway Council and the Puget Sound Ecosystem Monitoring Program in the reporting requirements identified in condition 2.13.	

Table 2 – Response to comments of Pacific Whale Watch Association

Posted March 15, 2022. [CIAR #3300](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
PWWA-1	8.1.7- Marine Mammals	<p>avoid, from June 1 or the date Southern Resident Killer Whale (<i>Orcinus orca</i>) are confirmed by marine mammal observers to be present in the Salish Sea, whichever is later, to September 30:</p> <p>8.1.7.1 - all vibratory and impact pile driving;</p> <p>8.1.7.2 - vibro-densification of the caisson foundation mattress rock; and</p> <p>8.1.7.3 - removal of the piles for the temporary barge ramps;</p>	<p>Section 8.1.7. of the draft potential conditions calls for the avoidance of activities such as pile-driving and vibro-densification from June 1 (or the date when SRKW are confirmed in the area) until September 30. In recent years, SRKW usage of the Salish Sea has shifted dramatically due to declines in Fraser River Chinook (Shields et al. 2018). Southern Residents are now less likely to be seen during summer months and more likely to be seen during fall, winter, or early spring. While the potential conditions do describe protocols for monitoring for SRKW outside of the summer months, the PWWA wishes to emphasize that SRKW can appear at any time of year and that their forays into the Salish Sea are becoming less and less predictable. It is crucial that mitigation procedures pertaining to SRKW be consistent throughout the year and that they be rapidly implemented in the event SRKW are seen in the vicinity.</p> <p>The area surrounding Roberts Bank is utilized even more frequently by other species that may also be affected by construction activities. Bigg's killer whales, humpback whales, and gray whales can also be present at any time of year. Though the draft potential conditions do briefly mention an exclusion zone for other marine mammals, the mitigation procedures for non-Southern Resident killer whales are not described in detail. The PWWA requests more information on mitigation efforts and proposed thresholds for other whales and marine mammals near Roberts Bank that will be impacted by this project.</p>	<p>Recent trends in SRKW presence are accounted for in the definition of the peak use period, which is consistent with recent trends from the B.C. Cetacean Sightings Network and OrcaMaster sightings databases, DFO data, and the Pacific Whale Watch Association data (IR2020-2.3, CIAR #2083). Please see Appendix 2.6-B of this submission for more information on temporal considerations regarding SRKW movement patterns.</p> <p>As noted by PWWA, the port authority will implement year-round monitoring and stop-work procedures before SRKW enter exclusion zones. These measures will reduce potential overlap between construction noise and SRKW if they are present outside the peak use period. Further, the port authority suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.</p> <p>The port authority notes that the draft conditions, with the revisions and additions suggested by the port authority, would serve to mitigate potential adverse effects of the project on SRKW whenever they may occur in the vicinity of the project. The port authority also notes that other measures that have been, are being, and will be implemented by the Government of Canada will also serve to mitigate adverse effects, including cumulative effects, on SRKW.</p> <p>The port authority notes that the draft conditions already would require the establishment of thresholds, exclusion zones based on these thresholds, year-round monitoring, stop work procedures, and development and implementation of mitigation measures for marine mammals other than SRKW. The proposed thresholds for other whales and marine mammals include hearing group-specific injury threshold(s) for impulse and continuous (non-impulse) noise (described in detail in Appendix IR2020-2.3-C, CIAR #2083). In addition, other mitigation efforts relevant to non-SRKW marine mammals include measures such as the use of soft start procedures, minimizing impulse noise by using vibratory piling, the use of sound attenuation technology, and participation in the ECHO Program (e.g., vessel slowdowns to reduce underwater noise and risk of vessel strikes).</p>
PWWA-2	8.2.7.5 - Marine Mammals	<p>develop and implement procedures for marine mammal observer(s) to receive any available information on the presence of cetaceans in the area surrounding the local assessment area from whale sighting networks, and use this information to inform observation requirements in condition 8.2.7;</p>	<p>Section 8.2.7.5. of the potential conditions calls for the project to <i>“develop and implement procedures for marine mammal observer(s) to receive any available information on the presence of cetaceans in the area surrounding the local assessment area from whale sighting networks, and use this information to inform observation requirements in condition 8.2.7.”</i></p> <p>The PWWA currently utilizes the private PWWA App to share real-time whale and wildlife sightings internally among its membership. The PWWA also extends PWWA App access to select authorized users, such as the Canadian Coast Guard's Marine Mammal Desk and marine mammal observers (MMO's) that work in conjunction with the Royal Canadian Navy. The PWWA proposes a similar arrangement with MMO's working on a potential Roberts Bank Terminal 2 project so that approved MMO's could better anticipate and prepare for whales entering the terminal area, providing more effective protections for the region's marine mammals.</p>	<p>The port authority welcomes PWWA's willingness to discuss enabling access to the PWWA App for marine mammal observers engaged for RBT2. The port authority will connect with PWWA when developing the marine mammal detection and response plan, as required by draft condition 8.2.</p>

Table 3 – Response to comments of Worldocean Consulting

Posted March 14, 2022. [CIAR #3096](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
WOC-1	19.1.1 – Accidents and malfunctions	consider sensitive time periods for vulnerable species found in the vicinity of the Designated Project (including juvenile salmon and migratory birds); and	<p>Should this Project proceed, which I sincerely hope it does not, a significant increase in commercial shipping activity would result in the Salish Sea- critical habitat for endangered, SARA-protected Southern Resident Killer Whales. The cumulative effects of shipping activity from this Project, as well as Trans Mountain Tanker Terminal expansion and other expansion projects within the Port of Vancouver, pose an existential threat to these orcas- an iconic symbolic of the Pacific Northwest. A catastrophic marine oil spill associated with either a Project-related or Trans Mountain-related vessel could essentially wipe out these endangered orcas overnight.</p> <p>For this reason, I propose that Section 19.1.1 in 19- Accidents and Malfunctions (Pages 44-47) be reworded as follows:</p> <p>"consider sensitive time periods for vulnerable species found in the vicinity of the Designated Project, including its construction and operation (including Southern Resident Killer Whales, juvenile salmon and migratory birds); and, in the case of Southern Resident Killer Whales, whenever they are present in the Southern Strait of Georgia, as determined by the Canadian Coast Guard's Marine Mammal Desk in Sidney, suspend all incoming and outgoing shipping activity associated with the terminal until such time as these whales have left the area."</p>	<p>The proposed condition would extend beyond the scope of the RBT2 Project. It is not feasible, and cannot be imposed as a condition.</p> <p>As discussed in Section 2.2 of this submission, the updated projections prepared on behalf of the port authority demonstrate that, for the most-realistic scenario, the number of container vessels calling at the Port of Vancouver in the future will be the same with or without RBT2 (see IR2020-3, CIAR #2083). By 2045, in the most realistic scenario, it is projected that the project will not change the total number of container vessels calling at the Port of Vancouver overall and will not change the number of container vessels transiting the marine shipping area between the Port of Vancouver and the 12 nautical mile limit of Canada's territorial sea, but an increase in the number of vessels calling at RBT2 and a corresponding decrease at Deltaport and Burrard Inlet terminals is projected. Thus, the "significant increase in commercial shipping activity" referenced in this comment is not likely to occur as a result of the project.</p> <p>Moreover, suspending all incoming and outgoing shipping activity associated with RBT2 is not a feasible measure that could be implemented by the port authority. Nonetheless, as per draft condition 8.6, daytime departures of RBT2 container vessels will be delayed to mitigate effects to SRKW. Further, the port authority addresses project effects to SRKW and suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.</p> <p>As noted in the key principles, Section 3.1 of this submission, conditions can only be imposed on the proponent.</p>

Table 4 – Response to comments of Garden City Conservation Society

Posted March 15, 2022. [CIAR #3338](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
GCCS-1	10.1 & 10.2 - Avifauna	<p>10.1 – The Proponent shall carry out the Designated Project in a manner that protects migratory birds and avoids injuring, killing or disturbing migratory birds, destroying or disturbing their nests or eggs, or taking them. In this regard, the Proponent shall take into account Environment and Climate Change Canada’s <i>Avoidance Guidelines</i> to reduce the risk to migratory birds. The Proponent’s actions when carrying out the Designated Project shall be in compliance with the <i>Migratory Birds Convention Act, 1994</i>, the <i>Migratory Birds Regulations</i> and with the <i>Species at Risk Act</i>.</p> <p>10.2 - The Proponent shall document, prior to construction and in consultation with internationally recognized and published experts on biofilm ecology, Indigenous groups, and Environment and Climate Change Canada, methods and best practices to create biofilm habitat, including details about the production of lipids, with specific reference to fatty acids in the Fraser river estuary. The Proponent shall publish a document compiling the results of its research on its website and shall provide it to the Agency prior to construction. The Proponent shall incorporate current knowledge peer-reviewed science in the document and shall update the document at years 2, 5, and 10 following the end of construction based on emerging knowledge and science, including science developed as part of condition 10.14.</p>	<p>If the federal ECCC Minister and Cabinet approve RBT2, there will be pre-set conditions. In the 48 pages of potential RBT2 conditions, only the above two conditions are re Western Sandpipers.</p> <p>They are also the only hint “the unmitigable species-level risk to Western Sandpipers” exists:</p> <ul style="list-style-type: none"> • 10.1, a condition that the Proponent follow Canadian law (already the law) • 10.2, a condition to publish, on a VFPA website, current research about biofilm habitat, etc. <p>In contrast, robust conditions in this matter would require measured achievement of a set of standards. In other words, they would require proven steps and demonstrated results. Together they would end the serious unmitigable species-level risk to Western Sandpipers. For example, they might require, prior to approval, (a) completion of a working prototype of the set of methods and (b) a bond of a sufficient amount to ensure the set of methods get implemented well.</p> <p>Or VFPA could redesign so the habitat isn’t lost, as ECCC has suggested for 18 years.</p> <p>The weak “potential conditions” re Western Sandpipers epitomize the RBT2 farce. It is still possible to get beyond that, but time is short.</p>	<p>The port authority will respond to comments on the draft conditions pertaining to salinity, biofilm, and western sandpiper in a separate submission.</p>

Table 5 – Response to comments of Ecojustice on behalf of David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation, and Wilderness Committee

Posted March 15, 2022. [CIAR #3322](#)

#	Section	Original condition	Comment and suggested amendment	Port authority response
COALITION-1	General		307. The Conservation Coalition is concerned that many of the Draft Potential Conditions leave crucial measures to be developed at a later time by VFPA, and are insufficiently prescriptive (e.g. Conditions 7.6, 7.11, 8.2, 8.4, 8.6, 8.9). The conditions must require specifics, otherwise parties such as the Conservation Coalition cannot meaningfully assess how successful the conditions are likely to be, and the Minister or Governor in Council cannot be confident in their outcomes if they approve the Project.	The port authority notes that the general scheme of, and level of detail in, the draft conditions are consistent with those in decision statements issued for other projects, including other marine terminal projects. Underlying the scheme for the draft conditions is a recognition that detailed requirements can and should be determined at an appropriate time when detailed information is available in consultation with the appropriate authorities and Indigenous groups. For example, see general follow-up program requirements for the development of details in consultation (draft condition 2.5)
COALITION-2	General		310. Every Project condition that applies to SARA-listed species must be drafted to clearly specify which SARA-listed species are covered, including by naming all those species. While there are 19 SARA-listed birds in the Project and Marine Shipping Area there are only conditions in relation to four of these species – barn owl, barn swallow, great blue heron, and western sandpiper. While it may be appropriate to take a representative species approach generally under CEAA 2012, section 79(2) of SARA requires a consideration of impacts to all SARA-listed species and requires measure to ensure <u>all</u> mitigation of all impacts on SARA-listed species.	Section 79 of SARA does not require that every SARA-listed species that benefits from a condition be identified in that condition, nor does section 79 SARA impose requirement on the minister issuing a decision statement to impose a specific condition for every listed species. Therefore, a change is not required.
COALITION-3	General		311. Finally, while the Panel's recommendations addressed cumulative effects there is a general absence of conditions directed at cumulative effects. Given the highly developed state of the Fraser Estuary and the already degraded state of the Salish Sea, the Project is contributing to significant and challenging pre-existing problems that in many cases are already threatening species' survival and ecosystem collapse	This assertion is incorrect. Every condition that serves to mitigate the potential adverse effects of the project also serves to mitigate the project's contribution to cumulative effects. Further, there are numerous draft conditions (e.g., 8.10, 8.11, 8.12, 8.13, 12.5, 13.8) that would require the port authority to participate in various regional initiatives that are intended to address regional cumulative effects. These draft conditions (with revisions and additions suggested by the port authority in Appendix 3.2-A of this submission) reflect an appropriate approach to addressing the project's contribution to cumulative effects, in a manner consistent with the key principles outlined in Section 3.1 of this submission. Addressing cumulative effects is a shared responsibility. The draft Whole of Government Response outlines the many initiatives and measures that have been, are being, and will be taken by the Government of Canada to address regional cumulative effects.
COALITION-4	2.5 – Follow-up requirements	The Proponent shall, where a follow-up program is a requirement of a condition set out in this document, determine, as part of the development of each follow-up program and in consultation with the party or parties being consulted during the development, the following information, unless already specified in the condition: 2.5.1 - the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program;	312. Condition 2.5: This condition leaves VFPA to determine crucial details of follow-up programs. a) The condition leaves it to VFPA to determine thresholds for when further measures are needed (2.5.4) and what measures are to be implemented in the event that those thresholds are exceeded (2.5.5), and what the follow-up program needs to achieve before it can stop in these cases (2.5.6). These decisions should not be at VFPA's discretion, especially when they relate to SARA-listed species such as the critically endangered Southern Residents and their Chinook salmon prey.	These comments mischaracterize the process of follow-up program development contemplated by the draft conditions. This draft condition must be read and understood together with other potential conditions that would govern follow-up program development (draft condition 2.6, 2.7, 2.8, 2.9, 2.10.4, 2.10.5, 2.16.2, and 2.17). The draft conditions would require the follow-up program elements to be developed in consultation with the parties specified in each condition, which typically include one or more relevant authorities with specialist or expert information or knowledge about the subject matter and/or regulatory responsibility, Indigenous groups and other parties. Through the implementation of other draft conditions, notably

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>2.5.2 – the scope, content and frequency of reporting of the results of the follow-up program;</p> <p>2.5.3 – the frequency at which the follow-up program must be updated;</p> <p>2.5.4 – the levels of environmental change relative to baseline that are caused by the Designated Project and that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities causing the environmental change to be stopped;</p> <p>2.5.5 - the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.5.4 have been reached or exceeded; and</p> <p>2.5.6 - the specific and measureable end points that must be achieved before the follow-up program can end. Those end points should indicate that the accuracy of the environmental assessment has been verified and/or that the mitigation measures are effective.</p>	<p>b) Without specific requirements included in the conditions, it is not realistic to expect VFPA to identify a precautionary point at which it would “stop” the activities causing environmental damage in these cases (2.5.4).</p> <p>c) This condition inappropriately focuses impacts only on “levels of environmental change relative to the baseline that are caused by the Designated Project”, which ignores the reality of cumulative effects.</p>	<p>2.3, the port authority would be required to undertake an impartial consideration of all views and information presented by the party or parties being consulted and to advise the party or parties on how the views and information have or have not been integrated into the follow-up program elements, including a rationale for why the views have or have not been integrated. Further, the port authority would be required to document and report on these matters in accordance with other draft conditions (e.g., 2.8 and 2.10). The final follow-up program also must be provided to IAAC and the consulted parties prior to its implementation. These draft conditions, working together, provide a robust framework that appropriately places the responsibility for follow-up program development on the proponent while ensuring that follow-up programs are collaboratively developed and appropriately integrate specialist and expert information and knowledge from relevant authorities, Indigenous knowledge from Indigenous groups, and relevant feedback from other consulted parties.</p> <p>With respect to comment 312(c), as outlined in Section 3.1 of this submission, conditions must be focused on the effects of the project; therefore, no change is required.</p>
COALITION-5	7.2 – Fish and fish habitat	<p>The Proponent shall install and maintain a breach to allow fish passage through either the existing and proposed widened areas of the causeway, if determined feasible pursuant to condition 7.1, or at the east end of the marine terminal identified on figure IR2020-2.2-1 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall determine to the satisfaction of Fisheries and Oceans Canada which breach location to implement if both are technically and economically feasible.</p>	<p>313. Condition 7.2: This condition appears to require VFPA to either install a breach in the causeway if that is deemed feasible, or install a breach of the terminal if a breach of the causeway is not deemed feasible. As explained above, this would be inadequate to mitigate the disruption to juvenile salmon migration that will result from the Project. A single breach, 10 metres in diameter, will be insufficient to mitigate the loss of connectivity between the inter-causeway area and the area north of the causeway. This insufficiency is magnified by the fact that the four potential breach locations proposed by VFPA in IR2020-2.2 have highly differing abilities to restore connectivity to the inter-causeway area due to increasing tide height further from shore, making breaches closer to shore less effective. Condition 7.2 should instead require VFPA to construct multiple breaches, in series. For example, the Proponent should be required to construct and maintain three side-by-side culverts 10 metres in diameter at the terminal end, as well as one or more breaches of the causeway. This would reflect the expert evidence of salmon biologist David Scott, whose field work with breaches in other parts of the Fraser Estuary shows that breaches need to be multiple and as wide-open as possible to facilitate juvenile salmon migration.</p>	<p>The port authority notes that this comment conflates the potential effect of the project—a potential disruption of juvenile salmon migration around the new terminal—with the existing effect of the existing causeway and terminal (loss of connectivity between the inter-causeway area and the area north of the causeway). As explained in the port authority’s IR response (IR2020-2.2, CIAR #2083), the marine terminal breach would mitigate the potential effect of the project. A causeway breach would mitigate the existing effect and a decision to implement a causeway breach for that purpose would be a public policy decision.</p> <p>The detailed design of a fish passage breach would be undertaken following a decision to allow the project to proceed and confirmation of feasibility.</p> <p>The port authority notes, as stated in Appendix 3.2-A of this submission, if a causeway breach is found to be feasible, the determination of which breach to implement will be purely a public policy decision and should be made by the appropriate authority. Given the purpose a breach is intended to serve, the port authority assumes the public policy objective is to enhance overall juvenile salmon productivity and that DFO is the appropriate authority to</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
				make a technical determination about which location would provide the greater relative benefit.
COALITION-6	7.5 - Fish and fish habitat	The Proponent shall implement underwater noise monitoring during in-water work activities during construction to ensure sound levels remain below 206 decibels at a reference pressure of one micropascal within 10 metres of in-water pile driving for finfish	<u>314. Condition 7.5:</u> This condition should spell out what happens if noise monitoring detects an exceedance, such as shut down of work or other immediate action to address the exceedance.	The port authority notes that the measures to be implemented to mitigate an underwater noise exceedance, if one were to occur, would depend on the circumstances of the exceedance, including, for example, the activities that may be contributing to the exceedance, the location, and environmental conditions at the time, as well as the relative effectiveness of available measures in those circumstances. These measures cannot and should not be pre-determined, as that may preclude the most effective measure(s) from being implemented in any given circumstance. The requirement in the draft condition to “ensure sound levels remain below...” provides assurance that action would be taken if an exceedance were detected and therefore no change is required.
COALITION-7	7.11 - Fish and fish habitat	The Proponent shall develop, prior to construction, as required by Fisheries and Oceans Canada for authorization under the <i>Fisheries Act</i> , and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River), Environment and Climate Change Canada and British Columbia’s Ministry of Forests, Lands, Natural Resource Operations and Rural Development, any offsetting plan(s) related to the alteration, destruction or disturbance of fish habitat, and death of fish associated with the carrying out of the Designated Project based on the draft offsetting plan (IR2020-1.2, Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall implement the plan(s) during construction and operation. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation. The plan shall include: 7.11.1 – a description of anticipated losses of fish and fish habitat remaining after avoidance, reduction, and other mitigation measures have been implemented; 7.11.2 – a description of the amount and type of offsets required and the selection of offsetting sites, including consideration of Indigenous priorities; 7.11.3 – an assessment of the projected benefits of the offsetting measures, using more than one approach; 7.11.4 – a description of how potential eutrophication, anoxia and changes in	<u>315. Condition 7.11:</u> This offsetting condition is highly flawed. a) The condition requires VFPA to develop any plans “prior to construction”, but only requires it to <u>implement</u> any plans “during construction and operation”. This undermines the effectiveness of this condition by potentially allowing adverse effects to occur before offsets are in place and functional, and it puts this condition offside the Federal Court of Appeal’s interpretation of s. 79(2) of SARA, explained above, which requires measures to be in place before Project approval. At a minimum, the plans should be implemented <u>prior to construction</u> . However, there is a high degree of uncertainty regarding whether the offsetting plan proposed by VFPA will function as predicted, according to the expert evidence of salmon biologist David Scott. Therefore, this condition should require VFPA to <u>demonstrate that the offsets are fully functional before Project construction and operations</u> that will cause adverse effects to salmon take place. Given that VFPA has already identified offsetting initiatives, the condition as drafted is under-ambitious, and this amendment would not be overly onerous. b) Sub-condition 7.11.3 requires VFPA to assess the projected benefits of offsetting measures, using more than one approach. This condition should prescribe the assessment approaches that VFPA must use, such as the more common approach of comparing “net overall habitat area”. As explained above and in the Scott Report, the “multiple lines of inquiry” chosen by VFPA in the IRs are quite similar and are all based on a common assumption about relative productivity of habitats. ⁴ To highlight and compensate for the limitations of assumptions inherent in any approach or model, the approaches used to assess the offset plan should be different, and in the case of Roberts Bank which already suffers significant habitat loss, include “net overall habitat area” approach.	As fully explained in Section 2.6.1 of this submission, section 79(2) of SARA does not require that measures be in place before a project can be approved. Further, DFO indicates in their submission that “the substantial improvement to the offsetting plan, the identification of additional available offsetting opportunities, as well as the progress made by the Proponent in evaluating offsetting equivalency, improves DFO’s confidence that a final offsetting plan could be developed that is consistent with DFO policy” (CIAR #2407 , p.24). With respect to comment 315(a), the port authority notes that the offsetting plan includes offsetting projects from the port authority’s habitat bank. As noted in IR2020-1.2 (CIAR #2083), approximately 8.3 hectares of habitat bank area has been identified as part of the project’s proposed offsetting plan (~10% of the current proposal). These projects are already in place and functioning, some for over three decades. Work on other offsetting projects is also already underway. Further, the development of the offsetting plan has included consideration of uncertainty regarding the updated Roberts Bank ecosystem model and temporal lags to account for the time that may be required for predicted indirect gains in fish and fish habitat productivity to be realized, as well as the time required to construct offsetting habitats and for offsets to become functional once constructed. Even when uncertainty and temporal lags are accounted for, implementation of avoidance, reduction, and 86 hectares of offsetting currently being advanced will counterbalance effects in fish and fish habitat productivity with a net gain of 1,773 t/year. With respect to comment 315(b), as noted in DFO’s guidance document (Equivalency metrics for the determination of offset requirements for the Fisheries Protection Program, Bradford et al., 2016), the use of an areal approach when determining the amount of offsetting needed may not be appropriate if multiple habitat types are affected by the project, and replacement habitats cannot be assumed to be equal to those lost, as is the case for RBT2. RBT2 is a large-

⁴ Scott Report, supra note 5 at p 9.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>water drainage have been considered in the design of the offsetting measures; and</p> <p>7.11.5 - offsetting measures to compensate for effects to fish and fish habitat remaining after avoidance, reduction, and other mitigation measures have been implemented.</p>	<p>c) Given the uncertainty inherently associated with the of the out-of-kind offsetting proposed by VPFA, and the limited options for onsite restoration or offsetting, VFPA should be required to develop offsets covering a significantly larger area than that destroyed by the Project to account for the likelihood that some of the proposed offsets will not prove useful for the populations of Chinook salmon affected by the Project. This is consistent with DFO's recommendation that DFO's opinion that "given the substantial habitat loss at Roberts Bank due to the Project footprint, additional onsite offsetting opportunities should be advanced and included in the final offsetting plan if they are feasible and beneficial to fish."⁵</p>	<p>scale port development project in a setting where the coastal wetlands are dynamically changing and interconnected. Determining offsetting compensation requirements for larger projects where multiple habitat types are affected thus requires a complex equivalency analysis that considers not just spatial extent but also habitat function, biomass and abundance of species comprising and dependent on the habitat, and other factors affecting habitat productivity. For these reasons, a habitat area approach to determination of offsetting requirements is not appropriate for this project.</p> <p>With respect to comment 315(c), the port authority notes that the final offsetting plan will be developed in consultation with DFO and Indigenous groups.</p> <p>As noted in IR2020-1.1 (CIAR #2083), and in alignment with Musqueam's vision, the RBT2 offsetting plan is designed to provide a network of interconnected habitats to support increased feeding, rearing, and refuge for a range of priority species and life stages (including out-migrating juvenile salmon) throughout the Fraser River estuary. The proposed RBT2 offsetting projects prioritize tidal marsh (and eelgrass) habitats, which have been found to be the most valuable habitats to estuarine-rearing juvenile salmon (Chalifour et al. 2019 and 2021), and to provide a variety of other key ecological functions (e.g., detrital food web support, shoreline erosion protection) (Appendix IR2020-1.1-C, CIAR #2083). In contrast, subtidal sand/mud are considered of lower value for juvenile salmon.</p> <p>DFO's offsetting policy provides the opportunity and flexibility for out-of-kind offsets and guidance regarding equivalency (DFO 2021).⁶ Per DFO's offsetting policy, biomass is considered a "common currency" that can be used in equivalency analyses (as has been adopted for the RBT2 proposed offsetting plan). Habitat functions and ecosystem services may also be considered as metrics to assess equivalency. The port authority showed that out of 13 key ecological functions examined in terms of equivalency, marsh and eelgrass offsetting habitat provides all 13 (Table IR2020-1.1-C1 in Appendix IR2020-1.1-C, CIAR #2083), whereas intertidal and subtidal sand/mud habitats provide only two.</p> <p>As noted in Section 2.4 of this submission, the port authority shares DFO's confidence that a final offsetting plan consistent with DFO policy can and will be developed.</p>
COALITION-8	8.1.4 - Marine Mammals	use sound attenuation method(s) and/or technology(ies) when impact pile-driving underwater;	317. Condition 8.1.4: Drs. Scott and Val Veirs specifically recommend that for the estimated four pilings that will use impact and not vibratory methods, Reinhall or BOSS pilings are used, as they are preferable for reducing source levels during impact pile driving.	The port authority does not recommend specifying Reinhall or BOSS pilings as part of the draft conditions. These novel double-wall piling techniques have not yet been applied in large-scale marine development projects. These proposed noise attenuation techniques were identified and evaluated by the port authority in its response to the ministers' IR, as potential noise attenuation measures (Appendix IR2020-2.3-B, CIAR #2083). The port authority suggests not limiting

⁵ DFO Submissions, supra note 77 at PDF p 16.

⁶ DFO (Fisheries and Oceans Canada). 2021. Policy for applying measures to offset adverse effects on fish and fish habitat under the Fisheries Act. Available at: <https://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/policies-politiques-eng.html>. Accessed: April 2022.

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				<p>sound attenuation to specific methods, as the specificity may affect the feasibility of implementing this condition. Moreover, other techniques/measures are or may be available at the time of construction that attenuate noise as well or better than the proposed piles.</p>
COALITION-9	8.1.7 - Marine Mammals	<p>avoid, from June 1 or the date Southern Resident Killer Whale (<i>Orcinus orca</i>) are confirmed by marine mammal observers to be present in the Salish Sea, whichever is later, to September 30:</p> <p>8.1.7.1 - all vibratory and impact pile driving;</p> <p>8.1.7.2 - vibro-densification of the caisson foundation mattress rock; and</p> <p>8.1.7.3 - removal of the piles for the temporary barge ramps;</p>	<p><u>318. Condition 8.1.7:</u> As suggested by Drs. Scott and Val Veirs, this condition should be amended to avoid the listed activities from September 30 through June 1, for periods beginning at any time that Southern Resident presence is confirmed in the Salish Sea and lasting until at least one to two weeks after the last confirmed observation. This will in turn make condition 8.2.7 more precautionary and less dependent on only marine mammal observers for its success by stipulating that all possible confirmation sources in the Salish Sea will be able to inform mitigation measures at the terminal, not only locally stationed marine mammal observers monitoring buffer zones. They further suggest that these activities be limited to the month of April, with the above precautions in place.</p> <p>319. The above is further supported by DFO's evidence, which states based on analysis of May to October only that "there is a high likelihood of [Southern Resident] occurrence in areas within 20 km of the Project in May and October", and further states more broadly that Southern Residents are "consistently observed in the winter including in the RBT2 construction area."⁷</p>	<p>319. The port authority will be implementing year-round monitoring and stop-work procedures before SRKW enter exclusion zones, which will reduce potential overlap between construction noise and SRKW if they are present outside the peak use period.</p> <p>The port authority notes that DFO stated in their response that the port authority identified appropriate and feasible mitigation measures for project construction and that DFO will further consult on stop work procedures. Specifically, DFO stated that "The information provided in the response increases DFO's confidence that technically and economically feasible measures to mitigate underwater noise from Project construction have been explored and appropriate mitigation measures have been identified for further development. DFO would expect to further engage with the Proponent on the Underwater Noise Management Plan, including the SRKW detection plan and stop work procedures" (CIAR #2407).</p> <p>318. As discussed in Appendix 2.6-B of this submission, the port authority notes that avoiding the listed activities from September 30 through June 1, for periods beginning at any time that SRKW presence is confirmed in the Salish Sea and lasting until at least one to two weeks after the last confirmed observation, would not be feasible, as this would cause significant delays to the project. It would also not be reasonable to avoid or stop work simply because SRKW are present anywhere in the Salish Sea because project construction would not affect the species if SRKW are, for example, in Haro Strait.</p> <p>It would also not be feasible to limit all the listed activities to April (or Mar to May) because this period is outside the timing window (August 16 - February 28) of least risk for juvenile salmon, an important future food source for SRKW, for the activities above -5 m chart datum and would add considerable delays to the project given the anticipated duration of the activities and other constraints presented in Appendix IR2020-2-3-A (CIAR #2083). For example, mattress rock densification requires approximately 12 months of active work, so limiting this to only one month per year would extend the overall project construction by at least 12 years.</p> <p>Recent trends in SRKW presence were accounted for in the definition of the peak use period (see the port authority's response to PWWA-1 above)</p>
COALITION-10	8.1.8 & 8.22 - Marine Mammals	8.1.8 – limit, to the extent feasible as determined by a qualified professional, the number of dredge equipment in use and tug and barge movements required for dredging activities when Southern Resident Killer Whale (<i>Orcinus orca</i>) are confirmed	<u>320. Condition 8.1.8 and 8.22:</u> The conditions related to dredging fail to incorporate VFPA's statement that it will avoid dredging during the "SRKW peak use period". This should be formalized, and the peak use period should be defined, in a condition.	<p>The avoidance of dredging during the peak use period was stated specifically in relation to future terminal operations dredging, not construction dredging, as described in IR2020-3 (CIAR #2083).</p> <p>The port authority suggests revisions to draft condition 7.4 in Appendix 3.2-A of this submission to clarify that operations</p>

⁷ *Ibid* at PDF pp 28-29.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>present in the Salish Sea by marine mammal observers.</p> <p>8.2.2 - identify the in-water work activities that are predicted to generate impulse and continuous (non-impulse) underwater noise (which shall include pile driving and dredging) during construction;</p>		<p>maintenance dredging at the terminal will also avoid the SRKW peak use period.</p> <p>For project construction, the port authority notes that it is not feasible to completely avoid dredging in the SRKW peak use period due to constraints related to the Dungeness crab fisheries-sensitive window and the expected duration of the activity. Avoiding dredging the dredge basin to construct the terminal would extend the duration of construction substantially (four or more years), as the activity would be limited to two months a year (April and May), as described in Appendix IR2020-2.3-A (CIAR #2083).</p>
COALITION-11	8.2 - Marine Mammals	<p>The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups and Indigenous groups (marine shipping), a marine mammal detection and response plan to reduce adverse effects to marine mammals caused by construction, consistent with any Fisheries and Oceans authorization under the <i>Fisheries Act</i>. The Proponent shall implement the plan during all in-water work activities during construction that pose a risk to marine mammals, and have a qualified professional oversee the implementation of the plan. As part of the marine mammal detection and response plan, the Proponent shall:</p>	<p><u>321. Condition 8.2:</u> Consistent with DFO's warnings with respect to the effectiveness of exclusion zones being dependent on successful detection of Southern Residents, and DFO's caution that there are gaps in passive acoustic monitoring, that the other methods of detection are unlikely to be as effective in winter as they are in summer, and that VFPA has likely overestimated its modelled detection ranges, VFPA should be required to adopt DFO's suggestion of "placing acoustic detection receivers much further away from the construction zone and at water depths that are in-line with where the whales may be located when calling (10-20m depth)" to allow for detection of Southern Residents before they enter a location where they can be impacted by construction noise.⁸</p>	<p>The port authority notes that the modelled detection ranges for marine mammal observers (Appendix IR2020-2.3-E, CIAR #2083) considered killer whale specific detection ranges and variation based on weather conditions, which varied by season (e.g., winter conditions). Therefore, this variability is accounted for in the estimates of the effectiveness of this mitigation measure and the detection ranges are not anticipated to be overestimated.</p> <p>The port authority notes that DFO indicates in its submission (CIAR #2407, p.32) that it is available to discuss placement of acoustic receivers with the proponent during the application for a <i>Fisheries Act</i> Authorization. The design of the passive acoustic monitoring (PAM) array would include discussion regarding seasonal/weather considerations, water depth, and receiver locations. The port authority notes that measures to mitigate potential effects on SRKW will be specified by DFO in any SARA-compliant <i>Fisheries Act</i> Authorization that may be issued for the project. In addition, once selected and design the commissioning of the PAM array will include testing the capabilities of the system to verify that it meets the intended requirements, which will be outlined in the marine mammal detection and response plan (draft condition 8.2 and 8.2.7.3).</p>
COALITION-12	8.2.5 - Marine Mammals	<p>at the start of each new in-water work activity identified pursuant to condition 8.2.2 that generates continuous noise, validate the exclusion zone(s) established based on the behavioral disturbance threshold(s) for continuous noise for Southern Resident Killer Whale (<i>Orcinus orca</i>) referred to in condition 8.2.1 to confirm it is of appropriate size. If the exclusion zone is not of the appropriate size, the Proponent shall expand the exclusion zone;</p>	<p><u>322. Condition 8.2.5:</u> This should include validation of the exclusion zone for impulsive noise as well as continuous noise, as Drs. Scott and Val Veirs advise.</p>	<p>The port authority proposed validation of the SRKW exclusion zone for impulsive noise in its response to the minister's IR (see IR2020-2.3, CIAR #2083). It does note that this requirement was not explicitly captured in the draft conditions. The port authority has suggested revisions to draft condition 8.2.5 in Appendix 3.2-A of this submission to clarify that this will include validation of the exclusion zone for impulsive noise as well as continuous noise.</p>
COALITION-13	8.2.6 - Marine Mammals	<p>establish a monitoring buffer zone around the exclusion zone implemented for Southern Resident Killer Whale (<i>Orcinus orca</i>) to account for the time needed to initiate stop/modify work procedures before Southern Resident Killer Whale (<i>Orcinus orca</i>) enter the applicable exclusion zone;</p>	<p><u>323. Condition 8.2.6:</u> The expert evidence of Drs. Scott and Val Veirs is that the buffer zone for Southern Residents should be 3 km or more, which represents about 30 minutes of Southern Residents travelling at their mean speed of about 6 km per hour.</p>	<p>The size of a suitable buffer zone for SRKW will be determined as part of the marine mammal detection and response plan (draft condition 8.2.6) based on the in-water work activity or activities occurring at any given time. The size of the buffer zone will account for the time required to communicate to the contractor and modify or shut down the specific in-water construction activity(ies), as well as sufficient distance so that SRKW do not enter the exclusion zone boundary. The buffer zone will therefore likely vary in size over time based on activities (see Appendix 2.6-B of this submission).</p>

⁸ *Ibid* at PDF pp 31-32.

#	Section	Original condition	Comment and suggested amendment	Port authority response
				Specifying the size of the buffer in the condition would preclude its development in consultation with all the specified parties under draft condition 8.2 and is therefore premature.
COALITION-14	8.2.8 - Marine Mammals	develop and implement stop work procedures to shut down or modify in-water work activities identified pursuant to condition 8.2.2 when marine mammals exclusion zone(s) are present within their applicable exclusion zone(s) established pursuant to condition 8.2.3, including communication protocols to facilitate stop work procedures. In doing so, the Proponent shall:	<u>324. Condition 8.2.8:</u> This condition should require that the stop-work procedures stop all noise- generating activities and not merely some when the Southern Residents are nearby, reflecting DFO’s concern that the Southern Residents could move into the reduced exclusion zone if some activities continue. ⁹	<p>The port authority notes that it may not be feasible, for safety reasons, to immediately stop certain activities (e.g., a tug under tow). In such cases, it may be possible to modify the activity to avoid or reduce potential effects on observed marine mammals. For example, if the early detection sources identify SRKW approaching the construction area, the contractor may delay that activity until the whales are sufficiently distant from the project or reduce the potential area of acoustic effects and applicable exclusion zone by stopping other activities.</p> <p>The port authority notes that DFO stated in their response that the port authority identified appropriate and feasible mitigation measures and that DFO will further consult with the port authority on stop work procedures during the application for a <i>Fisheries Act</i> Authorization (CIAR #2407).</p>
COALITION-15	8.3 - Marine Mammals	The Proponent shall require container vessels calling on the Designated Project to participate in the <i>Enhancing Cetacean Habitat and Observation Program</i> , or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:	<p><u>325. Condition 8.3:</u> The weakness of the condition for vessels calling on the Project to participate in ECHO is that there is no condition or other guarantee that ECHO or a direct equivalent will continue for the life of the Project. Nor is there a condition or other guarantee as to what minimum standard ECHO will require of participants from year to year, as the program’s specifics are announced each year for that year only, and could theoretically be less stringent in one or more future years.¹⁰ As drafted, the condition provides no guarantee of what participation in ECHO will entail in terms of specific measures from year to year.</p> <p>326. The condition should therefore be amended to require that VFPA continue ECHO (or another equivalent future program developed in consultation with Fisheries and Oceans Canada and Transport Canada) for the lifetime of the Project. It must also be amended to require minimum annual ECHO program requirements (i.e., a slowdown to at least a specified speed, during specified months), so that there is a guarantee of minimum stringency, and so that innovation and improvement can occur with the guarantee that measures will never become <u>less</u> ambitious.</p>	<p>Draft condition 8.3 requires container vessels calling RBT2 to participate in the ECHO Program or future equivalent program. The condition itself requires future participation for the life time of the project “to reduce the potential effects of container vessels calling on the Designated Project on cetacean species.”</p> <p>As outlined in Section 3.1 of this submission, project-specific conditions cannot be imposed on third parties and cannot make compliance by the proponent dependent on the action of a third party. Therefore, given the collaborative nature of the ECHO Program, it would not be appropriate, nor would it be feasible for the port authority to unilaterally establish minimum annual ECHO Program requirements.</p> <p>In addition, the port authority does not have the statutory ability to mandate vessels to slow down to specified speeds in the marine shipping area through the ECHO Program or any other means. That statutory authority lies with Transport Canada. If the Government of Canada determines such minimum performance measures are warranted to mitigate effects of marine shipping incidental to the project or cumulative effects, it can implement those measures.</p> <p>However, the long-term goal of the ECHO Program is to develop and implement initiatives that result in a quantifiable reduction in threats to whales as a result of shipping activities. ECHO Program initiatives are regularly evaluated to determine effectiveness and to inform subsequent initiatives and work plans to support continuous improvement in underwater noise reduction.</p>

⁹ *Ibid* at PDF pp 32.

¹⁰ See, for example, the following on slowdowns and lateral displacements, respectively, showing a year-to-year approach: Port of Vancouver, “2021 Haro Strait and Boundary Pass voluntary vessel slowdown”, available online at <https://www.portvancouver.com/environmental-protection-at-the-port-of-vancouver/maintaining-healthy-ecosystems-throughout-our-jurisdiction/echo-program/projects/haro-slowdown/>; Port of Vancouver, “2021 Strait of Juan de Fuca voluntary inshore lateral displacement”, available online at <https://www.portvancouver.com/environmental-protection-at-the-port-of-vancouver/maintaining-healthy-ecosystems-throughout-our-jurisdiction/echo-program/projects/lateral-displacement/>.

#	Section	Original condition	Comment and suggested amendment	Port authority response
COALITION-16	8.3 - Marine Mammals	The Proponent shall require container vessels calling on the Designated Project to participate in the <i>Enhancing Cetacean Habitat and Observation Program</i> , or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:	327. Alternatively, or additionally, rather than rely on ECHO, Condition 8.3 could simply require mandatory speed reductions (with exemptions to allow for safety designed in consultation with Transport Canada). Condition 8.4.3 indicates that VFPA can implement mandatory speed reductions; therefore, there is no need to rely on ECHO as the mechanism.	As noted above, the port authority does not have the statutory ability to mandate vessels to slow down to specified speeds in the marine shipping area through the ECHO Program or any other means. That statutory authority lies with Transport Canada. If the Government of Canada determines such minimum performance measures are warranted to mitigate effects of marine shipping incidental to the project or cumulative effects, it can implement those measures. The port authority notes that tug slowdowns (within the area for which the port authority has jurisdiction) are addressed in DFO's submission (CIAR #2407); please see the port authority's suggested revisions and additions to draft condition 8.5 in Appendix 3.2-A of this submission.
COALITION-17	8.3 - Marine Mammals	The Proponent shall require container vessels calling on the Designated Project to participate in the <i>Enhancing Cetacean Habitat and Observation Program</i> , or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:	328. Regardless of whether or slowdowns and related measures are done through ECHO, the minimum requirements set out in the conditions should be more ambitious than what VFPA currently proposes, as set out in the expert report of Drs. Scott and Val Veirs, and described above.	The port authority notes that potential effects of the project and of marine shipping incidental to the project will be addressed through the measures to be implemented by the proponent, including those outlined in the draft conditions, and by the many initiatives and actions that have been, are being, and will be undertaken by the Government of Canada, as outlined in the draft Whole of Government Report (discussed in Section 3.3 of this submission), which are over and above the measures to be implemented by the proponent. With the revisions and additions suggested by the port authority in Appendix 3.2-A of this submission, the draft conditions are appropriate and commensurate with the predicted effects of the project, including the project's contribution to cumulative effects.
COALITION-18	8.3 - Marine Mammals	The Proponent shall require container vessels calling on the Designated Project to participate in the <i>Enhancing Cetacean Habitat and Observation Program</i> , or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:	329. With respect to time of year of slowdowns and related measures, Drs. Scott and Val Veirs have further cautioned that the Southern Residents' patterns of seasonal use of their habitat may be changing. ¹¹ As a result, the May to September or October summer season can no longer be assumed to be the only or even primary time of year that protective measures are needed. Drs. Scott and Val Veirs recommend that conditions specifying times of year should therefore go beyond May to October to include any month of the year when observations or models suggest the Southern Residents may be present. ¹² With respect to area, they advise that slowdowns should extend from Boundary Pass to the terminal and further north into and from Burrard Inlet, and that commercial traffic should be as far from the Fraser Delta as possible to avoid areas of higher Southern Resident density.	The timing of the ECHO Program slowdowns is outside the port authority's care and control. Currently, the timing is determined annually by the ECHO Program through collaboration with its many advisors and considers both long-term historical presence and more recent observations of SRKW within the Salish Sea. The ECHO Program adaptively manages its initiatives as new information becomes available and the timing of future slowdowns would take changing patterns into consideration. The condition would capture changes made to slowdown periods as part of the ECHO Program (or any future equivalent) adaptive management approach. With respect to the spatial extent of slowdowns, the port authority notes that it does not have the statutory ability to mandate vessel slowdowns in the marine shipping area or within marine shipping lanes north of RBT2. That statutory authority lies with Transport Canada. If the Government of Canada determines that expansion of the vessel slowdown area(s) is warranted to mitigate effects of marine shipping incidental to the project or cumulative effects, it can implement those measures. See Section 3.3 of this submission for additional detail. The port authority applies rules and regulations in its navigational jurisdiction, which includes Burrard Inlet, Roberts Bank, and the

¹¹ *Veirs Report*, *supra* note 6 at pp 6-7.

¹² *Ibid* at pp 8, 17-18.

#	Section	Original condition	Comment and suggested amendment	Port authority response
				Fraser River, to contribute to the safe, efficient and environmentally responsible handling of shipping traffic. This includes applying Canadian rules and regulations such as the <i>Canada Marine Act</i> , and the Marine Transportation Security Regulations. As per the Port Information Guide, every vessel or ship in the port must at all times, approach areas of known or suspected marine wildlife activity with caution and follow the 'be whale wise' guidelines. Further, there are vessels speed limits within Burrard Inlet.
COALITION-19	8.4 - Marine Mammals	The Proponent shall develop, prior to operations, in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada, a plan to address effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) due to underwater noise produced as a result of the operations of the Designated Project, including both marine shipping and operations at the marine terminal. The Proponent shall implement the plan in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada during operation. As part of the plan, the Proponent shall:	330. Condition 8.4: A noise budget is a valuable idea, and the Conservation Coalition supports the concept of setting a hard cap on underwater noise in Southern Resident critical habitat, at levels that do not destroy or otherwise impair critical habitat, which would necessarily be lower than current levels, which pose an imminent threat to survival and recovery. However, the use of a noise budget in this condition is fatally undermined by being proponent-determined, not determined based on the Southern Residents' actual needs, and by the absence of enforceability or any consequences for exceedance.	<p>The port authority addresses the matter of underwater noise levels and suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.</p> <p>The port authority notes that the conditions, with revisions and additions suggested by the port authority in Appendix 3.2-A, would be feasible, appropriate, and commensurate with the predicted effects of the project, including the project's contribution to cumulative effects, taking into consideration the updated container vessel projections. In the matter of underwater noise levels and monitoring, as noted in the suggested revisions, the means and methods will be developed in consultation with the parties specified in the condition, which typically include one or more relevant authorities with specialist or expert information or knowledge about the subject matter and/or regulatory responsibility, and Indigenous groups.</p> <p>Additional measures that have been, are being, or will be implemented by other federal authorities, to be outlined in the Whole of Government Response, are addressing and will continue to address the existing and future cumulative effects associated with all marine shipping, including container vessels, in the marine shipping area, and are expected to make material improvements to the health of the Salish Sea (see Section 3.3.2 of this submission).</p>
COALITION-20	8.4 - Marine Mammals	The Proponent shall develop, prior to operations, in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada, a plan to address effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) due to underwater noise produced as a result of the operations of the Designated Project, including both marine shipping and operations at the marine terminal. The Proponent shall implement the plan in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada during operation. As part of the plan, the Proponent shall:	331. DFO has similarly noted the need for "enforceable conditions that hold the Proponent accountable" with respect to underwater noise in its comments. ¹³	The port authority addresses the matter of underwater noise levels and suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-21	8.4.1 - Marine Mammals	establish a budget for underwater noise for the operation of the Designated Project, specifying the amount, locations, and timing of underwater noise that will be generated, reduced, and/or offset, in	332. Condition 8.4.1: The noise budget to be established should be specified in the condition, not left to be determined by VFPA. As the Panel found, the Salish Sea is already too noisy for the Southern Residents. ¹⁴ The Project will increase noise to some degree under	The port authority addresses the matter of underwater noise levels and suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.

¹³ DFO Submissions, *supra* note 77 at PDF p 43

¹⁴ Panel Report, *supra* note 2 at PDF p 132.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		order to meet the predicted effects to Southern Resident Killer Whales (<i>Orcinus orca</i>) due to underwater noise described in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672);	<p>any interpretation of the evidence. The noise budget must reflect the fact that current conditions in the Salish Sea are already too loud for the Southern Residents, and it must go beyond ensuring “no net increase” from the Project to eliminate substantially more noise than the Project adds. It must be specified before approval, in the conditions, and it must be based on the Southern Residents’ actual needs, keeping in mind that the status quo poses an imminent threat to their survival and recovery.</p> <p>333. The expert report of Drs. Scott and Val Veirs explains that the current status and trajectory of the Southern Resident population requires an overall <u>reduction</u> of noise, or, a “more than mitigate” budget, not just “no net increase”.¹⁵ DFO agrees that a net overall decrease is needed.¹⁶</p>	The port authority notes that the conditions, with revisions and additions suggested by the port authority in Appendix 3.2-A, would be feasible, appropriate, and commensurate with the predicted effects of the project, including the project’s contribution to cumulative effects, taking into consideration the updated container vessel projections. Additional measures that have been, are being, or will be implemented by other federal authorities, to be outlined in the Whole of Government Response, are addressing and will continue to address the existing and future cumulative effects associated with all marine shipping, including container vessels, in the marine shipping area, and are expected to make material improvements to the health of the Salish Sea (see Section 3.3.2 of this submission).
COALITION-22	8.4.1 - Marine Mammals	establish a budget for underwater noise for the operation of the Designated Project, specifying the amount, locations, and timing of underwater noise that will be generated, reduced, and/or offset, in order to meet the predicted effects to Southern Resident Killer Whales (<i>Orcinus orca</i>) due to underwater noise described in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672);	334. Drs. Scott and Val Veirs further caution that no individual noise source should be permitted to cause noise at the location of a Southern Resident to rise above 120 dB, and they indicate that it could be precautionary to ensure that the broadband noise level received by foraging Southern Residents stays below 100 dB, and in the frequency bands relevant to the Southern Residents, below 50 dB for calls (near 1 kHz) and below 40 dB for echolocation clicks (near 20-30 kHz). The conditions should reflect this.	<p>Ensuring that no individual noise source (i.e., vessels) be permitted to cause noise at the location of a SRKW to rise above 120 dB or less, or above other proposed thresholds considered relevant to SRKW is not feasible nor within the care and control of the port authority. For example, as noted in IR2020-3 (CIAR #2083), existing background noise levels near the proposed terminal are already elevated (i.e., above 120 dB, see Table IR2020-3-3, CIAR #2083) due to existing shipping traffic and marine terminals at Roberts Bank (such as Westshore and Deltaport).</p> <p>The port authority addresses the matter of underwater noise levels and suggests extensive revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.</p> <p>The port authority notes that the draft conditions, with revisions and additions suggested by the port authority in Appendix 3.2-A, would be feasible, appropriate, and commensurate with the predicted effects of the project, including the project’s contribution to cumulative effects, taking into consideration the updated container vessel projections. Additional measures that have been, are being, or will be implemented by other federal authorities, to be outlined in the Whole of Government Response, are addressing and will continue to address the existing and future cumulative effects associated with all marine shipping, including container vessels, in the marine shipping area, and are expected to make material improvements to the health of the Salish Sea (see Section 3.3.2 of this submission).</p>
COALITION-23	8.4.3 - Marine Mammals	implement modified or additional mitigation measures, and report to the Agency, Transport Canada, and Fisheries and Oceans, if the results of the monitoring and modelling referred to in condition 8.4.2 demonstrate that levels of underwater noise are nearing exceedance of the budget established in condition 8.4.1. Measures may include:	335. <u>Condition 8.4.3</u> : Rather than rely on this condition for additional measures only if monitoring reveals that VFPA is nearing exceedance of the noise budget, the conditions must require VFPA to take <u>all feasible measures</u> to reduce noise <u>immediately</u> , especially given that Transport Canada has deemed them feasible – though they cannot be relied on as effective at this time, as DFO has identified uncertainties and states that their effectiveness still needs to be evaluated. ¹⁷ Saving feasible measures for later is contrary to s.	<p>The port authority notes that Section 79(2) requires that “...that measures are taken...”, not “all” measures. See Section 2.6.1 of this submission for the port authority’s detailed response.</p> <p>The port authority notes that that the conditions, with revisions and additions suggested by the port authority in Appendix 3.2-A, would be feasible, appropriate, and commensurate with the predicted effects of the project, including the project’s contribution to</p>

¹⁵ Veirs Report, supra note 6 at p 21.

¹⁶ DFO Submissions, supra note 77 at PDF p 43

¹⁷ Transport Canada Submissions, supra note 224 at PDF pp 6, 15; DFO Submissions, ibid at PDF pp 46-47.

#	Section	Original condition	Comment and suggested amendment	Port authority response
			79(2) of SARA and does not represent a precautionary approach to protecting the critically endangered Southern Residents.	<p>cumulative effects, taking into consideration the updated container vessel projections.</p> <p>The port authority notes that certain measures described in the IR response (IR2020-3, CIAR #2083) are measures that are within the statutory authority of the Government of Canada, and would be implemented by federal authorities, including Transport Canada,. This is recognized by Transport Canada in its submission; for example:</p> <p style="padding-left: 40px;">“To support the evaluation of the updated forecasted container vessel traffic, the Vancouver Fraser Port Authority also submitted new detailed underwater noise modelling, and additional feasible mitigation and/or adaptive management measures (requiring Canada’s implementation on a regional basis) have been assessed by Transport Canada to ensure feasibility of underwater noise reduction options are available in the future, if required” (emphasis added) (CIAR #2298, p.3)</p> <p>Transport Canada also referred to its “commitment to continue to work with the proponent on implementing additional mitigation and/or adaptive management measures” (CIAR #2298, p.3).</p> <p>If the Government of Canada determines that the feasible measures are warranted to mitigate effects of marine shipping incidental to the project or cumulative effects, it can implement those measures. See Section 3.3 of this submission for additional detail.</p>
COALITION-24	8.4.3 - Marine Mammals	implement modified or additional mitigation measures, and report to the Agency, Transport Canada, and Fisheries and Oceans, if the results of the monitoring and modelling referred to in condition 8.4.2 demonstrate that levels of underwater noise are nearing exceedance of the budget established in condition 8.4.1. Measures may include:	336. This condition must also define “nearing exceedance” so that there is a clear trigger for backstop measures.	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-25	8.4.3.3 - Marine Mammals	limits on container vessel calls to the Designated Project; and	337. The backstop measures should be clearly spelled out in mandatory language in the sub- conditions. They could include, for example, a mandatory emergency backstop, such as limiting vessel calls, as per 8.4.3.3 – but with the number of vessels specified.	The port authority addresses this draft condition in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-26	8.4.3.2 - Marine Mammals	additional offsets for underwater noise in Southern Resident Killer Whale (<i>Orcinus orca</i>) critical habitat in the Salish Sea;	<u>338. Condition 8.4.3.2:</u> The reference to “offsets” falsely suggests that it is possible to “offset” underwater noise in Southern Resident critical habitat and should therefore be removed. DFO has stated in its response that “the concept of offsetting underwater noise is relatively new and in development”, and that “[t]he quantification of equivalency reductions in one location to offset noise inputs elsewhere is complicated and it is important to consider the biological meaningfulness of noise inputs and reductions over space and time.” ¹⁸	<p>The port authority addresses this draft condition in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.</p> <p>As noted by DFO in their submission, offsetting underwater noise is new, (CIAR #2407) not impossible. The Government of Canada is currently working on underwater noise offsetting for the Trans Mountain Expansion (TMX) Project and is developing methods to evaluate its effectiveness. As part of the TMX project, the</p>

¹⁸ DFO Submissions, *ibid* at PDF p 45

#	Section	Original condition	Comment and suggested amendment	Port authority response
				<p>“Government is currently implementing multiple initiatives” to “address the threats to the SRKW and its critical habitat”, including “to more than offset the impacts of Project-related traffic including vessel noise” (recommendation 5¹⁹).</p> <p>DFO stated in its response (CIAR #2407) that “DFO agrees with the Proponent that Project increases in underwater noise and associated effects on SRKW following avoidance and mitigation need to be counterbalanced (offset) by reductions in underwater noise and associated effects on SRKW” (p. 45).</p> <p>DFO also recommends that the port authority, “in consultation with DFO, further consider methods for evaluating the effectiveness of underwater noise offsets to counterbalance impacts of underwater noise from Project operations (berthing), building on the work that is being undertaken by DFO for the Trans Mountain Expansion Project” (p. 46).</p>
COALITION-27	8.4.3.2 - Marine Mammals	additional offsets for underwater noise in Southern Resident Killer Whale (<i>Orcinus orca</i>) critical habitat in the Salish Sea;	339. The Agency should amend the condition to specify the measures to which it refers.	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-28	8.4.3.2 - Marine Mammals	additional offsets for underwater noise in Southern Resident Killer Whale (<i>Orcinus orca</i>) critical habitat in the Salish Sea;	340. Drs. Scott and Val Veirs have further suggested that this condition include consultation with the Canadian Coast Guard and/or Transport Canada about moving the shipping lanes and BC ferry routes away from the high-density Southern Resident usage areas within the Fraser delta and southern Strait of Georgia, given that this area is essential to Southern Resident foraging success for returning Fraser River salmon.	<p>Statutory authority for establishing—and moving—shipping lanes and ferry routes rests with other federal authorities and, if deemed by the Government of Canada to be warranted to mitigate effects of marine shipping incidental to the project or cumulative effects, should be implemented by it.</p> <p>As noted in Section 3.1 of this submission, conditions can only be imposed on the proponent.</p>
COALITION-29	8.4.3.3 - Marine Mammals	limits on container vessel calls to the Designated Project; and	<u>341. Condition 8.4.3.3:</u> If a cap on vessel calls is an effective measure, which Drs. Scott and Val Veirs believe it is, there should be a condition for it to be automatically applied if VFPA is nearing exceedance of the noise budget. The benchmark for nearing exceedance must also be clearly defined.	The port authority addresses this draft condition in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-30	8.4.4 - Marine Mammals	identify measures, out of the care and control of the Proponent, that could be undertaken by relevant authorities in order to achieve the budget for underwater noise established in condition 8.4.1 or to limit effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) to those predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672) should the Proponent be of the opinion that measures developed and implemented pursuant to condition 8.4.3 have been exhausted.	<u>342. Condition 8.4.4:</u> This indicates that the Agency considers it possible VFPA will not be able to achieve the noise budget, in spite of Conditions 8.4.2 and 8.4.3. The Conservation Coalition reminds the Agency and the Minister that 1) underwater noise is already too high, and increases in noise are likely to constitute destruction of Southern Resident critical habitat, which is an offence under s. 58(1) of SARA, and that the Minister of Fisheries and Oceans will not be able to approve this Project if in her opinion it will jeopardize survival or recovery (which it will, as critical habitat is already too loud); and 2) effects of this kind on the SARA-listed Southern Residents are not justifiable under CEAA 2012. Failure with respect to noise budgets is not an acceptable outcome. Therefore, there must be a mandatory condition to achieve the noise budget, with an emergency backstop available if it appears that VFPA is “nearing exceedance.”	<p>The comment is premised on legal and factual misconceptions. See Section 2.6.1 of this submission for the port authority’s detailed response.</p> <p>The port authority notes that potential effects of the project and of marine shipping incidental to the project will be addressed through the measures to be implemented by the proponent, including those provided for in the draft conditions, and by the many initiatives and actions that have been, are being, and will be undertaken by the Government of Canada, as outlined in the draft Whole of Government Report (discussed in Section 3.3 of this submission).</p> <p>As noted above, certain measures to mitigate effects, including cumulative effects, on SRKW, are measures that are within the statutory authority of other federal authorities, including Transport</p>

¹⁹ Canada Gazette, Part I, Volume 153, Number 25: Orders in Council. June 22, 2019. Department of Natural Resources. National Energy Board Act. <https://gazette.gc.ca/rp-pr/p1/2019/2019-06-22/html/sup1-eng.html>

#	Section	Original condition	Comment and suggested amendment	Port authority response
				<p>Canada, and would have to be implemented by them. If the Government of Canada determines that measures are warranted to mitigate effects of marine shipping incidental to the project or cumulative effects on SRKW, it should address those measures in the Whole of Government Response. See Section 3.3 of this submission for additional detail.</p> <p>With the revisions and additions suggested by the port authority in Appendix 3.2-A of this submission, the draft conditions are appropriate and commensurate with the predicted effects of the project, including the project's contribution to cumulative effects.</p> <p>There is no basis in fact for concluding that elevated levels of noise is "destruction". See Section 2.6.1 of this submission for the port authority's detailed response.</p>
COALITION-31	8.5 - Marine Mammals	<p>The Proponent shall implement, in consultation with Transport Canada and Fisheries and Oceans Canada, technically and economically feasible technologies for reducing underwater noise related to berthing activities. In doing so, the Proponent shall:</p> <p>8.5.1 - evaluate, prior to operation, the effectiveness of technologies to reduce underwater noise associated with berthing activities, including the use of electric tugs. The Proponent shall determine, as part of its evaluation, whether the use of the technology would increase the extent to which environmental effects, other than underwater noise, are adverse. The Proponent shall submit the evaluation to the Agency one year prior to the start of operation and shall include the sources of information and methodology used;</p> <p>8.5.2 - upon completion of the initial evaluation referred to in condition 8.5.1, conduct a review every three years in order to identify and evaluate any new and emerging underwater noise reduction technologies for berthing activities. The Proponent shall conduct a review until such time that the Proponent has determined, in consultation with Transport Canada and Fisheries and Oceans Canada, that a review is no longer warranted. The results of the review shall be included as part of the annual report referred to condition 2.10; and</p> <p>8.5.3 - implement any technically and economically feasible new or emerging underwater noise reduction technologies for berthing activities determined by the Proponent, as part of a review conducted</p>	<p><u>343. Condition 8.5 and sub-conditions:</u> This must be amended to require VFPA to not only evaluate but also implement measures before operations begin. It must also be amended to require VFPA to implement "all technically and economically feasible technologies", to comply with s. 79(2) of SARA.</p>	<p>Section 79(2) requires that "...that measures are taken...", not "all" measures. See Section 2.6.1 of this submission for the port authority's detailed response.</p> <p>The port authority notes that draft condition 8.5.3 already requires implementation of any technically and economically feasible new or emerging underwater noise reduction technologies for berthing activities determined to be effective at reducing underwater noise associated with berthing activities, subject to the referenced criteria. Such measures may not be determined to be feasible prior to the commencement of operation and therefore could not be implemented prior to operation.</p> <p>Further, as noted above, certain measures to mitigate effects, including cumulative effects, are measures that are within the statutory authority of other federal authorities, and would have to be implemented by them.</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		pursuant to condition 8.5.2, to be effective at reducing underwater noise associated with berthing activities, without increasing the extent to which other environmental effects are adverse, and to meet requirements for safe operations. The Proponent shall submit these measures to the Agency prior to implementing them		
COALITION-32	8.5.1 - Marine Mammals	evaluate, prior to operation, the effectiveness of technologies to reduce underwater noise associated with berthing activities, including the use of electric tugs. The Proponent shall determine, as part of its evaluation, whether the use of the technology would increase the extent to which environmental effects, other than underwater noise, are adverse. The Proponent shall submit the evaluation to the Agency one year prior to the start of operation and shall include the sources of information and methodology used;	<u>344. Condition 8.5.1:</u> Drs. Scott and Val Veirs suggest amending this measure to include assessment of to the underwater noise from electric tugs and design constraints to ensure that neither the electric motors nor operation with them would radiate additional noise in the frequencies where Southern Resident hearing is most sensitive (i.e. ~20 kHz).	Draft condition 8.5.1 includes the requirement to evaluate the effectiveness of electric tugs at reducing underwater noise, and draft condition 8.5.3 requires the port authority to implement such vessels when evaluations indicate that they are effective and feasible. The evaluation would involve assessment of the underwater noise from electric tugs at relevant frequencies, which includes 20 kHz as assessed by the port authority in its response to the minister's IR (IR2020-3, CIAR #2083) to ensure that these vessels are effective at reducing underwater noise and acoustic effects on SRKW.
COALITION-33	8.5.3 - Marine Mammals	implement any technically and economically feasible new or emerging underwater noise reduction technologies for berthing activities determined by the Proponent, as part of a review conducted pursuant to condition 8.5.2, to be effective at reducing underwater noise associated with berthing activities, without increasing the extent to which other environmental effects are adverse, and to meet requirements for safe operations. The Proponent shall submit these measures to the Agency prior to implementing them.	<u>345. Condition 8.5.3:</u> This sub-condition is currently not drafted to require VFPA to actually implement technologies for quieter berthing, should its reviews indicate that it is feasible. The condition should be amended so that the Agency decides, based on VFPA's reviews and input from Transport Canada, when this technology is feasible and effective, and at that time can instruct VFPA to implement it, which VFPA is then required to do.	This assertion is incorrect: the draft condition clearly would require the port authority to implement underwater noise reduction technologies for berthing activities determined to be feasible if they are effective at reducing underwater noise associated with berthing activities, without increasing the extent to which other environmental effects are adverse, and meet requirements for safe operations.
COALITION-34	8.6 - Marine Mammals	The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada, Canadian Coast Guard, Pacific Pilotage Authority, and other relevant authorities, procedures to delay, where necessary, the daytime departure of container vessels calling on the Designated Project to mitigate effects to Southern Resident Killer Whale (<i>Orcinus orca</i>). The procedures shall include communication protocols, monitoring and criteria for determining whale presence, and safety and regulatory requirements. As part of the development of the procedures, the Proponent shall take into account the potential impacts of the implementation of the criteria and procedures on the Proponent's tenants and users of the Proponent's facilities at Roberts Bank.	<u>346. Condition 8.6:</u> This condition is excessively open-ended. It must specify the outcomes it intends the procedures to achieve, and criteria for the procedures themselves.	The outcome of this measure is described in the response to IR2020-3 (CIAR #2083): "If SRKW are in the vicinity of the terminal at the time of a planned vessel departure, its departure (including deployment of tugs) would be delayed until the SRKW have left the area of potential acoustic disturbance. This mitigation measure would avoid potential acoustic effects on SRKW by reducing the overlap between SRKW and noise emissions from unberthing and departure activities (Appendix IR2020-3-D)." Specifying details of the procedures in the condition would preclude the procedures from being developed in consultation with all the specified parties and is therefore premature.
COALITION-35	8.6 - Marine Mammals	The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada, Canadian Coast Guard, Pacific Pilotage Authority, and other relevant authorities,	<u>347.</u> Furthermore, as Drs. Scott and Val Veirs suggest, if VFPA does not attempt to detect Southern Residents at night, it must pause unberthing until daylight hours. This is consistent with DFO's advice that "an acoustic monitoring system be implemented if it is feasible"	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		procedures to delay, where necessary, the daytime departure of container vessels calling on the Designated Project to mitigate effects to Southern Resident Killer Whale (<i>Orcinus orca</i>). The procedures shall include communication protocols, monitoring and criteria for determining whale presence, and safety and regulatory requirements. As part of the development of the procedures, the Proponent shall take into account the potential impacts of the implementation of the criteria and procedures on the Proponent's tenants and users of the Proponent's facilities at Roberts Bank.	or alternatively VFPA "should explore avoidance of nighttime berthing." ²⁰ 348. Therefore, this condition must explicitly require either the use of passive acoustic monitoring to detect Southern Residents at night and the avoidance of unberthing when they are present at night, or it must require avoidance of unberthing at night and postponement until daylight hours when visible marine mammal observation is more effective. The same could be done for berthing, not just unberthing, if incoming ships could anchor until daylight.	
COALITION-37	8.9 - Marine Mammals	8.9 – The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as a result of operation of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall: 8.9.1 – monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (<i>Orcinus orca</i>). The Proponent shall conduct monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring; 8.9.2 – evaluate and determine whether meeting the underwater noise budget established pursuant to condition 8.4 is mitigating effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672); and 8.9.3 – monitor the effectiveness of any technologies implemented pursuant to condition 8.5.	<u>349. Condition 8.9:</u> VFPA states that "the Minister can be confident that" additional actions will be taken under the follow-up program if the increase in sound exposure for SRKW is higher than expected under VFPA's "most-realistic" scenario, and that VFPA has "assessed potential contingency mitigation options that could be implemented if underwater noise from container vessels calling at the Port of Vancouver is higher than predicted under the most-realistic scenario." ²¹ However, despite the possibility that this scenario could occur, and despite VFPA's apparent willingness to implement contingency mitigation in this scenario, this follow-up program condition contains no requirement for any action in the event that the follow-up program reveals that the increase in sound is higher than predicted, the noise budget is not being met, or technology implemented under 8.5 is not effective.	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-38	8.9 - Marine Mammals	8.9 – The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and	350. The Conservation Coalition submits that this condition must be amended to include how success or failure is to be measured in order to determine whether action is needed, as well as the action to	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.

²⁰ *Ibid* at PDF p 44.

²¹ IR2020-3, *supra* note 180 at PDF pp 2-3.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as a result of operation of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:</p> <p>8.9.1 – monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (<i>Orcinus orca</i>). The Proponent shall conduct monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring;</p> <p>8.9.2 – evaluate and determine whether meeting the underwater noise budget established pursuant to condition 8.4 is mitigating effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672); and</p> <p>8.9.3 – monitor the effectiveness of any technologies implemented pursuant to condition 8.5.</p>	<p>be taken. DFO echoes this concern, recommending enforceable conditions that require additional mitigation measures to be implemented if underwater noise exceeds VFPA’s predictions for its “most-realistic” scenario.</p>	
COALITION-39	8.9 - Marine Mammals	<p>8.9 – The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as a result of operation of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:</p> <p>8.9.1 – monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (<i>Orcinus orca</i>). The Proponent shall conduct monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring;</p>	<p>351. Further, with respect to Condition 8.9, as Drs. Scott and Val Veirs suggest, VFPA should be required to verify the accuracy of underwater noise predictions that include not just broadband levels, as VFPA proposes, but also frequencies in the most sensitive hearing range of the Southern Residents.²² All future modelling should incorporate the most sensitive hearing range of Southern Residents into evaluating potential acoustic impacts, and further, field observations should be done to ensure that underwater noise does not exceed predictions.</p>	<p>In Appendix 3.2-A of this submission, the port authority suggests that noise monitoring metrics will be developed and finalized in consultation with DFO, Transport Canada, Indigenous groups, and other relevant authorities. As noted in Appendix 2.6-B of this submission, broadband noise does include frequencies in the most sensitive hearing range of SRKW and is considered an appropriate monitoring metric for this species.</p> <p>Sound source field verification, as described by the port authority in its response to the minister’s IR (Appendix IR2020-3-I, CIAR #2083), includes field observations to ensure that underwater noise does not exceed predictions. Specifically, the port authority states that it “will collect noise source level measurements from container vessels calling at the Port of Vancouver to confirm the model assumptions. For example, sound source level measurements would be collected using Transport Canada’s underwater listening station in Boundary Pass, provided it is still in operation. If the Boundary Pass underwater listening station is not available, the port authority would seek an alternative station or deploy alternative hydrophones, if needed, to verify container vessel underwater noise source levels.”</p>

²² Veirs Report, supra note 6 at pp 13-15.

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>8.9.2 – evaluate and determine whether meeting the underwater noise budget established pursuant to condition 8.4 is mitigating effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672); and</p> <p>8.9.3 – monitor the effectiveness of any technologies implemented pursuant to condition 8.5.</p>		
COALITION-40	8.7 to 8.13 - Marine Mammals	<p>8.7 – The Proponent shall distribute, prior to and throughout operation, the marine mammal awareness pamphlet <i>Marine Mammals of the Roberts Bank Area and Mariner's Guide to Whales, Dolphins, Porpoises of Western Canada, or any future equivalent document, to marine pilots working within the Port of Vancouver.</i></p> <p>8.8 – The Proponent shall document Indigenous knowledge it has received and how it was considered in the development and implementation of measures to mitigate effects on Southern Resident Killer Whales (<i>Orcinus orca</i>) throughout all phases of the Designated Project. The Proponent shall respect Indigenous knowledge protocols and shall keep Indigenous knowledge it has received confidential, if requested, and/or if required by legal and regulatory requirements.</p> <p>8.9 – The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as a result of operation of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:</p> <p>8.9.1 – monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (<i>Orcinus orca</i>). The Proponent shall conduct monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring;</p> <p>8.9.2 – evaluate and determine whether meeting the underwater noise budget established pursuant to condition 8.4 is</p>	<p>352. The Conservation Coalition does not object to the inclusion of Conditions 8.7-8.13 but reminds the Agency and the Minister that, in light of the meaning of mitigation as explained above, these are not considered mitigation under CEAA 2012 and they cannot satisfy the SARA s. 79(2) requirement. More specifically, these conditions include initiatives the Panel confirmed not to be mitigation (Condition 8.7 pamphlets, Condition 8.10 Conservation Agreement, Conditions 8.11-8.13 potential participation in regional initiatives by the federal government), initiatives that are follow-up programs (Condition 8.9), and initiatives that involve documentation as opposed to action (Condition 8.8).</p>	<p>As discussed in Section 3.3.4 of this submission, there is no rational basis for concluding that the measures proposed will not in fact mitigate the impacts to SRKW. They are in fact mitigation and must be considered as such.</p> <p>Section 79(2) requires only that measures be taken, acknowledging that a benefit can be gained regardless of who implements a particular measure.</p>

#	Section	Original condition	Comment and suggested amendment	Port authority response
		<p>mitigating effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672); and</p> <p>8.9.3 – monitor the effectiveness of any technologies implemented pursuant to condition 8.5.</p> <p>8.10 – The Proponent shall sign on, as a party to the <i>Species at Risk Act Section 11 Conservation Agreement to Support the recovery of the Southern Resident Killer Whale</i>, to an additional five year term of the agreement, or equivalent, if the other parties of the agreement also agree.</p> <p>8.11 – The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at effective management and recovery of the Southern Resident Killer Whale (<i>Orcinus orca</i>), including the Oceans Protection Plan, the Whales Initiative, or equivalent, and any other initiative supporting the recovery objectives for the Southern Resident Killer Whale (<i>Orcinus orca</i>) outlined in the <i>Southern Resident Killer Whale Action Plan</i>.</p> <p>8.12 – The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at managing underwater noise due to commercial vessel traffic.</p> <p>8.13 - The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at identifying the portions of the Salish Sea where marine shipping overlaps spatially and temporally with Southern Resident Killer Whale (<i>Orcinus orca</i>) habitat use.</p>		
COALITION-41	8 - Marine Mammals		354. With respect to gaps and the need for additional conditions, Drs. Scott and Val Veirs recommend the addition of a condition reducing tugboat speed by as much as safely possible – an idea VFPA rejected and which is absent from the conditions. DFO similarly stated that, despite VFPA’s position that the benefit would be small, this measure should “be implemented if feasible.” ²³	The port authority addresses this point in its suggested revisions and additions to the draft conditions in part 8, supported by rationale for the changes; please see Appendix 3.2-A of this submission.
COALITION-42	8 - Marine Mammals		355. Drs. Scott and Val Veirs further recommend staging inbound vessels on the outer shelf of Canada and anchoring temporarily within the Salish Sea to schedule their arrival in groups, timed to avoid spatiotemporal overlap with the Southern Residents, to create beneficial quiet periods and to reduce long-term average noise levels.	This measure is unrealistic, goes well beyond the scope of the project, and is not within the ability of the port authority to implement. As noted above, certain measures to mitigate effects, including cumulative effects, on SRKW, are measures that are within the statutory authority of other federal authorities, including Transport Canada, and would have to be implemented by them. If the Government of Canada determines that measures are warranted to

²³ DFO Submissions, supra note 77 at PDF p 44.

#	Section	Original condition	Comment and suggested amendment	Port authority response
				mitigate effects of marine shipping incidental to the project or cumulative effects on SRKW, it can implement those measures. See Section 3.3 of this submission for additional detail.
COALITION-43	8 - Marine Mammals		356. Finally, the Conservation Coalition submits that the conditions should require emergency response vessels with firefighting capabilities and emergency towing vessels, both capable of responding to container vessels of the size that would call at the Project, to be on standby on the shipping route, including at Sidney, BC, year-round. Container vessel fuel has the potential to cause a catastrophic spill in the event of an accident, and carries a fire risk. ²⁴ In the recent case of the 2021 fire on the <i>Zim Kingston</i> , a much smaller container vessel than those that would call at the Project (4253 TEU), two tugs with firefighting capabilities were coincidentally at a nearby dock and were able to prevent a large-scale environmental disaster.	The port authority notes that responsibility for emergency firefighting and towing along shipping routes is held by the Canadian Coast Guard. As such, this is a matter for consideration by the Government of Canada in the Whole of Government Response. See Section 3.3 of this submission for additional detail.

²⁴ Justine Hunter and Xiao Xu, "Misadventures of container ship MV ZIM Kingston highlight the risks of marine traffic off B.C.'s ecologically fragile coast", *The Globe and Mail* (29 October 2021), available online at <https://www.theglobeandmail.com/canada/british-columbia/article-bad-luck-and-trouble-the-misadventures-of-the-mv-zim-kingston/>; Tim Robertson et al., "Vessel Drift and Response Analysis for the Strait of Juan de Fuca to the Southern Strait of Georgia", (April 2021), at p.ii, available online at <https://www.sanjuanlio.com/wp-content/uploads/2021/04/Vessel-Drift-and-Response-Analysis-Inland-Waters-SJC-Apr21.pdf>.

Appendix 3.2-A Port authority feedback on draft conditions

Roberts Bank Terminal 2 Public Comment Period Draft Conditions Review

Condition #	Condition	Feedback / rationale	Suggested revision
1	Definitions		
1.1	<i>Agency</i> means the Impact Assessment Agency of Canada.	<ul style="list-style-type: none"> No comment. 	
1.2	<i>Baseline</i> means the environmental conditions prior to initiating construction of the Designated Project.	<ul style="list-style-type: none"> No comment. 	
1.3	<i>Construction</i> means the phase of the Designated Project during which the Proponent undertakes the site preparation, building or installation of any components of the Designated Project and the decommissioning of temporary infrastructure, including periods during which these activities may temporarily cease.	<ul style="list-style-type: none"> No comment. 	
1.4	<i>Construction activity</i> means any physical activity that is carried out by the Proponent for the purpose of construction of the Designated Project.	<ul style="list-style-type: none"> No comment. 	
1.5	<i>Day</i> means calendar day.	<ul style="list-style-type: none"> No comment. 	
1.6	<i>Daytime</i> means from one hour before sunrise to one hour after sunset, as calculated by the National Research Council of Canada for Vancouver (British Columbia).	<ul style="list-style-type: none"> No comment. 	
1.7	<i>Designated Project</i> means all components and activities associated with the Roberts Bank Terminal 2 Project, which consist of construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, and incidental marine shipping as described in the Designated Project Description (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672) and the implementation of conditions.	<ul style="list-style-type: none"> No comment. 	
1.8	<i>Designated Project area</i> means the geographic area occupied by the Designated Project as indicated on figure 1 (Project Overview) of the Designated Project Description (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672).	<ul style="list-style-type: none"> No comment. 	
1.9	<i>Environment and Climate Change Canada</i> means the Department of the Environment as established under subsection 2(1) of the Department of the Environment Act.	<ul style="list-style-type: none"> No comment. 	
1.10	<i>Environmental assessment</i> means “environmental assessment” as defined in subsection 2(1) of the Canadian Environmental Assessment Act, 2012.	<ul style="list-style-type: none"> No comment. 	
1.11	<i>Environmental effects</i> means “environmental effects” as described in section 5 of the Canadian Environmental Assessment Act, 2012.	<ul style="list-style-type: none"> No comment. 	
1.12	<i>Environmental impact statement</i> means the March 27, 2015 document entitled Roberts Bank Terminal 2 Project, Roberts Bank, Delta, B.C., Environmental Impact Statement (Canadian Impact Assessment Registry Reference Number 80054, Document Number 181).	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
1.13	<i>Exclusion zone</i> means the area within which a marine mammal may be potentially exposed to sound levels from a construction activity that are above injury thresholds for marine mammals or behavioural disturbance thresholds for Southern Resident Killer Whales (<i>Orcinus orca</i>) set out in condition 8.1.	<ul style="list-style-type: none"> The establishment of injury and behavioural disturbance thresholds is addressed in draft condition 8.2.1. That condition requires exclusion zones to be established but does not specify the zones themselves. 	The port authority suggests the following revisions: <i>Exclusion zone</i> means the area within which a marine mammal may be potentially exposed to sound levels from a construction activity that are above injury thresholds for marine mammals or behavioural disturbance thresholds for Southern Resident Killer Whales (<i>Orcinus orca</i>) set out in <i>established in accordance with</i> condition 8.2.1.
1.14	<i>Federal Review Panel Report</i> means the report submitted on March 27, 2020 by the Federal Review Panel established by the Minister of Environment and Climate Change (Canadian Impact Assessment Registry Reference Number 80054, Document Number 2062).	<ul style="list-style-type: none"> No comment. 	
1.15	<i>Fish</i> means “fish” as defined in subsection 2(1) of the Fisheries Act.	<ul style="list-style-type: none"> No comment. 	
1.16	<i>Fish habitat</i> means “fish habitat” as defined in subsection 2(1) of the Fisheries Act.	<ul style="list-style-type: none"> No comment. 	
1.17	<i>Fisheries and Oceans Canada</i> means the Department of Fisheries and Oceans as established under subsection 2(1) of the Department of Fisheries and Oceans Act.	<ul style="list-style-type: none"> No comment. 	
1.18	<i>Follow-up program</i> means “follow-up program” as defined in subsection 2(1) of the Canadian Environmental Assessment Act, 2012.	<ul style="list-style-type: none"> No comment. 	
1.19	<i>Health Canada</i> means the Department of Health as established under subsection 2(1) of the Department of Health Act.	<ul style="list-style-type: none"> No comment. 	
1.20	<i>Heritage value</i> means the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations.	<ul style="list-style-type: none"> No comment. 	
1.21	<i>In-water work activities</i> means any works associated with the Designated Project undertaken in water frequented by fish.	<ul style="list-style-type: none"> No comment. 	
1.22	<i>Indigenous groups</i> means the following Aboriginal Peoples who will be affected or potentially affected by the Designated Project, including construction and operation of the marine terminal, the widened causeway, and the expanded tug basin and marine shipping within the marine shipping assessment area: Tsawwassen First Nation, Musqueam Indian Band (Musqueam), Cowichan Tribes, Halalt First Nation, Ts’uubaa-asatx Nation, Lyackson First Nation, Malahat First Nation, Pauquachin First Nation, Penelakut Tribe, Semiahmoo First Nation, Stz’uminus First Nation, Tsartlip First Nation, Tsawout First Nation, Tseycum First Nation, and Tsleil-Waututh Nation.	<ul style="list-style-type: none"> The previous draft condition (draft condition 1.21 in the pre-public consultation version of the draft conditions) used the descriptive term “marine terminal” to refer to the Indigenous groups included in this definition; that descriptive term has been omitted from this definition. This omission has created uncertainty about the intended scope of later conditions that refer to consultation with “Indigenous groups.” The port authority recommends some kind of descriptive term, similar to the bracketed terms used in draft conditions 1.23 (“Fraser River”) and 1.24 (“marine shipping”), be used in this definition to ensure clarity in the intended scope of consultation required by later conditions. If the descriptive term “marine terminal” is not considered suitable, an alternative term, such as “Roberts Bank”, could be used. In feedback on subsequent conditions, the port authority addresses the issue of clarity of intended scope of consultation. Further, whether any specific Indigenous group will be affected or potentially affected by any aspect of the Designated Project is a matter determined through the assessment and need not be stated or inferred in a definition. The pertinent groups can be specified simply by naming them. 	The port authority suggests the following revisions: <i>Indigenous groups (Roberts Bank)</i> means the following Aboriginal Peoples who will be affected or potentially affected by the Designated Project, including construction and operation of the marine terminal, the widened causeway, and the expanded tug basin and marine shipping within the marine shipping assessment area: Tsawwassen First Nation, Musqueam Indian Band (Musqueam), Cowichan Tribes, Halalt First Nation, Ts’uubaa-asatx Nation, Lyackson First Nation, Malahat First Nation, Pauquachin First Nation, Penelakut Tribe, Semiahmoo First Nation, Stz’uminus First Nation, Tsartlip First Nation, Tsawout First Nation, Tseycum First Nation, and Tsleil-Waututh Nation.
1.23	<i>Indigenous groups (Fraser River)</i> means the following Aboriginal Peoples who will be affected or potentially affected upriver by the Designated Project: S’ólh Téméxw Stewardship Alliance (Chawathil First Nation, Cheam First Nation, Kwaw-Kwaw-Apilt First Nation, Scowlitz First Nation, Skawahlook First Nation, Skwah First Nation, Sumas First Nation, Yale First Nation each on their own behalf, and Aitchelitz First Nation, Shxwhá:y Village, Skowkale First Nation, Soowahlie First Nation, Squiala First Nation, Tzeachten First Nation and	<ul style="list-style-type: none"> Whether any specific Indigenous group will be affected or potentially affected by any aspect of the Designated Project is a matter determined through the assessment and need not be stated or inferred in a definition. The pertinent groups can be specified simply by naming them. 	The port authority suggests the following revision: <i>Indigenous groups (Fraser River)</i> means the following Aboriginal Peoples who will be affected or potentially affected upriver by of the Designated Project: S’ólh Téméxw Stewardship Alliance (Chawathil First Nation, Cheam First Nation, Kwaw-Kwaw-Apilt First Nation, Scowlitz First Nation, Skawahlook First Nation, Skwah First Nation, Sumas First Nation, Yale First Nation each on their own behalf, and Aitchelitz First Nation, Shxwhá:y Village, Skowkale First

Condition #	Condition	Feedback / rationale	Suggested revision
	Yakweawioose First Nation), Kwantlen First Nation, Leq'á:mél First Nation, Matsqui First Nation, Shxw'ow'hamel First Nation, Popkum First Nation, and Seabird Island First Nation.		Nation, Soowahlie First Nation, Squiala First Nation, Tzeachten First Nation and Yakweawioose First Nation), Kwantlen First Nation, Leq'á:mél First Nation, Matsqui First Nation, Shxw'ow'hamel First Nation, Popkum First Nation, and Seabird Island First Nation.
1.24	<i>Indigenous groups (marine shipping)</i> means the following Aboriginal Peoples who will be affected or potentially affected by the marine shipping within the marine shipping assessment area of the Designated Project only: Scia'new (Beecher Bay) First Nation, Ditidaht First Nation, Esquimalt Nation, Maa-nulth First Nations (Huu-ay-aht First Nation, Ka:'yu:'k't'h'/Che:k'tles7et'h First Nations, Toquaht Nation, Uchucklesaht Tribe and Yuułu?i?ath (Ucluelet Nation), Pacheedaht First Nation, Songhees Nation, and T'sou-ke First Nation.	<ul style="list-style-type: none"> Whether any specific Indigenous group will be affected or potentially affected by any aspect of the Designated Project is a matter determined through the assessment and need not be stated or inferred in a definition. The pertinent groups can be specified simply by naming them. 	The port authority suggests the following revision: <i>Indigenous groups (marine shipping)</i> means the following Aboriginal Peoples who will be affected or potentially affected by the marine shipping within the marine shipping assessment area of the Designated Project only: Scia'new (Beecher Bay) First Nation, Ditidaht First Nation, Esquimalt Nation, Maa-nulth First Nations (Huu-ay-aht First Nation, Ka:'yu:'k't'h'/Che:k'tles7et'h First Nations, Toquaht Nation, Uchucklesaht Tribe and Yuułu?i?ath (Ucluelet Nation), Pacheedaht First Nation, Songhees Nation, and T'sou-ke First Nation.
New		<ul style="list-style-type: none"> See comment on draft condition 9.1. 	The port authority suggests the following new definition condition: <i>Invasive plant species</i> means a plant species introduced intentionally or accidentally through human activity to an area where it did not previously exist, and that presents an environmental, safety, or economic threat such that it is targeted for eradication or control by specific federal or provincial regulations.
1.25	<i>Listed species at risk</i> means a species that is listed on the List of Wildlife Species at Risk set out in Schedule 1 of the Species at Risk Act.	<ul style="list-style-type: none"> No comment. 	
1.26	<i>Local assessment area</i> means the area within which the Designated Project is expected to interact with and potentially cause effects to a component of the environment and are delineated for various components of the environment.	<ul style="list-style-type: none"> The port authority notes that reference to where the local assessment areas were defined for each intermediate and valued component may add clarity to this definition. 	The port authority suggests the following revision: <i>Local assessment area</i> means the area within which the Designated Project is expected to interact with and potentially cause effects to a component of the environment and are delineated for various components of the environment <i>in the Environmental Impact Statement, March 27, 2015 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 181).</i>
1.27	<i>Marine mammals</i> means all mammal species, which are morphologically adapted to the marine environment, including cetaceans and pinnipeds.	<ul style="list-style-type: none"> No comment. 	
1.28	<i>Migratory bird</i> means “migratory bird” as defined in subsection 2(1) of the Migratory Birds Convention Act, 1994	<ul style="list-style-type: none"> No comment. 	
1.29	<i>Mitigation measures</i> means “mitigation measures” as defined in subsection 2(1) of the Canadian Environmental Assessment Act, 2012.	<ul style="list-style-type: none"> As noted in Section 3 of this submission, the port authority understands that the conditions can only impose requirements that the proponent can, in fact, comply with; in this regard, where a condition would require the proponent to implement mitigation measures, the measures must be technically and economically feasible. Incorporating this principle directly into the definition of “mitigation measures” would be an efficient and effective means of addressing this feasibility issue for all subsequent conditions that refer to mitigation measures. 	The port authority suggests the following revision: <i>Mitigation measures</i> means “mitigation measures,” as defined in subsection 2(1) of the Canadian Environmental Assessment Act, 2012, <i>that are technically and economically feasible.</i> Alternatively, the definition here could directly incorporate the definition from CEAA 2012, with added reference to technical and economic feasibility, as follows: <i>Mitigation measures means technically and economically feasible measures for the elimination, reduction, or control of the adverse environmental effects of the Designated Project, and includes restitution for any damage to the environment caused by those effects through replacement, restoration, compensation, or any other means.</i>
1.30	<i>Natural Resources Canada</i> means the Department of Natural Resources as established under subsection 3(1) of the Department of Natural Resources Act.	<ul style="list-style-type: none"> No comment. 	
1.31	<i>Offsetting plan</i> means “offsetting plan” as described in Schedule 1 of the Authorizations Concerning Fish and Fish Habitat Protection Regulations.	<ul style="list-style-type: none"> No comment. 	
1.32	<i>Operation</i> means the phase of the Designated Project during which vessels are accepted for berthing and cargo transfer. This phase includes periods	<ul style="list-style-type: none"> No comment. 	

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	when vessel berthing and vessel cargo transfer may temporarily cease. This phase includes any activities associated with commissioning the marine terminal in whole or in part.		
1.33	<i>Participate</i> means to directly or indirectly assist or support initiatives through the provision of resources, including knowledge, time, data, access and other means that are economically and technically feasible and within the care and control of the Proponent.	<ul style="list-style-type: none"> The port authority notes that some draft conditions contemplate “participation” by other parties, including Indigenous groups (e.g., draft conditions 2.9, 17.1). The port authority understands the reference to “care and control” to be specifically related to instances where its own participation is contemplated, not the participation of others. The port authority also considers that the condition should articulate the standard of behaviour that is expected of any party whose participation is required by the conditions. 	The port authority suggests the following revisions: <i>Participate</i> means to directly or indirectly assist or support initiatives <i>expeditiously and in good faith</i> through the provision of resources, including knowledge, time, data, access and other means that are economically and technically feasible and, <i>where the participation of the Proponent is contemplated</i> , within the care and control of the Proponent.
1.34	<i>Port of Vancouver</i> means the lands and waters in the Vancouver Fraser port Authority’s Letters Patent as of December 31, 2020.	<ul style="list-style-type: none"> The port authority notes that its Letters Patent may be amended from time to time, which may alter the lands and waters over which it has jurisdiction. 	The port authority suggests the following revision: <i>Port of Vancouver</i> means the lands and waters in the Vancouver Fraser port Authority’s Letters Patent as of December 31, 2020 <i>as amended from time to time</i> .
1.35	<i>Pre-construction survey</i> means any physical activity that is carried out by the Proponent for the purpose of gathering data to establish existing environmental conditions prior to the commencement of construction, other than any physical activity carried out in relation to a follow-up program that is a requirement of a condition set out in this document or any physical activity required by any other condition set out in this document.	<ul style="list-style-type: none"> The port authority acknowledges Tsleil-Waututh Nation’s submission (CIAR #3500) regarding this condition. See the port authority’s response to comment TWN-2 in Appendix 2.5-A of this submission. The port authority notes that geotechnical investigations would be captured by this definition, as the purpose of geotechnical investigations would be to establish existing environmental—specifically, geotechnical—conditions. For greater certainty and clarity, the term “physical” could be added to the condition, as shown. 	The port authority suggests the following revision: <i>Pre-construction survey</i> means any physical activity that is carried out by the Proponent for the purpose of gathering data to establish existing <i>physical or</i> environmental conditions prior to the commencement of construction, other than any physical activity carried out in relation to a follow-up program that is a requirement of a condition set out in this document or any physical activity required by any other condition set out in this document.
1.36	<i>Proponent</i> means Vancouver Fraser Port Authority and its successors or assigns.	<ul style="list-style-type: none"> No comment. 	
1.37	<i>Qualified individual</i> means someone who, through education, experience and knowledge relevant to a particular matter, provides the Proponent with advice within their area of expertise. Knowledge relevant to a particular matter may include community and Indigenous knowledge.	<ul style="list-style-type: none"> No comment. 	
1.38	<i>Qualified professional</i> means a person who has training, experience and expertise in a discipline relevant to the field of practice set out in the condition, and who is registered with the appropriate professional organization in British Columbia, is acting under that organization’s code of ethics and is subject to disciplinary action by that organization.	<ul style="list-style-type: none"> No comment. 	
1.39	<i>Record</i> means “record” as defined in subsection 2(1) of the Canadian Environmental Assessment Act, 2012.	<ul style="list-style-type: none"> No comment. 	
1.40	<i>Relevant authorities</i> means federal and/or provincial and/or municipal authorities that are in possession of specialist or expert information or knowledge, or that have a responsibility for the administration of a law or regulation, with respect to the subject matter of a condition set out in this document.	<ul style="list-style-type: none"> No comment. 	
1.41	<i>Reporting year</i> means January 1 of a calendar year through December 31 of the same calendar year.	<ul style="list-style-type: none"> No comment. 	
1.42	<i>Salish sea</i> means the inland sea east of Juan de Fuca traffic separation scheme light buoy JA, including the Strait of Juan de Fuca, Strait of Georgia and Puget Sound	<ul style="list-style-type: none"> No comment. 	
1.43	<i>Structure, site or thing of historical, archeological, paleontological or architectural significance</i> means a structure, site or thing that is determined by a qualified individual, on the basis of heritage value, to be associated with an	<ul style="list-style-type: none"> The port authority suggests the definition be clarified in its focus on physical structures, sites, or things. The port authority also notes that the term “Indigenous groups” is incorporated into defined terms for the purpose of these conditions (as per 	The port authority suggests the following revisions: <i>Structure, site or thing of historical, archeological, paleontological or architectural significance</i> means a <i>physical</i> structure, site or thing that is determined by a qualified individual, on the basis of heritage value, to be

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	aspect of the history or culture of the people of Canada, including Indigenous groups.	draft conditions 1.22, 1.23, 1.24), and suggests alternative language be used here for clarity.	associated with an aspect of the history or culture of the people of Canada, including Indigenous groups <i>Aboriginal Peoples</i> .
1.44	<i>Water frequented by fish</i> means “water frequented by fish” as defined in subsection 34(1) of the Fisheries Act.	<ul style="list-style-type: none"> No comment. 	
1.45	<i>Wetland</i> means land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydrophytic vegetation and various kinds of biological activity which are adapted to a wet environment and as further defined in the Canadian Wetland Classification System.	<ul style="list-style-type: none"> No comment. 	
1.46	<i>Wetland functions</i> means the natural processes and derivation of benefits and values associated with wetland ecosystems, including economic production, fish and wildlife habitat, organic carbon storage, water supply and purification (e.g. groundwater recharge, flood control, maintenance of flow regimes, shoreline erosion buffering), and soil and water conservation, as well as tourism, heritage, recreational, educational, scientific, and aesthetic opportunities.	<ul style="list-style-type: none"> No comment. 	
2	General conditions		
2.1	The Proponent shall ensure that its actions in meeting the conditions set out in this document during all phases of the Designated Project are considered in a careful and precautionary manner, promote sustainable development, are informed by the best information and knowledge, including community and Indigenous knowledge, available at the time the Proponent takes action, are based on methods and models that are recognized by standard-setting bodies, are undertaken by qualified individuals, and have applied the best available technically and economically feasible technologies.	<ul style="list-style-type: none"> No comment. 	
2.2	The Proponent shall ensure that its actions in meeting the conditions set out in this document are taken in a way that is consistent with any applicable management plan, recovery strategy and action plan for listed species at risk.	<ul style="list-style-type: none"> As worded, this condition might create a conflict over the scope of the project authorized by the decision statement, and, further, might be understood as effectively delegating the minister’s authority to make or amend conditions. The port authority suggests that this be clarified in the condition itself. 	The port authority suggests the following revisions: The Proponent shall ensure that its actions in meeting the conditions set out in this document are taken in a way that is consistent with any applicable management plan, recovery strategy and action plan for listed species at risk. <i>For certainty, this condition does not alter the scope of the project authorized by, nor delegate any authority to make or amend conditions in, this decision statement.</i>
2.3	The Proponent shall, where consultation is a requirement of a condition set out in this document:	<ul style="list-style-type: none"> The port authority notes that unforeseen circumstances may arise over the life of the project that may require urgent action to avoid harm to the environment or people. In such circumstances, it may not be feasible to carry out consultation on the timelines contemplated by the sub-conditions. The conditions should therefore provide flexibility to enable the proponent, at the direction of IAAC, to respond appropriately to urgent circumstances. 	The port authority suggests the following revision: The Proponent shall, <i>unless otherwise directed in writing by the Agency</i> , where consultation is a requirement of a condition set out in this document:
2.3.1	provide a written notice of the opportunity for the party or parties being consulted to present their views and information on the subject matter of the consultation at least 90 days prior to the commencement of the activity or activities to which the consultation pertains;	<ul style="list-style-type: none"> No comment. 	
2.3.2	provide all information available and relevant to the scope and the subject matter of the consultation and a reasonable period of time not less than 30 days, or as otherwise parties agreed upon with the party or parties being consulted, to prepare their views and information;	<ul style="list-style-type: none"> The port authority notes that potential confusion arising from the use of the term “all” could be avoided with some minor editorial revisions. There is also a typographical error that may create confusion. 	The port authority suggests the following revisions: provide all the information <i>that is</i> available and <i>is</i> relevant to the scope and the subject matter of the consultation and a reasonable period of time not less than 30 days, or as otherwise parties agreed upon with the party or parties being consulted, to prepare their views and information;

Condition #	Condition	Feedback / rationale	Suggested revision
2.3.3	undertake an impartial consideration of all views and information presented by the party or parties being consulted on the subject matter of the consultation; and	<ul style="list-style-type: none"> No comment. 	
2.3.4	advise as soon as feasible in writing, the party or parties being consulted on how the views and information received have, or have not, been integrated into the subject matter of the consultation by the Proponent, including a rationale for why the views have, or have not, been integrated.	<ul style="list-style-type: none"> No comment. 	
2.4	The Proponent shall, where consultation with Indigenous groups, Indigenous groups (marine shipping), and Indigenous groups (Fraser River) is a requirement of a condition set out in this document:	<ul style="list-style-type: none"> A minor edit is suggested to ensure the condition applies to circumstances in which any one or more of the defined groups is required to be consulted. See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall, where consultation with Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping), and/or Indigenous groups (Fraser River) is a requirement of a condition set out in this document:
2.4.1	discuss with each Indigenous group, Indigenous group (marine shipping), and Indigenous group (Fraser river) separately whether it is interested in being consulted on the condition(s) where indicated. The Proponent shall revisit this every year with each Indigenous group, Indigenous group (marine shipping), and/or Indigenous group (Fraser river) and only conduct consultation requirements referred to in condition 2.3 for the condition(s) of interest to each Indigenous group, Indigenous group (marine shipping), and/or Indigenous group (Fraser river);	<ul style="list-style-type: none"> The port authority notes that some Indigenous groups may prefer to establish for themselves the frequency of revisiting the conditions for consultation, particularly later in the project operation phase. See also comments on draft condition 1.22. There is a minor typographical error. 	The port authority suggests the following revision: discuss with each <i>Indigenous group within the</i> Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping), and Indigenous groups (<i>Fraser River river</i>) separately whether it is interested in being consulted on the condition(s) where indicated. The Proponent shall revisit this every year, <i>or at a frequency agreed upon with each group</i> , with each <i>Indigenous group within the</i> Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping), and Indigenous <i>groups</i> (<i>Fraser River river</i>) and only conduct consultation requirements referred to in condition 2.3 for the condition(s) of interest to each <i>Indigenous group, Indigenous group (marine shipping), and/or Indigenous group (Fraser river)</i> ;
2.4.2	communicate with each Indigenous group, Indigenous group (marine shipping), and Indigenous group (Fraser river) with respect to the manner to satisfy the consultation requirements referred to in condition 2.3, including:	<ul style="list-style-type: none"> See comments on draft condition 1.22. There is a minor typographical error. 	The port authority suggests the following revision: communicate with each Indigenous group (<i>Roberts Bank</i>), Indigenous group (marine shipping), and Indigenous group (<i>Fraser River river</i>) with respect to the manner to satisfy the consultation requirements referred to in condition 2.3, including:
2.4.2.1	methods of notification;	<ul style="list-style-type: none"> No comment. 	
2.4.2.2	the type of information, resources and the period of time to be provided when seeking input;	<ul style="list-style-type: none"> No comment. 	
2.4.2.3	whether consultation is to be done separately from other parties being consulted;	<ul style="list-style-type: none"> No comment. 	
2.4.2.4	the process to be used by the Proponent to undertake impartial consideration of all views and information presented on the subject of the consultation; and	<ul style="list-style-type: none"> No comment. 	
2.4.2.5	the period of time and the means to advise Indigenous groups of how their views and information were considered by the Proponent.	<ul style="list-style-type: none"> The port authority would advise all the Indigenous groups identified in draft condition 2.4.2 (not only the “Indigenous groups” as defined in draft condition 1.22) of how their views and information were considered. 	The port authority suggests the following revisions: the period of time and the means to advise <i>the</i> Indigenous groups <i>identified in condition 2.4.2</i> of how their views and information were considered by the Proponent.
2.5	The Proponent shall, where a follow-up program is a requirement of a condition set out in this document, determine, as part of the development of each follow-up program and in consultation with the party or parties being consulted during the development, the following information, unless already specified in the condition:	<ul style="list-style-type: none"> No comment. 	
2.5.1	the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program;	<ul style="list-style-type: none"> No comment. 	
2.5.2	the scope, content and frequency of reporting of the results of the follow-up program;	<ul style="list-style-type: none"> No comment. 	

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2.5.3	the frequency at which the follow-up program must be updated;	<ul style="list-style-type: none"> No comment. 	
2.5.4	the levels of environmental change relative to baseline that are caused by the Designated Project and that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities causing the environmental change to be stopped;	<ul style="list-style-type: none"> No comment. 	
2.5.5	the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.5.4 have been reached or exceeded; and	<ul style="list-style-type: none"> The use in this draft condition of the language “to be implemented” implies that the mitigation measures identified in a follow-up program (FUP) <u>must</u> be implemented if the levels of environmental change identified pursuant to draft condition 2.5.4 are reached or exceeded. However, the specific measures that would be most effective to address an exceedance would depend on the circumstances at the time they are to be implemented and should be determined at that time. Further, a FUP may identify a suite of potential mitigation measures, but not all of them would necessarily be needed to address an exceedance. In addition, as a FUP may be developed years in advance of when mitigation may be needed, the most suitable mitigation measure or adaptive management approach may not have been identified at the time the FUP was developed. Other potential conditions already would require the implementation of mitigation if monitoring in the context of a FUP indicates an exceedance; therefore, the language in this condition need not establish a duplicative implementation requirement directly or indirectly. For these reasons, the port authority suggests the condition require the identification of <u>potential</u> mitigation measures that <u>may</u> be implemented to address an exceedance. This approach would be consistent with clarification provided previously by IAAC that this condition is not intended to limit the mitigation measures that may be implemented to those identified in a FUP or other document developed ahead of time. 	<p>The port authority suggests the following revisions: the <i>potential</i> technically and economically feasible mitigation measures to that <i>may</i> be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.5.4 have been reached or exceeded; and</p>
2.5.6	the specific and measureable end points that must be achieved before the follow up program can end. Those end points should indicate that the accuracy of the environmental assessment has been verified and/or that the mitigation measures are effective.	<ul style="list-style-type: none"> No comment. 	
2.6	The Proponent shall update the follow-up programs, including the information determined for each follow-up program pursuant to condition 2.5, during the implementation of each follow-up program, at the minimum frequency determined pursuant to condition 2.5.3 and in consultation with the party or parties being consulted during the development of each follow-up program.	<ul style="list-style-type: none"> No comment. 	
2.7	The Proponent shall provide the follow-up programs, including the information determined for each follow-up program pursuant to condition 2.5, to the Agency and to the party or parties being consulted during the development of each follow-up program prior to the implementation of each follow-up program. The Proponent shall also provide any update made pursuant to condition 2.6 to the Agency and to the party or parties being consulted during the development of each follow-up program within 30 days of the follow-up program being updated.	<ul style="list-style-type: none"> No comment. 	
2.8	The Proponent shall, where a follow-up program is a requirement of a condition set out in this document:	<ul style="list-style-type: none"> No comment. 	

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2.8.1	implement the follow-up program according to the information determined pursuant to condition 2.5 and any requirements specified in conditions specific to each follow-up program;	<ul style="list-style-type: none"> No comment. 	
2.8.2	conduct monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition and/or to determine the effectiveness of any mitigation measure;	<ul style="list-style-type: none"> No comment. 	
2.8.3	determine whether modified or additional mitigation measure(s) are required based on the monitoring and analysis undertaken pursuant to condition 2.8.2;	<ul style="list-style-type: none"> No comment. 	
2.8.4	if modified or additional mitigation measures are required pursuant to condition 2.8.3, develop and implement these technically and economically feasible mitigation measure(s) as soon as feasible and monitor them pursuant to condition 2.8.2. The Proponent shall notify the Agency within 24 hours of any modified or additional mitigation measure being implemented and provide a detailed description of the measure, if not previously submitted to the Agency, within 7 days; and	<ul style="list-style-type: none"> No comment. 	
2.8.5	report all results of the follow-up program including all data collected, analyses, and monitoring reports to the Agency no later than March 31 following any reporting year during which the follow-up program is implemented and, subject to information determined pursuant to 2.5.2, to the party or parties being consulted during the development of the follow-up program.	<ul style="list-style-type: none"> No comment. 	
2.9	Where consultation with Indigenous groups, Indigenous groups (marine shipping), and/or Indigenous groups (Fraser River) is a requirement of a follow-up program, the Proponent shall discuss the follow-up program with each group and shall determine, in consultation with each group, opportunities for their participation in the implementation of the follow-up program, including the conduct of monitoring, the analysis and reporting of follow-up results and whether modified or additional mitigation measure(s) are required, as set out in condition 2.8.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revisions: Where consultation with Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping), and/or Indigenous groups (Fraser River) is a requirement of a follow-up program, the Proponent shall discuss the follow-up program with each group and shall determine, in consultation with each group, opportunities for their participation in the implementation of the follow-up program, including the conduct of monitoring, the analysis and reporting of follow-up results and whether modified or additional mitigation measure(s) are required, as set out in condition 2.8.
2.10	The Proponent shall prepare an annual report that sets out, for each reporting year:	<ul style="list-style-type: none"> No comment. 	
2.10.1	the activities undertaken by the Proponent to comply with each of the conditions set out in this document;	<ul style="list-style-type: none"> No comment. 	
2.10.2	how the Proponent complied with condition 2.1;	<ul style="list-style-type: none"> No comment. 	
2.10.3	for conditions set out in this document for which consultation is a requirement, a summary of any views and information received during or as a result of consultation and how the Proponent considered and addressed the views and information received;	<ul style="list-style-type: none"> No comment. 	
2.10.4	the information referred to in conditions 2.5 for each follow-up program and any update to that information made pursuant to condition 2.6;	<ul style="list-style-type: none"> No comment. 	
2.10.5	a summary of the results of the follow-up program requirements;	<ul style="list-style-type: none"> No comment. 	
2.10.6	any modified or additional mitigation measure implemented or proposed to be implemented by the Proponent, as determined pursuant to condition 2.8;	<ul style="list-style-type: none"> No comment. 	
2.10.7	for any conditions where implementation is specifically stated to be dependent in whole or in part upon economic or technical feasibility, and the Proponent determines it is not economically or technically feasible, the Proponent shall provide a reasonable justification for that determination;	<ul style="list-style-type: none"> No comment. 	

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2.10.8	the activities undertaken by the Proponent related to its participation in regional initiatives; and	<ul style="list-style-type: none"> No comment. 	
2.10.9	for any plan that is a requirement of a condition set out in this document, any update(s) to the plan that have been made during the reporting year.	<ul style="list-style-type: none"> No comment. 	
2.11	The first reporting year for which the Proponent shall prepare an annual report pursuant to condition 2.10 shall start on the day the Minister of the Environment issues the Decision Statement to the Proponent pursuant to subsection 54 (1) of the Canadian Environmental Assessment Act, 2012.	<ul style="list-style-type: none"> No comment. 	
2.12	The Proponent shall submit to the Agency the annual report referred to in condition 2.10, including a plain language executive summary in both official languages, no later than March 31 following the reporting year to which the annual report applies.	<ul style="list-style-type: none"> No comment. 	
2.13	The Proponent shall publish on the Internet the annual reports and the executive summaries referred to in conditions 2.10 and 2.12, greenhouse gas reduction plan and monitoring results referred to in conditions 3.2 and 3.3, biofilm follow-up program results referred to in conditions 10.14, the reports related to accidents and malfunctions referred to in conditions 19.6.3 and 19.6.4, the accident and malfunction communication plan referred to in condition 19.7, the schedules referred to in conditions 20.1 and 20.2, and any update or revision to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 15 years following their publication. The Proponent shall notify the Agency and Indigenous groups of the availability of these documents within two business days of their publication.	<ul style="list-style-type: none"> The port authority would, through normal practice, notify all Indigenous groups as defined in draft conditions 1.22 to 1.24 (not only the "Indigenous groups" as currently defined in draft condition 1.22) of the availability of these documents. See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall publish on the Internet the annual reports and the executive summaries referred to in conditions 2.10 and 2.12, greenhouse gas reduction plan and monitoring results referred to in conditions 3.2 and 3.3, biofilm follow-up program results referred to in conditions 10.14, the reports related to accidents and malfunctions referred to in conditions 19.6.3 and 19.6.4, the accident and malfunction communication plan referred to in condition 19.7, the schedules referred to in conditions 20.1 and 20.2, and any update or revision to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 15 years following their publication. The Proponent shall notify the Agency and Indigenous groups (<i>Roberts Bank</i>), <i>Indigenous groups (marine shipping)</i> , and <i>Indigenous groups (Fraser River)</i> of the availability of these documents within two business days of their publication.
2.14	When the development of any plan is a requirement of a condition set out in this document, the Proponent shall submit the plan to the Agency prior to the commencement of the activity or activities to which the plan pertains, unless otherwise required through the condition.	<ul style="list-style-type: none"> No comment. 	
2.15	The Proponent shall notify the Agency and Indigenous groups in writing no later than 30 days after the day on which there is any transfer of ownership or control of the Designated Project in whole or in part.	<ul style="list-style-type: none"> The port authority would, through normal practice, notify all Indigenous groups as defined in draft conditions 1.22 to 1.24 (not only the "Indigenous groups" as defined in draft condition 1.22) of this matter. See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall notify the Agency and Indigenous groups (<i>Roberts Bank</i>), <i>Indigenous groups (marine shipping)</i> , and <i>Indigenous groups (Fraser River)</i> in writing no later than 30 days after the day on which there is any transfer of ownership or control of the Designated Project in whole or in part.
2.16	If the Proponent is proposing to carry out the Designated Project in a manner other than described in condition 1.7, the Proponent shall notify the Agency in writing in advance. As part of the notification, the Proponent shall provide:	<ul style="list-style-type: none"> No comment. 	
2.16.1	a description of the proposed change(s) to the Designated Project and the environmental effects that may result from the change(s);	<ul style="list-style-type: none"> No comment. 	
2.16.2	any modified or additional measure to mitigate any environmental effect that may result from the change(s) and any modified or additional follow-up requirement; and	<ul style="list-style-type: none"> No comment. 	
2.16.3	an explanation of how, taking into account any modified or additional mitigation measure referred to in condition 2.16.2, the environmental effects that may result from the change(s) may differ from the environmental effects of the Designated Project identified during the environmental assessment.	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
2.17	The Proponent shall submit to the Agency any additional information required by the Agency about the proposed change(s) referred to in condition 2.16, which may include the results of consultation with Indigenous groups and relevant authorities on the proposed change(s) and environmental effects referred to in condition 2.16.1 and the modified or additional mitigation measures and follow-up requirements referred to in condition 2.16.2.	<ul style="list-style-type: none"> The port authority notes that the scope of consultation on potential project changes would depend on what the change is and what its effects may be. For example, a project change that is limited to the terminal footprint and would have no effects outside of the Designated Project Area and/or requires mitigation measures to be implemented only within the terminal may warrant consultation with Indigenous groups (Roberts Bank), whereas a project change that may have effects in a broader area or require mitigation measures to be implemented in a broader area may warrant consultation with Indigenous groups (marine shipping) and/or Indigenous groups (Fraser River) as well. The port authority would, through normal practice, consult Indigenous groups on proposed change(s) to the Designated Project that may affect them. See also comments on draft condition 1.22. 	<p>The port authority suggests the following revision:</p> <p>The Proponent shall submit to the Agency any additional information required by the Agency about the proposed change(s) referred to in condition 2.16, which, <i>depending on the nature of the proposed change(s)</i>, may include the results of consultation with <i>one or more of the</i> Indigenous groups <i>identified in conditions 1.22, 1.23, and 1.24</i>, and relevant authorities on the proposed change(s) and environmental effects referred to in condition 2.16.1 and the modified or additional mitigation measures and follow-up requirements referred to in condition 2.16.2.</p>
3	Air quality and greenhouse gas emissions		
3.1	The Proponent shall provide and maintain, during operation, electrical power connection(s) so that all container vessels equipped to plug into land-based electrical power while berthed at the marine terminal can do so to reduce the use of diesel powered auxiliary engines.	<ul style="list-style-type: none"> No comment. 	
3.2	The Proponent shall develop, in consultation with Indigenous groups, Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy and Metro Vancouver, greenhouse gas management plans for construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, to improve energy efficiency and reduce greenhouse gas emissions. The Proponent shall develop each plan prior to the relevant phase of the Designated Project and implement each plan throughout the relevant phase of the Designated Project. The Proponent shall take into account applicable federal, provincial and regional greenhouse gas reduction strategies when developing and implementing the plans. As part of each plan, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	<p>The port authority suggests the following revision:</p> <p>The Proponent shall develop, in consultation with Indigenous groups (<i>Roberts Bank</i>), Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy and Metro Vancouver, greenhouse gas management plans for construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, to improve energy efficiency and reduce greenhouse gas emissions. The Proponent shall develop each plan prior to the relevant phase of the Designated Project and implement each plan throughout the relevant phase of the Designated Project. The Proponent shall take into account applicable federal, provincial and regional greenhouse gas reduction strategies when developing and implementing the plans. As part of each plan, the Proponent shall:</p>
3.2.1	identify the sources of direct and indirect greenhouse gas emissions applicable to each phase of the Designated Project covered by the greenhouse gas management plan;	<ul style="list-style-type: none"> No comment. 	
3.2.2	identify the commercially available technologies and practices which have the potential to reduce greenhouse gas emissions from each phase of the Designated Project covered by the greenhouse management plan, including emerging technologies and practices at a sufficiently advanced stage of technological development to become technically and economically feasible over the life of the Designated Project;	<ul style="list-style-type: none"> No comment. 	
3.2.3	determine how each technically and economically feasible technology or practice identified pursuant to condition 3.2.2 will be implemented by the Proponent during each phase of the Designated Project, including consideration of when any equipment associated with the Designated Project that contributes to the emission of greenhouse gases will need to be replaced with equipment of lower greenhouse gas intensity;	<ul style="list-style-type: none"> No comment. 	
3.2.4	review the Proponent's existing voluntary and incentive-based greenhouse gas reduction programs, as indicated in Table 7-3 of the Federal Review Panel Report, indicate within each plan whether the existing programs could be improved to include mandatory measures, and apply any applicable mandatory measures to the Designated Project;	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
3.2.5	establish greenhouse gas emission reduction targets for specific intervals that aim to reduce overall emissions and that take into account how the Proponent plans to implement the technologies and practices in the manner referred to in condition 3.2.2 and any greenhouse gas reduction programs referred to in condition 3.2.4;	<ul style="list-style-type: none"> No comment. 	
3.2.6	review the operational greenhouse gas management plan every five years from the start of operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall take into account the results of the follow-up program referred to in condition 3.3 when reviewing and, if necessary updating the plan. If the Proponent updates the plan, the Proponent shall submit any updated plan to the Agency and to Environment and Climate Change Canada within 30 days of the revision of the plan. As part of the review of the plan, the Proponent shall:	<ul style="list-style-type: none"> No comment. 	
3.2.6.1	review the technologies and practices referred to in condition 3.2.2 and update the plan if it identifies other emerging technologies and practices that are at a sufficiently advanced stage of technological development to become technically and economically feasible over the life of the Designated Project;	<ul style="list-style-type: none"> No comment. 	
3.2.6.2	review the greenhouse gas reduction programs referred to in condition 3.2.4 for any additional improvements; and	<ul style="list-style-type: none"> No comment. 	
3.2.6.3	determine whether the reduction targets referred to in condition 3.2.5 need to be revised in light of the information referred to in condition 3.2.6.1 and, if so, revise the targets.	<ul style="list-style-type: none"> No comment. 	
3.3	The Proponent shall develop, prior to construction, and implement, during all phases of the Designated Project, a follow-up program to determine the effectiveness of the mitigation measures as it pertains to greenhouse gas emissions. The Proponent shall develop and implement the follow-up program in consultation with Indigenous groups, Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, and Metro Vancouver and in accordance with conditions 2.5 to 2.9. As part of the implementation of the follow-up program, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction, and implement, during all phases of the Designated Project, a follow-up program to determine the effectiveness of the mitigation measures as it pertains to greenhouse gas emissions. The Proponent shall develop and implement the follow-up program in consultation with Indigenous groups (<i>Roberts Bank</i>), Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, and Metro Vancouver and in accordance with conditions 2.5 to 2.9. As part of the implementation of the follow-up program, the Proponent shall:
3.3.1	quantify and report annually, during operation and as part of the annual report referred to in condition 2.10, annual greenhouse gas emissions resulting from operation of the marine terminal, the widened causeway and the expanded tug basin, including the methodology, assumptions and all supporting data;	<ul style="list-style-type: none"> No comment. 	
3.3.2	quantify and report annually, as part of the annual report referred to in condition 2.10, annual greenhouse gas emissions arising from construction activities, transportation activities not directly supporting the operation of the marine terminal, and other types of indirect emissions attributable to the Designated Project, including the methodology, assumptions and all supporting data. The Proponent shall specify if indirect emissions data is unavailable or if estimates have been made based on available information; and	<ul style="list-style-type: none"> No comment. 	
3.3.3	use methods outlined in the Canada's Greenhouse Gas Quantification Requirements, as updated, or, where emission source methods are not specified for a certain activity, methods consistent with the 2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories, to quantify emissions pursuant to conditions 3.3.1 and 3.3.2. The Proponent shall justify the methodology used to quantify	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
	emission from any activity not specified in Canada's Greenhouse Gas Quantification Requirements.		
3.4	The Proponent shall develop, prior to the commencement of activities to which they pertain and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, the City of Delta, Metro Vancouver, and Indigenous groups, measures to mitigate adverse environmental effects caused by air emissions emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin during each phase of the Designated Project. The Proponent shall implement the measures throughout the relevant phase of the Designated Project. As part of these measures, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to the commencement of activities to which they pertain and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, the City of Delta, Metro Vancouver, and Indigenous groups (<i>Roberts Bank</i>), measures to mitigate adverse environmental effects caused by air emissions emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin during each phase of the Designated Project. The Proponent shall implement the measures throughout the relevant phase of the Designated Project. As part of these measures, the Proponent shall:
3.4.1	mitigate emissions of dust attributable to the construction of the marine terminal, the widened causeway, and the expanded tug basin, including by:	<ul style="list-style-type: none"> No comment. 	
3.4.1.1	regularly sweeping any paved surface located within the Designated Project area;	<ul style="list-style-type: none"> No comment. 	
3.4.1.2	installing and using a wheel washer;	<ul style="list-style-type: none"> No comment. 	
3.4.1.3	regularly using water spray on any unpaved surface and exposed stockpiles within the open storage area located within the Designated Project area;	<ul style="list-style-type: none"> No comment. 	
3.4.1.4	stabilizing any exposed earthwork as soon as possible;	<ul style="list-style-type: none"> No comment. 	
3.4.2	provide incentives to third-party contractors to use zero-emission mobile and stationary off-road equipment required for any physical activity undertaken in relation to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin or, if zero-emission equipment is not available or its use is not technically or economically feasible, provide a rationale for that determination and require third-party contractors to use equipment that:	<ul style="list-style-type: none"> No comment. 	
3.4.2.1	uses diesel engines operating on diesel or low-carbon diesel fuel that meet Tier 4 emissions standards where technically and economically feasible or, at a minimum, Tier 3 emission standards and is equipped with verified diesel particulate filters and for which both the engines and the filters are maintained in accordance with maintenance instructions provided by the manufacturer; or	<ul style="list-style-type: none"> No comment. 	
3.4.2.2	uses low-carbon fuel, which may include natural gas, propane or hydrogen, while meeting Tier 4 emissions standards where technically and economically feasible or, at a minimum, Tier 3 emission standards and being maintained in accordance with maintenance instructions provided by the manufacturer;	<ul style="list-style-type: none"> No comment. 	
3.4.3	ensure emission control technologies are not removed from any diesel-powered equipment, unless removal is necessary for repair and maintenance activities, after which the emission control technologies shall be replaced prior to resuming work; and	<ul style="list-style-type: none"> No comment. 	
3.4.4	require, from the start of operation, on-site cargo handling equipment required for operation of the marine terminal to be zero-emitting through the use of electric, hydrogen fuel cell or other technology, except shuttle carriers. The Proponent shall use low-emission shuttle carriers, until such a time as zero-emitting shuttle carriers are technically and economically feasible.	<ul style="list-style-type: none"> As outlined in the port authority's response to IAAC's clarification question #33 (submitted to IAAC on July 6, 2021), the port authority notes that the specific equipment to be used for horizontal container transport at RBT2 will be determined by the terminal operator and will depend on the specific terminal operating model selected by the terminal operator. This cannot be determined in advance. Thus, the horizontal transport equipment <u>may</u> be shuttle carriers but may also be some other kind of horizontal transport equipment. This condition 	The port authority suggests the following revision: require, from the start of operation, on-site cargo handling equipment required for operation of the marine terminal to be zero-emitting through the use of electric, hydrogen fuel cell or other technology, except shuttle carriers <i>the horizontal transport equipment</i> . The Proponent shall use low-emission shuttle carriers <i>horizontal transport equipment</i> , until such a time as zero-emitting shuttle carriers <i>it becomes technically and economically feasible to transition</i>

Condition #	Condition	Feedback / rationale	Suggested revision
		<p>should therefore refer to horizontal transport equipment, not shuttle carriers specifically.</p> <ul style="list-style-type: none"> Further, once the specific terminal operating model is determined and the type of horizontal transport equipment to be used is selected (prior to the start of operation), that equipment cannot necessarily be replaced with another kind of horizontal transport equipment. That is, if one type of low-emission horizontal transport equipment is selected and another type of horizontal transport equipment later becomes zero-emission, it may not be feasible to replace the selected type of equipment with the zero-emission kind, if the latter is not compatible with the operating model for the terminal. 	<p><i>the fleet of selected horizontal transport equipment are technically and economically feasible to zero-emitting equipment.</i></p>
3.5	<p>The Proponent shall develop, prior to construction, and implement, during all phases of the Designated Project, a no-idling policy for all mobile equipment and vehicles within the Designated Project area. The Proponent shall require that all persons abide by this policy, unless not technically feasible or not feasible for health or safety reasons. The Proponent shall submit the policy to the Agency prior to construction.</p>	<ul style="list-style-type: none"> No comment. 	
3.6	<p>The Proponent shall develop, prior to each phase of the Designated Project and in consultation with Environment and Climate Change Canada, Health Canada, British Columbia's Ministry of Environment and Climate Change Strategy, British Columbia's Ministry of Health, the City of Delta, Metro Vancouver, and Indigenous groups, and to the satisfaction of a qualified professional, a follow-up program as described in Table C21 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to air quality attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin and related environmental effects on human health. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:</p>	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	<p>The port authority suggests the following revision: The Proponent shall develop, prior to each phase of the Designated Project and in consultation with Environment and Climate Change Canada, Health Canada, British Columbia's Ministry of Environment and Climate Change Strategy, British Columbia's Ministry of Health, the City of Delta, Metro Vancouver, and Indigenous groups (<i>Roberts Bank</i>), and to the satisfaction of a qualified professional, a follow-up program as described in Table C21 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to air quality attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin and related environmental effects on human health. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:</p>
3.6.1	<p>determine, for each phase of the Designated Project, the criteria air contaminants and trace organic contaminants to be monitored and reported on, including NO₂, O₃, SO₂, TPM, PM₁₀ and PM_{2.5}, the equipment to be used to obtain air quality concentrations and meteorological data, the frequency of data analysis and reporting requirements, and the human health thresholds to be used for the purpose of condition 3.6.5;</p>	<ul style="list-style-type: none"> No comment. 	
3.6.2	<p>conduct, during construction, inventories of emissions of criteria air contaminants and trace organic contaminants determined for the construction phase pursuant to condition 3.6.1 within the Roberts Bank port complex, including emissions from the Deltaport Terminal and Westshore Terminals, as well as the BC Ferries Tsawwassen Terminal, to the extent such information is available to the Proponent;</p>	<ul style="list-style-type: none"> The port authority understands that the contaminants to be monitored and reported on would be determined in consultation with the parties specified in the parent condition 3.6 during the development of the FUP, as required by draft condition 3.6.1. The port authority notes the history of collaboration with the parties listed, as described in Appendix IR6-04, Table IR6-04-A1 (CIAR #1118), which details the discussions and decisions made collaboratively with the port authority, Environment and Climate Change Canada, and other listed parties during the Air Quality Scoping Study (2013 to 2015). As a result of this collaboration, there was agreement on the contaminants to be included in the air quality study. Therefore, for clarity and to avoid any potential conflict between conditions, this condition should simply refer to whatever contaminants are determined pursuant to condition 3.6.1 without listing them. 	<p>The port authority suggests the following revision: conduct, during construction, inventories of emissions of criteria-air contaminants and trace organic <i>the</i> contaminants determined for the construction phase pursuant to condition 3.6.1 within the Roberts Bank port complex, including emissions from the Deltaport Terminal and Westshore Terminals, as well as the BC Ferries Tsawwassen Terminal, to the extent such information is available to the Proponent;</p>
3.6.3	<p>monitor, during construction, criteria air contaminants and trace organic contaminants determined for the construction phase pursuant to condition</p>	<ul style="list-style-type: none"> See rationale for draft condition 3.6.2. 	<p>The port authority suggests the following revision:</p>

Condition #	Condition	Feedback / rationale	Suggested revision
	3.6.1 at existing air quality monitoring stations operated by Metro Vancouver and at additional air quality monitoring station(s) in locations potentially affected by the construction of the marine terminal, the widened causeway, and the expanded tug basin, as determined in consultation with the parties involved in the development of the follow-up program;		monitor, during construction, criteria air contaminants and trace organic the contaminants determined for the construction phase pursuant to condition 3.6.1 at existing air quality monitoring stations operated by Metro Vancouver and at additional air quality monitoring station(s) in locations potentially affected by the construction of the marine terminal, the widened causeway, and the expanded tug basin, as determined in consultation with the parties involved in the development of the follow-up program;
3.6.4	monitor, during operation, criteria air contaminants and trace organic contaminants determined for the operation phase pursuant to condition 3.6.1 at existing air quality monitoring stations operated by Metro Vancouver and at additional air quality monitoring station(s) in locations potentially affected by the operation of the marine terminal, the widened causeway, and the expanded tug basin, as determined in consultation with the parties involved in the development of the follow-up program;	<ul style="list-style-type: none"> See rationale for draft condition 3.6.2. 	The port authority suggests the following revision: monitor, during operation, criteria air contaminants and trace organic the contaminants determined for the operation phase pursuant to condition 3.6.1 at existing air quality monitoring stations operated by Metro Vancouver and at additional air quality monitoring station(s) in locations potentially affected by the operation of the marine terminal, the widened causeway, and the expanded tug basin, as determined in consultation with the parties involved in the development of the follow-up program;
3.6.5	if the results of the monitoring referred to in conditions 3.6.3 or 3.6.4 demonstrate any exceedance of the most stringent applicable air quality criteria set out in the Canadian Ambient Air Quality Standards or British Columbia Air Quality Objectives or human health thresholds, notify Metro Vancouver and determine, in consultation with the parties involved in the development of the follow-up program, the source of any such exceedance;	<ul style="list-style-type: none"> No comment. 	
3.6.6	for any exceedance determined pursuant to condition 3.6.5 to be attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, develop and implement modified or additional measures to mitigate air quality emissions, which may include reduction or cessation of one or more construction activities; and	<ul style="list-style-type: none"> No comment. 	
3.6.7	share the results of the follow-up program on a regular basis with the parties being involved in the development of the follow-up program, including through meetings and the provision of monthly summaries of measured ambient air quality concentrations.	<ul style="list-style-type: none"> No comment. 	
4	Noise and vibration		
4.1	The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups, Environment and Climate Change Canada, Health Canada, and the City of Delta, measures to mitigate adverse environmental effects of atmospheric noise and vibration emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the measures during the relevant phase of the Designated Project. As part of these measures, the Proponent shall:	<ul style="list-style-type: none"> The port authority notes that feasibility of the measures specified in the sub-conditions should be referenced. See related comments on draft condition 1.29. See also comments on draft condition 1.22. 	The port authority suggests the following revisions: The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups (<i>Roberts Bank</i>), Environment and Climate Change Canada, Health Canada, and the City of Delta, measures to mitigate adverse environmental effects of atmospheric noise and vibration emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the <i>technically and economically feasible</i> measures during the relevant phase of the Designated Project. As part of these measures, the Proponent shall:
4.1.1	use soft start procedures to increase the sound levels emitted by construction equipment gradually before use at full operational power;	<ul style="list-style-type: none"> The port authority notes that soft starters may not be feasible for all types of equipment. The suggested revision to the parent condition to refer to technical feasibility will address this concern. If draft condition 4.1 is not revised as suggested above, this sub-condition should be revised to refer to feasibility, as shown. 	The port authority suggests the following revision: use soft start procedures <i>where feasible</i> to increase the sound levels emitted by construction equipment gradually before use at full operational power;
4.1.2	use alarms on moving or operating equipment with sound levels that adjust to the surrounding ambient sound levels;	<ul style="list-style-type: none"> The port authority notes that the use of alarms may be subject to safety requirements established in applicable regulation or occupational health and safety procedures. The port authority also notes that alarms on moving and operating equipment are generally built into the equipment by the manufacturer; it is 	The port authority suggests the following revision: use alarms on moving or operating equipment with sound levels that adjust to the surrounding ambient sound levels, <i>if technically and economically feasible and subject to meeting safety, operational, or regulatory requirements</i> ;

Condition #	Condition	Feedback / rationale	Suggested revision
		unlikely that alarms with sound levels that adjust to the surrounding ambient sound levels are options on all types of equipment and it is uncertain whether retrofitting after-market alarms will be feasible. The suggested revision to the parent condition 4.1 will also help to address this uncertainty.	
4.1.3	require employees and contractors involved in or responsible for noise-generating activities in the Designated Project area to undertake training related to best practices for noise reduction related to those activities;	<ul style="list-style-type: none"> No comment. 	
4.1.4	use and maintain atmospheric noise-dampening technologies on all vehicles and equipment used in the Designated Project area and keep them in good working order, including through the implementation of a regular inspection program;	<ul style="list-style-type: none"> As previously noted by the port authority, noise-dampening technologies may not be available or technically or economically feasible for all vehicles and equipment. The port authority considers this condition should not apply to private vehicles (e.g., personal vehicles of employees). 	The port authority suggests the following revisions: use and maintain atmospheric noise-dampening technologies, <i>if technically and economically feasible</i> , on all vehicles and equipment used <i>by the proponent for construction and operation of the Designated Project</i> in the Designated Project area and keep them in good working order, including through the implementation of a regular inspection program;
4.1.5	install and maintain, to the satisfaction of a qualified professional, acoustic barriers around atmospheric noise-emitting components and activities to shield wildlife and human receptors from noise; and	<ul style="list-style-type: none"> As drafted, this condition could be interpreted to require barriers to shield wildlife and human receptors from <u>any</u> noise. That is not feasible. The original commitment to install acoustic barriers was focused on shielding wildlife from noise that may result in injury or behavioural changes (i.e., a clear threshold). Revision of this condition is suggested to ensure the condition remains clear and feasible. The port authority notes that potential effects of noise on human health are already addressed in draft condition 4.3 and its sub-conditions. 	The port authority suggests the following revision: install and maintain, to the satisfaction of a qualified professional, acoustic barriers around atmospheric noise-emitting components and activities to shield wildlife and human receptors from <i>mitigate</i> noise <i>that may result in injury or behavioural changes to wildlife</i> ; and
4.1.6	conduct vibratory hammer and impact pile driving only on weekdays and during daytime hours.	<ul style="list-style-type: none"> The port authority notes that draft condition 8.1.5 establishes temporal limits on vibratory hammer and impact pile driving for the purpose of mitigating underwater noise. To avoid duplication, the port authority suggests removing this condition and revising draft condition 8.1.5 to include the weekday requirement as well. See suggested revision to that condition. 	The port authority suggests the removal of this condition to avoid duplication.
4.2	The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation and Health Canada, mitigation measures to reduce low-frequency noise during the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement these measures during construction and operation and submit these measures to the Agency prior to implementing them.	<ul style="list-style-type: none"> As drafted, this condition is not clearly linked to low frequency noise that may be caused by the project. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation and Health Canada, mitigation measures to reduce low-frequency noise during <i>caused by</i> the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement these measures during construction and operation and submit these measures to the Agency prior to implementing them.
4.3	The Proponent shall develop, prior to each phase of the Designated Project and in consultation with the City of Delta, Health Canada, and Indigenous groups, a follow-up program as described in Table C22 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse environmental effects on human health caused by noise and vibration attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	<ul style="list-style-type: none"> See comment on draft sub-condition 4.3.4. See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to each phase of the Designated Project and in consultation with the City of Delta, Health Canada, and Indigenous groups (<i>Roberts Bank</i>), a follow-up program as described in Table C22 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse environmental effects on human health caused by noise and vibration attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
4.3.1	determine, prior to construction, the data requirements for noise monitoring for all phases of the Designated Project;	<ul style="list-style-type: none"> No comment. 	
4.3.2	consider Health Canada's noise guidance and associated thresholds that are available at the time of construction when determining human health	<ul style="list-style-type: none"> The port authority notes the FUP will be developed <u>prior</u> to construction, pursuant to parent condition 4.3; thus, the guidance and associated 	The port authority suggests the following revision:

Condition #	Condition	Feedback / rationale	Suggested revision
	threshold(s) that would require the Proponent to implement modified or additional mitigation measure(s) pursuant to condition 4.3.6;	thresholds that are “available at the time of construction” may not be known when the FUP is first developed.	consider Health Canada’s noise guidance and associated thresholds that are available at the time of construction <i>the follow-up program is developed</i> when determining human health threshold(s) that would require the Proponent to implement modified or additional mitigation measure(s) pursuant to condition 4.3.6;
4.3.3	consider the most sensitive human receptors, including potential receptors in the marine environment, when determining the location of noise monitoring;	<ul style="list-style-type: none"> No comment. 	
4.3.4	monitor sound levels, including low-frequency noise, continuously during construction and the first two years of operation at a minimum of two locations on Tsawwassen First Nation lands;	<ul style="list-style-type: none"> The port authority notes that the locations of noise monitoring stations on Tsawwassen First Nation lands would be determined in consultation with Tsawwassen First Nation. 	The port authority suggests the following revision: monitor sound levels, including low-frequency noise, continuously during construction and the first two years of operation at a minimum of two locations on Tsawwassen First Nation lands, <i>to be determined in consultation with Tsawwassen First Nation</i> ;
4.3.5	monitor sound levels, including low-frequency noise offshore from the Designated Project at a frequency and location determined in consultation with Indigenous groups; and	<ul style="list-style-type: none"> As noted by the port authority previously, greater clarity of the intended scope of this condition would be beneficial, to focus the condition on those components and activities the port authority has the ability to address. The port authority notes that the duration of any temporary offshore noise monitoring should also be determined in consultation. See also comments on draft condition 1.22. 	The port authority suggests the following revisions: monitor sound levels, including low-frequency noise offshore from the <i>Designated Project the marine terminal, the widened causeway, and the expanded tug basin</i> at a frequency and location <i>and for a duration</i> determined in consultation with Indigenous groups (<i>Roberts Bank</i>); and
4.3.6	develop and implement modified or additional mitigation measures to mitigate the noise contribution of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, at source or at any receptor location where sound levels are monitored, if the results of any monitoring conducted as part of the follow-up program demonstrate that noise levels attributable to the Designated Project at any receptor location are higher than noise levels predicted during the environmental assessment and/or are above the relevant human health threshold(s) defined in the follow-up program.	<ul style="list-style-type: none"> As previously noted by the port authority, while noise levels may be higher than predicted, human health effects may not necessarily result if human health thresholds are not also exceeded. This condition should therefore be drafted to require modified or additional mitigation only if noise levels are higher than predicted as a result of the project <u>and</u> above the relevant human health threshold. The FUP will be focused on verifying the assessment predictions, which were predictions of potential effects on human health. 	The port authority suggests the following revisions: develop and implement modified or additional mitigation measures to mitigate the noise contribution of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, at source or at any receptor location where sound levels are monitored, if the results of any monitoring conducted as part of the follow-up program demonstrate that noise levels attributable to the Designated Project at any receptor location are higher than noise levels predicted during the environmental assessment and/or are above the relevant human health threshold(s) defined in the follow-up program.
4.4	The Proponent shall develop, prior to construction and in consultation with the City of Delta, a protocol for receiving complaints related to human health effects from exposure to noise attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the protocol during construction and operation. The Proponent shall provide the protocol to the Agency prior to construction. As part of the implementation of the protocol, the Proponent shall:	<ul style="list-style-type: none"> No comment. 	
4.4.1	communicate, prior to construction, with residents and communities located within the upland noise and vibration study area indicated by the Proponent on figure 9.3- 1 of the environmental impact statement, to provide the details of the protocol, including how to record a complaint;	<ul style="list-style-type: none"> No comment. 	
4.4.2	provide notification of noise-generating construction activities prior to carrying them out to the residents and communities referred to in condition 4.4.1;	<ul style="list-style-type: none"> No comment. 	
4.4.3	respond to any noise complaint attributed to any component of the Designated Project within 48 hours of the complaint being received and implement any technically and economically feasible corrective action, if required to reduce exposure to noise to below human health thresholds defined in the follow-up program referred to in condition 4.3, in a timely manner; and	<ul style="list-style-type: none"> No comment. 	
4.4.4	provide, on a quarterly basis, a report to the Agency and residents and communities referred to in condition 4.4.1. The report shall include any corrective actions taken during the reporting period.	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
5	Light		
5.1	The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups, Environment and Climate Change Canada, Fisheries and Oceans Canada, Transport Canada, and the City of Delta, measures to mitigate adverse environmental effects caused by light emitted during construction and operation of the marine 16 terminal, the widened causeway, and the expanded tug basin, while meeting safety, operational, or regulatory requirements. As part of these measures, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups (<i>Roberts Bank</i>), Environment and Climate Change Canada, Fisheries and Oceans Canada, Transport Canada, and the City of Delta, measures to mitigate adverse environmental effects caused by light emitted during construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, while meeting safety, operational, or regulatory requirements. As part of these measures, the Proponent shall:
5.1.1	avoid the use of decorative terminal lighting and solid burning or slow pulsing warning lights;	<ul style="list-style-type: none"> No comment. 	
5.1.2	orient terminal lights downward and limit light use to areas where Designated Project activities are occurring, including through the use of down-shielded lighting fixtures;	<ul style="list-style-type: none"> No comment. 	
5.1.3	control terminal light levels and reduce light intensity;	<ul style="list-style-type: none"> No comment. 	
5.1.4	install terminal light fixtures that emit light with wavelengths and/or correlated colour temperatures that are shown to reduce effects to fish, birds and other wildlife;	<ul style="list-style-type: none"> The port authority notes that there are no lights currently available that reduce effects for all fauna. It therefore may not be feasible to reduce effects to “fish, birds and other wildlife.” An alternative may be to add reference to input of a qualified professional, as is done in some other conditions. 	The port authority suggests the following revision: install terminal light fixtures that emit light with wavelengths and/or correlated colour temperatures that are shown to reduce effects to fish, birds and/or other wildlife, <i>to the satisfaction of a qualified professional</i> ;
5.1.5	design and install obstruction avoidance lighting on terminal structures that minimize intensity and flashing frequency;	<ul style="list-style-type: none"> The port authority notes the condition as drafted is unclear. 	The port authority suggests the following revision: design and install <i>on terminal structures</i> obstruction avoidance lighting on terminal structures that minimize to reduce intensity and flashing frequency;
5.1.6	design and install nighttime terminal lighting to avoid exceedances of 100 lux on the adjacent sea bed within 50 m of the terminal; and	<ul style="list-style-type: none"> No comment. 	
5.1.7	implement measures to reduce effects caused by light emitted from the marine terminal on Brunswick Point.	<ul style="list-style-type: none"> No comment. 	
5.2	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, Fisheries and Oceans Canada, the City of Delta, Transport Canada, Tsawwassen First Nation, and other Indigenous groups, a follow-up program as described in Table C20 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to ambient lighting attributable to the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin, including in the marine environment. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, Fisheries and Oceans Canada, the City of Delta, Transport Canada, Tsawwassen First Nation, and other Indigenous groups (<i>Roberts Bank</i>), a follow-up program as described in Table C20 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to ambient lighting attributable to the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin, including in the marine environment. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
5.2.1	monitor light trespass and sky glow at the points of reception POR 1, POR 2, POR 7, POR 11 indicated on figure 7-2 of the Federal Review Panel Report and at the nighttime points of reception N-POR 5 and N-POR 6 indicated on figure 20-1 of the Federal Review Panel Report, and compare monitoring results to the relevant classification from the International Commission on Illumination referred to in Tables 7-8 and 7-9 of the Federal Review Panel Report;	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
5.2.2	establish pre-construction light levels in the marine environment from natural light and artificial light from existing infrastructure, including during the spring-summer period when salmon are present at Roberts Bank;	<ul style="list-style-type: none"> No comment. 	
5.2.3	monitor light levels in the marine environment during operation and compare monitoring results to the pre-construction light levels established pursuant to condition 5.2.2; and	<ul style="list-style-type: none"> No comment. 	
5.2.4	develop and implement modified or additional mitigation measures if the results of the monitoring referred to in condition 5.2.1 or 5.2.3 demonstrate that modified or additional mitigation measures are required to mitigate light trespass, sky glow, or marine light levels attributable to the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin.	<ul style="list-style-type: none"> The port authority notes that any modified or additional mitigation measures that may alter project lighting must continue to meet safety, operational, and regulatory requirements, as previously acknowledged in draft condition 5.1. 	The port authority suggests the following revision: develop and implement modified or additional mitigation measures, <i>while meeting safety, operational, or regulatory requirements</i> , if the results of the monitoring referred to in condition 5.2.1 or 5.2.3 demonstrate that modified or additional mitigation measures are required to mitigate light trespass, sky glow, or marine light levels attributable to the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin.
6	Marine environment		
6.1	The Proponent shall have a qualified professional design the dykes in a manner to avoid channel formation in the seabed, and shall construct the dykes according to this design.	<ul style="list-style-type: none"> The port authority notes that while the dykes will be professionally designed with the intent of avoiding seabed channel formation, seabed channel formation cannot be prevented entirely and may still occur. This condition should therefore be drafted to ensure that the required measures are feasible so that, consequently, if channels were to form despite the design, this would not by definition amount to non-compliance. 	The port authority suggests the following revision: The Proponent shall have a qualified professional design the dykes in a manner <i>intended</i> to avoid channel formation in the seabed, and shall construct the dykes according to this design.
6.2	The Proponent shall construct the northwest corner of the terminal in a manner that reduces the potential for seabed scour and sediment deposition identified on figures IR2020-4-25 and IR2020- 4-26 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672).	<ul style="list-style-type: none"> No comment. 	
6.3	The Proponent shall not use vibro-replacement techniques for construction of the Designated Project in the marine environment.	<ul style="list-style-type: none"> No comment. 	
6.4	The Proponent shall take into account the Canadian Council of Ministers of the Environment's Water Quality Guidelines for the Protection of Aquatic Life and British Columbia's Approved Water Quality Guidelines: Aquatic Life, Wildlife and Agriculture when undertaking in-water work activities required for the Designated Project that use concrete, and do so in a manner consistent with the Fisheries Act and its regulations. In doing so, the Proponent shall:	<ul style="list-style-type: none"> No comment. 	
6.4.1	use pre-cast concrete or, if the use of pre-cast concrete is not technically or economically feasible, isolate concrete from the receiving environment until properly cured, using concrete tight forms or other equivalent method, unless otherwise authorized under the Fisheries Act; and	<ul style="list-style-type: none"> No comment. 	
6.4.2	if using cast-in-place concrete, monitor pH concentrations in the receiving environment, and implement modified or additional mitigations measures if pH concentrations exceed levels outlined in the Canadian Council of Ministers of the Environment's Water Quality Guidelines for the Protection of Aquatic Life or British Columbia's Approved Water Quality Guidelines: Aquatic Life, Wildlife and Agriculture or otherwise required under the Fisheries Act.	<ul style="list-style-type: none"> No comment. 	
6.5	The Proponent shall develop, prior to the relevant phase of the Designated Project, in consultation with Indigenous groups and to the satisfaction of a qualified professional, measures to control erosion and sedimentation in the Designated Project area, taking into account future climate change scenarios. The Proponent shall implement the measures during all phases of the Designated Project and submit the measures to the Agency prior to implementing them.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to the relevant phase of the Designated Project, in consultation with Indigenous groups (<i>Roberts Bank</i>) and to the satisfaction of a qualified professional, measures to control erosion and sedimentation in the Designated Project area, taking into account future climate change scenarios. The Proponent shall implement the measures during all phases of the Designated Project and submit the measures to the Agency prior to implementing them.

Condition #	Condition	Feedback / rationale	Suggested revision
6.6	The Proponent shall regularly inspect, subject to safety requirements, all erosion and sediment control measures installed within the Designated Project area pursuant to condition 6.5, including during and following rainfall events, and shall document and repair any defective or damaged control measure in a timely manner.	<ul style="list-style-type: none"> No comment. 	
6.7	The Proponent shall collect and treat any storm water from the Designated Project area in a manner consistent with the Fisheries Act and its regulations before discharging that water into waters frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water.	<ul style="list-style-type: none"> The Designated Project area encompasses all new land mass to be constructed for the project. The port authority notes that some of the new land area included in the Designated Project area will comprise permeable granular materials, such as the rip-rap slopes of the marine terminal and widened causeway. Stormwater collection and treatment in these permeable areas is not feasible. Stormwater will be collected and treated from all new impervious (i.e., paved) areas associated with project components within the Designated Project area. With respect to storm water draining from pervious areas, other standard construction practices and mitigation measures, such as the use of non-potentially acid generating rip-rap, are effective at avoiding the deposit of deleterious substances into waters frequented by fish. The port authority anticipates that any <i>Fisheries Act</i> authorization issued in respect of the project may address storm water discharge. The multiple references in the condition to “deleterious substances” may be confusing and revisions are suggested to clarify the focus of this condition on storm water. 	<p>The port authority suggests the following revision:</p> <p>The Proponent shall collect and treat any storm water from <i>new impervious areas associated with the marine terminal and the widened causeway within the Designated Project area</i> in a manner consistent with the Fisheries Act and its regulations <i>and any authorization issued to the Proponent pursuant to the Fisheries Act</i> before discharging that <i>storm</i> water into waters frequented by fish or in any place under any conditions where the <i>storm water deleterious substance</i> or any other deleterious substance that results from the <i>discharge deposit</i> of the <i>storm water deleterious substance</i> may enter <i>waters frequented by fish any such water</i>.</p>
6.8	The Proponent shall, prior to fill placement, characterize representative samples of all fill material received from an off-site location, including quarry material, Fraser sand, dredged material and other material that may be used as fill, to demonstrate that Designated Project construction activities, including supernatant discharge, will not result in marine pollution as defined in the London Protocol and Convention and according to advice received from Environment and Climate Change Canada during the environmental assessment (Canadian Impact Assessment Registry Reference Number 80054, Document Number 1091) and in pollution as defined in subsection 6(4) of British Columbia’s Environmental Management Act and in consideration of the federally Recommended Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey. The Proponent shall not use any materials as fill, where the characterization of representative samples indicates a potential for marine pollution, unless additional mitigation measures, such as the collection of supernatant, are implemented to prevent marine pollution.	<ul style="list-style-type: none"> The port authority notes the history of engagement with Environment and Climate Change Canada. In that engagement, consensus was reached with respect to planning to date for management of dredged sediment, including minimizing disposal at sea, maximizing beneficial reuse of dredge sediment, as well as characterization of fill materials and avoidance of marine pollution. The port authority notes that sampling of fill may be undertaken prior to its transportation to the project area (i.e., prior to being “received”). The port authority notes that the London Protocol was agreed among the parties to the London Convention to further modernize the Convention and, eventually, replace it. For this reason, reference to the Protocol is appropriate and reference to the Convention can be omitted. The port authority notes that the existing ambient concentrations of some parameters are higher than the levels identified in the <i>Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey</i>. This is recognized in draft condition 6.9.2.2 and should be recognized in this condition as well. Thus, both the referenced guidelines and the ambient concentrations would be considered when evaluating the potential for marine pollution. The port authority notes that the likelihood of the project to cause marine pollution would be determined through the evaluation, not the fill characterization. The port authority suggests revisions to the condition to increase clarity and certainty regarding these points. The port authority notes that collection of supernatant for the expected volume and placement of fill material is not feasible (as determined in the assessment of alternative means of construction described in Section 5.5 of the Environmental Impact Statement (EIS) (CIAR #181). The port authority notes that “pollution” is defined in section 1(1) of the <i>Environmental Management Act</i>, not in section 6(4). 	<p>The port authority suggests the following revisions:</p> <p>The Proponent shall, prior to fill placement, characterize representative samples of all fill material received from an off-site location, including quarry material, Fraser sand, dredged material and other material that may be used as fill <i>and shall evaluate whether the use of the fill material during, to demonstrate that</i> Designated Project construction activities, including supernatant discharge, would will not result in marine pollution as defined in the London Protocol and Convention and according to advice received from Environment and Climate Change Canada during the environmental assessment (Canadian Impact Assessment Registry Reference Number 80054, Document Number 1091) <i>or and</i> in pollution as defined in subsection 6(4) 1(1) of British Columbia’s Environmental Management Act. <i>The evaluation of the potential for marine pollution shall be conducted by a qualified professional and shall be based on in</i> consideration of the federally Recommended Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey <i>and on existing ambient concentrations in the receiving environment</i>. The Proponent shall not use any materials as fill <i>if the evaluation, where the characterization of representative samples indicates a potential for that</i> marine pollution <i>is likely to occur</i>, unless <i>modified or</i> additional mitigation measures, such as the collection of supernatant, are implemented to prevent marine pollution.</p>

Condition #	Condition	Feedback / rationale	Suggested revision
6.9	The Proponent shall not use material dredged from the upper 0.5 metres of the existing tug basin and the tug basin expansion area as fill for land development for the Designated Project unless the Proponent:	<ul style="list-style-type: none"> No comment. 	
6.9.1	prevents the discharge of supernatant when using the material as fill; or	<ul style="list-style-type: none"> In response to the recommendations of Environment and Climate Change Canada, the port authority committed to employ specific dredging practices to handle the upper 0.5 m of sediments from the existing tug basin and tug basin expansion area to avoid discharge of fines in supernatant. The port authority notes that material from other sources may be used as fill at the same time as material from the existing tug basin and tug basin expansion, and supernatant may continue to be discharged. The condition should preclude only the discharge of supernatant that contains the poorly settleable fines from the material dredged from the upper 0.5 metres of the existing tug basin and the tug basin expansion area. 	The port authority suggests the following revision: prevents the discharge of supernatant when using the material as fill <i>containing material dredged from the upper 0.5 metres of the existing tug basin and the tug basin expansion area</i> ; or
6.9.2	ensures that:	<ul style="list-style-type: none"> No comment. 	
6.9.2.1	sediment polychlorinated biphenyl levels in the supernatant do not exceed concentrations protective of Southern Resident Killer Whale (<i>Orcinus orca</i>), including those in the federally Recommended Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey and in the British Columbia's Working Sediment Quality Guidelines, prior to discharge; or	<ul style="list-style-type: none"> No comment. 	
6.9.2.2	discharge of supernatant will not increase ambient polychlorinated biphenyl concentrations in Southern Resident Killer Whale (<i>Orcinus orca</i>) critical habitat, including in the water column, sediment, and prey species.	<ul style="list-style-type: none"> No comment. 	
6.10	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, measures to mitigate the release of sediments to the water column during dredging activities, taking into account the Fraser River Estuary Management Program Dredge Management Guidelines. As part of these measures, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revisions: The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups (<i>Roberts Bank</i>), measures to mitigate the release of sediments to the water column during dredging activities, taking into account the Fraser River Estuary Management Program Dredge Management Guidelines. As part of these measures, the Proponent shall:
6.10.1	minimize the dispersal of sediments when dredging the upper 0.5 metres of sediments from the existing tug basin and tug basin expansion area;	<ul style="list-style-type: none"> No comment. 	
6.10.2	establish site-specific water quality objectives and thresholds, including for turbidity and total suspended solids;	<ul style="list-style-type: none"> No comment. 	
6.10.3	define the perimeter of the work areas around dredging activities within which water quality is monitored;	<ul style="list-style-type: none"> No comment. 	
6.10.4	monitor water quality in real-time during dredging activities, including total suspended solids and turbidity at the perimeter of the work areas defined pursuant to 6.10.3; and	<ul style="list-style-type: none"> No comment. 	
6.10.5	implement additional mitigation measures, including temporarily stopping or slowing dredging activities, if water quality monitoring results exceed the water quality objectives and thresholds established pursuant to condition 6.10.2	<ul style="list-style-type: none"> No comment. 	
6.11	The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Fisheries and Oceans Canada, Natural Resources Canada, British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development and Indigenous groups, a follow-up program as described in Table C2 of Appendix G in the Federal	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revisions: The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Fisheries and Oceans Canada, Natural Resources Canada, British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development and Indigenous groups

Condition #	Condition	Feedback / rationale	Suggested revision
	Review Panel Report to verify the accuracy of the environmental assessment as it pertains to sediment erosion and deposition and any associated eutrophication. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:		<i>(Roberts Bank)</i> , a follow-up program as described in Table C2 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to sediment erosion and deposition and any associated eutrophication. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
6.11.1	monitor scour along the northwest corner of the terminal at a frequency and for a duration determined in consultation with the parties involved in the development of the follow-up program;	<ul style="list-style-type: none"> No comment. 	
6.11.2	implement additional mitigation measures if scour and/or environmental effects resulting from scour attributable to the Designated Project are greater than predicted in the environmental assessment unless not warranted in the circumstances as determined in consultation with Fisheries and Oceans Canada;	<ul style="list-style-type: none"> No comment. 	
6.11.3	collect sediment cores in relevant locations surrounding the Designated Project area prior to construction and for at least 10 years following the end of construction to determine changes in sedimentation rates and patterns; and	<ul style="list-style-type: none"> The coastal geomorphology FUP (outlined in Table C2 of Appendix G of the Federal Review Panel Report) outlines a variety of methods that would be used to determine changes in the seabed. These methods include but are not limited to the collection of sediment cores. However, sediment coring and laboratory analysis of sediment grain size and total organic carbon content is primarily intended to evaluate sediment eutrophication and changes in sediment-associated biological communities, not changes in sedimentation rates and patterns. Rather, changes in sedimentation rates and patterns would be determined mainly through the use of topographic, LiDAR, and bathymetric surveys and ortho-rectified photographs over time. Further, the frequency and duration of sampling and surveying is also outlined in Table C2 of Appendix G of the Federal Review Panel Report. In particular, the timing of monitoring is linked to when the containment dykes are established, which is when any effects on sedimentation rates and patterns would be expected to commence (i.e., not after the completion of all project construction, which would not be until some five years later). The specific methods, frequency, timing, and duration of monitoring for the coastal geomorphology FUP will be determined through consultation with the specified parties during the development of the FUP, in accordance with draft condition 2.5.1. 	The port authority suggests the following revisions: collect sediment cores in <i>monitor</i> relevant locations surrounding the Designated Project area prior to construction and for at least 10 years following the end of construction <i>of the containment dykes</i> to determine changes in sedimentation rates and patterns; and
6.11.4	verify the predictions of the environmental assessment regarding eutrophication by monitoring changes in organic enrichment indicators including on tidal flats.	<ul style="list-style-type: none"> No comment. 	
7	Fish and fish habitat		
7.1	The Proponent shall investigate the technical and economic feasibility of a causeway breach to allow fish passage. The Proponent shall provide a draft of the feasibility report to Indigenous groups, Fisheries and Oceans Canada, Environment and Climate Change Canada, and tenants at Roberts Bank and provide each with at least 60 days to comment. The Proponent shall provide the Agency with the final feasibility report within six months of the issuance of the Minister's decision statement describing whether and under what conditions a causeway breach would be technically and economically feasible and shall include a description of the feedback received during the consultation on the draft feasibility report.	<ul style="list-style-type: none"> The port authority notes that the owners of the existing causeway lands will also be consulted on a draft of the feasibility report. The port authority notes the scope of consultation in this condition as drafted is unclear; the port authority would, through normal practice, notify all Indigenous groups as defined in draft conditions 1.22 to 1.24 (not only the "Indigenous groups" as defined in draft condition 1.22) in relation to this matter. The port authority notes that the feasibility of a breach will depend in part on the timing of when decisions are made regarding which breach is to be implemented relative to the timing of detailed design, procurement, and construction. See also related comments on draft condition 7.2. 	The port authority suggests the following revision: The Proponent shall investigate the technical and economic feasibility of a causeway breach to allow fish passage. The Proponent shall provide a draft of the feasibility report to Indigenous groups <i>(Roberts Bank)</i> , <i>Indigenous groups (marine shipping)</i> , <i>Indigenous groups (Fraser River)</i> , Fisheries and Oceans Canada, Environment and Climate Change Canada, and <i>landowners and</i> tenants at Roberts Bank and provide each with at least 60 days to comment. The Proponent shall provide the Agency with the final feasibility report within six months of the issuance of the Minister's decision statement describing whether and under what conditions a causeway breach would be technically and economically feasible, <i>taking into account the impact of timing on</i>

Condition #	Condition	Feedback / rationale	Suggested revision
			<p><i>feasibility</i>, and shall include a description of the feedback received during the consultation on the draft feasibility report.</p>
7.2	<p>The Proponent shall install and maintain a breach to allow fish passage through either the existing and proposed widened areas of the causeway, if determined feasible pursuant to condition 7.1, or at the east end of the marine terminal identified on figure IR2020-2.2-1 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall determine to the satisfaction of Fisheries and Oceans Canada which breach location to implement if both are technically and economically feasible.</p>	<ul style="list-style-type: none"> With respect to decision-making regarding which breach is to be implemented, the port authority emphasizes the following points, which are important to the feasibility of this condition: <ul style="list-style-type: none"> the feasibility report will include all the information necessary to inform a decision on which breach to implement if both are feasible, the determination of which breach to implement will be purely a public policy decision and should be made by the appropriate authority. Given the purpose a breach is intended to serve, the port authority assumes the public policy objective is to enhance overall juvenile salmon productivity and that DFO is the appropriate authority to make a technical determination about which location would provide the greater relative benefit when a decision is made on which breach to implement, it must be a <u>final</u> decision, as irrevocable decisions related to design, procurement, and construction would immediately ensue In light of these points, the port authority suggests this condition be revised as shown. Further, consistent with the key principles outlined in Section 3.1 of this submission, the port authority notes that the condition cannot require the proponent to maintain the breach as the maintenance of a causeway breach would be subject to agreement with other parties and may require action by those other parties. 	<p>The port authority suggests the following revision: The Proponent shall install and maintain a breach to allow fish passage through either the existing and proposed widened areas of the causeway, if determined feasible pursuant to condition 7.1, or at the east end of the marine terminal identified on figure IR2020-2.2-1 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall <i>implement the breach at the location that determine to the satisfaction of Fisheries and Oceans Canada determines will result in greater benefit to juvenile salmon productivity at Roberts Bank which breach location to implement</i> if both are technically and economically feasible.</p>
7.3	<p>The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River) and Fisheries and Oceans Canada, measures to avoid and mitigate adverse environmental effects of the Designated Project on marine species during in-water work activities during construction. The Proponent shall implement the mitigation measures during construction. As part of the measures, the Proponent shall:</p>	<ul style="list-style-type: none"> The port authority notes that the term “mitigation measures” as defined in condition 1.29 includes measures to “avoid” adverse environmental effects. The word “avoid” in this condition is unnecessary and could result in uncertainty. See also comments on draft condition 1.22. 	<p>The port authority suggests the following revision for consistency with defined terms: The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping), Indigenous groups (Fraser River) and Fisheries and Oceans Canada, measures to avoid and mitigate adverse environmental effects of the Designated Project on marine species during in-water work activities during construction. The Proponent shall implement the mitigation measures during construction. As part of the measures, the Proponent shall:</p>
7.3.1	<p>conduct in-water work activities in the local assessment area indicated on figure 13- 1 of the environmental impact statement during timing windows of least risk for marine species, including those identified in condition 8.1.7 and during the following timing windows:</p>	<ul style="list-style-type: none"> No comment. 	
7.3.1.1	<p>for in-water work activities below -5 metre chart datum, during the timing window of least risk for Dungeness crab (<i>Cancer magister</i>) (March 31 - October 15), unless otherwise authorized under the Fisheries Act;</p>	<ul style="list-style-type: none"> No comment. 	
7.3.1.2	<p>for in-water work activities above -5 metre chart datum, during the timing window of least risk for juvenile salmon (August 16 - February 28), unless otherwise authorized under the Fisheries Act; and</p>	<ul style="list-style-type: none"> No comment. 	
7.3.1.3	<p>any additional timing windows of least risk identified through any authorization under the Fisheries Act for the Designated Project;</p>	<ul style="list-style-type: none"> No comment. 	
7.3.2	<p>validate every two years that the timing windows of least risk referred to in condition 7.3.1 are appropriate considering the environmental conditions at the time;</p>	<ul style="list-style-type: none"> Any change to a timing window during project construction could require amendment of other federal authorizations, including the <i>Fisheries Act</i> Authorization, which could cause significant multi-year extension to the construction duration. 	<p>The port authority recommends this condition be removed for the reasons given in the rationale.</p>

Condition #	Condition	Feedback / rationale	Suggested revision
		<ul style="list-style-type: none"> • Even if “validation” were to occur, it will not be reasonable or feasible to alter the timing window for in-water work once irrevocable construction-related decisions have been made and construction is underway. • The port authority notes that the timing windows referred to in draft conditions 7.3.1.1 and 7.3.1.2 are long-standing timing windows established by DFO based on years of research and monitoring. For example, the juvenile salmon timing window has not changed for at least a decade. Further, the Dungeness crab timing window was developed in consultation with DFO in 2009-2010 for the local area, as part of the Deltaport Third Berth Project. Validation of these timing windows is not warranted. • There are many mitigation measures proposed and required by other conditions to reduce potential project effects to juvenile salmon and Dungeness crab (e.g., isolating areas and conducting salvages applying soft start procedures, and conducting environmental monitoring during construction and applying adaptive measures). These measures, as well as the conditions that will be included in the <i>Fisheries Act</i> Authorization, will protect fish and fish habitat from potential adverse environmental effects outside the timing windows. The timing window for SRKW, included by reference (to condition 8.1.7) in draft condition 7.3.1, is based on historical data regarding peak use and more recent information on SRKW presence at Roberts Bank provided by DFO during consultation on IR202-3.3 and is therefore a reasonable timing window for the purposes of planning the entire construction period. • Similarly, there are many other measures proposed and required by other conditions to detect the presence of SRKW and to develop and implement additional or modified mitigation measures, including initiating procedures to stop or modify work before SRKW enter the exclusion zone to avoid exposure of SRKW to underwater noise during construction, are sufficient to protect any SRKW that may be present in the area outside of the timing window. Validation of the SRKW timing window is therefore also not necessary. 	
7.3.3	monitor for spawning herring presence during in-water work activities conducted outside the timing window of least risk for juvenile salmon and in mid to late February, in areas that spatially overlap with herring spawning habitats, and use this information to inform the development and implementation of additional mitigation measures; and	<ul style="list-style-type: none"> • The port authority considers that referring to specific dates would improve certainty in this condition. 	The port authority suggests the following revision: monitor for spawning herring presence during in-water work activities conducted outside the timing window of least risk for juvenile salmon and in mid to late from February 15 to February 28 , in areas that spatially overlap with herring spawning habitats, and use this information to inform the development and implementation of additional mitigation measures; and
7.3.4	determine the means, timing, frequency and location(s) of monitoring in condition 7.3.3.	<ul style="list-style-type: none"> • No comment. 	
7.4	The Proponent shall conduct dredging during operation, if required, only within the timing window of least risk for juvenile salmon (August 16 - February 28).	<ul style="list-style-type: none"> • In its response to the minister’s information request regarding avoidance and mitigation measure for project operation and marine shipping associated with the project (IR2020-3, CIAR #2083), the port authority communicated that they would ‘schedule potential future terminal maintenance dredging to avoid the SRWK peak use period from June 1 or the date when SRKW are confirmed to be present in the Salish Sea, whichever is later, to September 30’ (pg. 28). 	The port authority suggests the following revision: The Proponent shall conduct dredging during operation, if required, only within the timing window of least risk for juvenile salmon (August 16 - February 28) and avoid the Southern Resident Killer Whale (<i>Orcinus orca</i>) peak use period in accordance with condition 8.1.7.
7.5	The Proponent shall implement underwater noise monitoring during in-water work activities during construction to ensure sound levels remain below 206 decibels at a reference pressure of one micropascal within 10 metres of in-water pile driving for finfish.	<ul style="list-style-type: none"> • No comment. 	
7.6	The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a Dungeness crab (<i>Cancer magister</i>) salvage	<ul style="list-style-type: none"> • See comments on draft condition 1.22. 	The port authority suggests the following revision:

Condition #	Condition	Feedback / rationale	Suggested revision
	<p>program. The Proponent shall develop the program prior to construction and shall implement it prior to the commencement of any in-water work activity that has the potential to cause direct mortality of crab, including dredging. As part of the development of the program, the Proponent shall conduct a test to evaluate the use of baiting as a means to relocate crabs and minimize crab handling. If the Proponent concludes that the use of baiting is not an effective means to relocate crabs and minimize crab handling, the Proponent shall implement alternative salvage protocols.</p>		<p>The Proponent shall develop and implement, in consultation with Indigenous groups (<i>Roberts Bank</i>) and relevant authorities, a Dungeness crab (<i>Cancer magister</i>) salvage program. The Proponent shall develop the program prior to construction and shall implement it prior to the commencement of any in-water work activity that has the potential to cause direct mortality of crab, including dredging. As part of the development of the program, the Proponent shall conduct a test to evaluate the use of baiting as a means to relocate crabs and minimize crab handling. If the Proponent concludes that the use of baiting is not an effective means to relocate crabs and minimize crab handling, the Proponent shall implement alternative salvage protocols.</p>
7.7	<p>The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Tsawwassen First Nation, Musqueam, and other Indigenous groups, a follow-up program as described in Table C7 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to the continued establishment and use of juvenile Dungeness crab (<i>Cancer magister</i>) nursery habitat. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.</p>	<ul style="list-style-type: none"> Through ongoing work since 2019 and since the submission of Table C7, in Appendix C of the Updated Project Commitments (CIAR #2001), the port authority has completed additional studies (in 2020 and 2021) to inform the development of the juvenile Dungeness crab FUP. The results of these studies has indicated that the metric originally contemplated in Table C7 for this FUP, specifically density of juvenile crabs (#/m²), is not a feasible metric to verify the accuracy of the environmental assessment. The port authority consulted extensively with Indigenous groups on the 2020 juvenile Dungeness crab FUP study design, which attempted to use a density-based metric to evaluate potential project-related change, as per the originally proposed approach outlined in Table C7. Despite intensive sampling efforts between June and September 2020 (i.e., total of 2,022 quadrats at 674 sampling sites), results indicated a density-based approach is not feasible. The port authority shared and discussed the 2020 results with Indigenous groups. Following the 2020 study, the port authority explored various modifications to the study design and a pilot study was developed in consultation with Indigenous groups and implemented in 2021 to trial a new approach that uses aerial (i.e., drone) surveys to monitor intertidal vegetation (i.e., <i>Ulva</i>) used by juvenile Dungeness crabs as nursery habitat. The port authority shared the 2021 pilot study results and proposed next steps with Indigenous groups in the fall and winter of 2021/2022. The parameters that will ultimately be used to verify effect predictions in the juvenile Dungeness crab FUP will be determined in collaboration with Indigenous groups during ongoing consultation. The parameters will focus on the key component in the effect pathway, which is juvenile Dungeness crab nursery habitat, particularly <i>Ulva</i> hummocks. These are predicted to continue to form and be deposited on Roberts Bank providing habitat for juvenile Dungeness crab to settle. See comments on draft condition 1.22. 	<p>The port authority suggests the following revisions:</p> <p>The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Tsawwassen First Nation, Musqueam, and <i>the other Indigenous groups within</i> Indigenous groups (<i>Roberts Bank</i>), a follow-up program as described in Table C7 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to <i>potential effects on the continued establishment and use of</i> juvenile Dungeness crab (<i>Cancer magister</i>) nursery habitat. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.</p>
7.8	<p>The Proponent shall transplant, prior to construction, a minimum of 10 percent of the orange sea pen colony (<i>Ptilosarcus gurneyi</i>) that occurs within the Designated Project area. The Proponent shall determine, prior to transplanting and in consultation with Indigenous groups and relevant authorities, the means by which transplanting will be carried out.</p>	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	<p>The port authority suggests the following revision:</p> <p>The Proponent shall transplant, prior to construction, a minimum of 10 percent of the orange sea pen colony (<i>Ptilosarcus gurneyi</i>) that occurs within the Designated Project area. The Proponent shall determine, prior to transplanting and in consultation with Indigenous groups (<i>Roberts Bank</i>) and relevant authorities, the means by which transplanting will be carried out.</p>
7.9	<p>The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program as described in Table C8 of Appendix G in the Federal Review Panel Report to verify the effectiveness of the orange sea pen (<i>Ptilosarcus gurneyi</i>) transplant referred to in condition 7.8. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.</p>	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	<p>The port authority suggests the following revision:</p> <p>The Proponent shall develop, prior to construction and in consultation with Indigenous groups (<i>Roberts Bank</i>) and relevant authorities, a follow-up program as described in Table C8 of Appendix G in the Federal Review Panel Report to verify the effectiveness of the orange sea pen (<i>Ptilosarcus gurneyi</i>) transplant referred to in condition 7.8. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.</p>

Condition #	Condition	Feedback / rationale	Suggested revision
7.10	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River), and relevant authorities, and implement measures during construction dredging activities to avoid or mitigate effects to marine fish and fish habitat, including:	<ul style="list-style-type: none"> • See comment on draft condition 7.3. • See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping), Indigenous groups (Fraser River), and relevant authorities, and implement measures during construction dredging activities to avoid or mitigate effects to marine fish and fish habitat, including:
7.10.1	measures to reduce direct mortality of Pacific sand lance (<i>Ammodytes hexapterus</i>) during dredging of the berth pocket;	<ul style="list-style-type: none"> • No comment. 	
7.10.2	measures to limit disturbance to eulachon (<i>Thaleichthys pacificus</i>), including:	<ul style="list-style-type: none"> • No comment. 	
7.10.2.1	implementing, during dredging in April, and prior to and during dredging in the dredge basin, hydroacoustic monitoring to detect eulachon in real-time and, where technically and economically feasible, stop dredging activities or guide dredging activities away from eulachon.	<ul style="list-style-type: none"> • The port authority notes that modifying dredging activities, for example ramping down, may also be effective to mitigate potential adverse effects if eulachon are present. 	The port authority suggests the following revision: implementing, during dredging in April, and prior to and during dredging in the dredge basin, hydroacoustic monitoring to detect eulachon in real-time and, where technically and economically feasible, <i>modify or</i> stop dredging activities or guide dredging activities away from eulachon.
7.11	The Proponent shall develop, prior to construction, as required by Fisheries and Oceans Canada for authorization under the Fisheries Act, and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River), Environment and Climate Change Canada and British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, any offsetting plan(s) related to the alteration, destruction or disturbance of fish habitat, and death of fish associated with the carrying out of the Designated Project based on the draft offsetting plan (IR2020-1.2, Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall implement the plan(s) during construction and operation. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation. The plan shall include:	<ul style="list-style-type: none"> • As noted in the covering letter to this submission, it is understood that the scope of consultation with relevant authorities should be focused on the scope of specialist or expert information or knowledge held by the relevant authority or on the scope of the applicable law or regulation they are responsible for administering. • The port authority acknowledges the submission of Tsawwassen First Nation regarding this draft condition and notes that the port authority and Tsawwassen First Nation have collaborated and continue to collaborate on the development of the offsetting plan, including consideration of Tsawwassen First Nation's Offsetting Vision. • See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction, as required by Fisheries and Oceans Canada for authorization under the Fisheries Act, and in consultation with Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping), Indigenous groups (Fraser River), Environment and Climate Change Canada and British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, any offsetting plan(s) related to the alteration, destruction or disturbance of fish habitat, and death of fish associated with the carrying out of the Designated Project based on the draft offsetting plan (IR2020-1.2, Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall implement the plan(s) during construction and operation. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation. The plan shall include:
7.11.1	a description of anticipated losses of fish and fish habitat remaining after avoidance, reduction, and other mitigation measures have been implemented;	<ul style="list-style-type: none"> • The port authority notes that changes in productivity are the basis for effect predictions in the assessment and the conclusions and recommendations of the review panel. As such, the FUP for the offsetting plan that would be required by draft condition 7.13 would necessarily be focused on verifying the predictions of productivity changes and the effectiveness of measures to mitigate productivity losses. Retaining reference to productivity is therefore essential to ensure that this and linked conditions, such as draft condition 7.13, remain feasible. • As stated in Section 10.3 of the EIS (CIAR #181, p.10-8), productivity is a measure of the amount of plant and animal biological material (or biomass) produced within an ecosystem over a given amount of time (e.g., tonnes per year of primary production). In the EIS, for fish, productivity was measured in biomass in tonnes. For marine vegetation components of fish habitat, productivity was measured in habitat area, percent cover, and leaf area index (for native eelgrass). 	The port authority suggests the following revision: a description of anticipated <i>productivity</i> losses of fish and fish habitat, remaining after avoidance, reduction, and other mitigation measures have been implemented;
s7.11.2	a description of the amount and type of offsets required and the selection of offsetting sites, including consideration of Indigenous priorities;	<ul style="list-style-type: none"> • No comment. 	
7.11.3	an assessment of the projected benefits of the offsetting measures, using more than one approach;	<ul style="list-style-type: none"> • No comment. 	
7.11.4	a description of how potential eutrophication, anoxia and changes in water drainage have been considered in the design of the offsetting measures; and	<ul style="list-style-type: none"> • No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
7.11.5	offsetting measures to compensate for effects to fish and fish habitat remaining after avoidance, reduction, and other mitigation measures have been implemented.	<ul style="list-style-type: none"> No comment. 	
7.12	The Proponent shall, for any fish habitat offsetting measure proposed in any offsetting plan referred to in condition 7.11 that may cause adverse environmental effects not considered in the environmental assessment, develop and implement, prior to construction, following consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River) and relevant authorities, measures to mitigate those effects. The Proponent shall submit these measures to the Agency prior to implementing them.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall, for any fish habitat offsetting measure proposed in any offsetting plan referred to in condition 7.11 that may cause adverse environmental effects not considered in the environmental assessment, develop and implement, prior to construction, following consultation with Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping), Indigenous groups (Fraser River) and relevant authorities, measures to mitigate those effects. The Proponent shall submit these measures to the Agency prior to implementing them.
7.13	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping) and Indigenous groups (Fraser River) and as required by Fisheries and Oceans Canada, a follow-up program in accordance with the requirements of any applicable Fisheries Act authorization to determine the effectiveness of the offsetting measures implemented as part of the offsetting plan(s) referred to in condition 7.11. The Proponent shall implement the follow-up program once offsetting habitats have been established and until requirements of the authorization under the Fisheries Act have been met. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.	<ul style="list-style-type: none"> See comment on draft condition 7.11.1. See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping) and Indigenous groups (Fraser River) and as required by Fisheries and Oceans Canada, a follow-up program in accordance with the requirements of any applicable Fisheries Act authorization to determine the effectiveness of the offsetting measures implemented as part of the offsetting plan(s) referred to in condition 7.11. The Proponent shall implement the follow-up program once offsetting habitats have been established and until requirements of the authorization under the Fisheries Act have been met. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.
7.14	The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Indigenous groups, Indigenous groups (marine shipping), and Indigenous groups (Fraser River), a follow-up program as described in Table C9 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to changes to productivity of juvenile salmon as a result of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping), and Indigenous groups (Fraser River), a follow-up program as described in Table C9 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to changes to productivity of juvenile salmon as a result of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
7.14.1	monitor, prior to, during and after construction, the abundance and distribution of Pacific salmon (<i>Oncorhynchus</i>) in the local assessment area indicated on figure 13-1 of the environmental impact statement using a statistically defensible sampling program; and	<ul style="list-style-type: none"> No comment. 	
7.14.2	monitor any effects of the marine terminal and breach for fish passage on the migration patterns of juvenile salmon.	<ul style="list-style-type: none"> Based on clarification provided by IAAC, the port authority understands the intent of this condition is to ensure the FUP that would be required by draft condition 7.14 includes consideration of how juvenile salmon abundance and distribution are affected by the fish passage breach that would be required by draft condition 7.2. The port authority notes that the monitoring that would be required by draft condition 7.14.1 would inform the verification of predicted effects of the project on juvenile salmon productivity. The port authority suggests revisions to this condition to more clearly focus on determining whether juvenile salmon are using the breach. 	The port authority suggests the following revision: monitor the use of the any effects of the marine terminal and breach for fish passage on the migration patterns of by juvenile salmon.
7.15	The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C3 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to changes in marine vegetation as a	<ul style="list-style-type: none"> See comment on draft condition 7.11; the port authority notes that changes in productivity are the basis for effect predictions in the assessment and the conclusions and recommendations of the review panel. As such, the FUP that would be required by this condition would necessarily be focused on verifying the predictions of productivity 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Environment and Climate Change Canada and Indigenous groups (<i>Roberts Bank</i>), a follow-up program as described in Table C3 of Appendix G in the Federal Review Panel Report to verify the

Condition #	Condition	Feedback / rationale	Suggested revision
	result of the Designated Project, including to evaluate the accuracy of the Roberts Bank ecosystem model forecasts. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.	<p>changes and the effectiveness of measures to mitigate productivity losses, as noted in Table C3 of Appendix G in the Federal Review Panel Report. For consistency with that referenced table, and to ensure the feasibility of this FUP, the port authority recommends the term “productivity” be retained in this condition.</p> <ul style="list-style-type: none"> • See comments on draft condition 7.11.1 regarding how productivity is defined and measured for marine vegetation. • See also comments on draft condition 1.22. 	accuracy of the environmental assessment as it pertains to changes in marine vegetation <i>productivity</i> as a result of the Designated Project, including to evaluate the accuracy of the Roberts Bank ecosystem model forecasts. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.
7.16	The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in infauna and marine invertebrate productivity as a result of the Designated Project, including to evaluate the accuracy of the Roberts Bank ecosystem model forecasts. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.	<ul style="list-style-type: none"> • See comments on draft condition 1.22. 	<p>The port authority suggests the following revision:</p> <p>The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada and Indigenous groups (<i>Roberts Bank</i>), a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in infauna and marine invertebrate productivity as a result of the Designated Project, including to evaluate the accuracy of the Roberts Bank ecosystem model forecasts. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.</p>
7.17	The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in rockfish and lingcod (<i>Ophiodon elongates</i>) productivity as a result of the Designated Project, including to evaluate the accuracy of the Roberts Bank ecosystem model forecasts. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.	<ul style="list-style-type: none"> • See comments on draft condition 1.22. 	<p>The port authority suggests the following revision:</p> <p>The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada and Indigenous groups (<i>Roberts Bank</i>), a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in rockfish and lingcod (<i>Ophiodon elongates</i>) productivity as a result of the Designated Project, including to evaluate the accuracy of the Roberts Bank ecosystem model forecasts. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.</p>
8	Marine mammals		
		<ul style="list-style-type: none"> • For clarity, and because different monitoring and mitigation methods and approaches would be applied, the conditions should deal with underwater noise from construction separately from operation, and similarly should deal with underwater noise from operation of the marine terminal separately from underwater noise related to incidental marine shipping in the marine shipping area. • The port authority notes that draft conditions 8.1 and 8.2 appear to pertain to construction. • The port authority notes that draft conditions 8.3, 8.5, 8.6, and 8.9 all pertain to mitigation for underwater noise produced as a result of operations at the marine terminal. The port authority suggests those conditions be grouped together for clarity. • The port authority notes that draft conditions 8.4 and 8.7 pertain to mitigation for underwater noise produced by marine shipping incidental to the project. The port authority suggests those conditions be grouped together for clarity. • Draft conditions 8.8 and 8.10 to 8.13 are generally applicable conditions and should be grouped together for clarity. • The port authority suggests revisions and additional conditions, as outlined below, in part to achieve the desired clarification. • The conditions must be focused on the potential acoustic effects to SRKW <u>from the Designated Project</u>; the conditions should not require the port authority to monitor or mitigate noise or noise-related effects that are not attributable to the project (e.g., noise from other sources such as other non-project vessels). Based on clarification provided by IAAC, the port authority understands that this is indeed the intent of the conditions. The 	

Condition #	Condition	Feedback / rationale	Suggested revision
		<p>port authority's suggested revisions are also aimed at clarifying this intent in the conditions.</p> <ul style="list-style-type: none"> The port authority has reviewed the recent submissions of Transport Canada (CIAR #2298) and DFO (CIAR #2407) and has considered their comments in developing the revisions suggested below as appropriate. The purpose of a Recovery Strategy is to "outline short-term objectives and long-term goals for protecting and recovering species at risk",¹ including describing the species, threats, critical habitat, and recovery goals and objectives. The purpose of an Action Plan is to "summarize projects and activities to meet recovery strategy objectives and goals,"¹ including measures to protect critical habitat and steps for implementing the recovery strategy. The Recovery Strategy and the Action Plan do not purport to prohibit development nor do they suggest that there can be no further impacts to SRKW. Rather, both the Recovery Strategy and Action Plan for SRKW identify the need to assess impacts from project activities on SRKW and their habitat and identify and apply measures that are reliable and available. The port authority's suggested revisions and additions below are aligned with the Recovery Strategy and Action Plan for SRKW that will ensure SRKW will not be jeopardized by the Project. 	
8.1	<p>The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups, Fisheries and Oceans Canada and Transport Canada measures to mitigate adverse environmental effects caused by underwater noise emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the measures during the relevant phase of the Designated Project. As part of these measures, the Proponent shall:</p>	<ul style="list-style-type: none"> All the sub-conditions of this condition pertain to measures to be implemented during the construction phase of the Designated Project. Measures to mitigate adverse environmental effects caused by underwater noise emitted during operation are addressed elsewhere. Revisions are suggested to clarify the focus of this condition on construction. This is consistent with Transport Canada's comment on this condition in their submission during the public comment period (CIAR #2298). The port authority notes that feasibility of the measures specified in the sub-conditions should be referenced. See related comments on draft condition 1.29. See also comments on draft condition 1.22. 	<p>The port authority suggests the following revision:</p> <p>The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups (<i>Roberts Bank</i>), Fisheries and Oceans Canada and Transport Canada, measures to mitigate adverse environmental effects caused by underwater noise emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the <i>technically and economically feasible</i> measures during the relevant phase of the Designated Project construction of the marine terminal, the widened causeway, and the expanded tug basin. As part of these measures, the Proponent shall:</p>
8.1.1	<p>use soft start procedures to increase the sound levels emitted by construction equipment gradually before use at full operational power;</p>	<ul style="list-style-type: none"> The port authority notes that this draft condition is exactly the same as draft condition 4.1.1; while the parent conditions 4.1 and 8.1 address atmospheric and underwater noise, respectively, the action required by draft condition 4.1.1 would apply to all construction equipment, including equipment that may be used for in-water works. This draft condition is therefore redundant and could be removed. If this condition is not removed to avoid redundancy and duplication, the port authority recommends it be revised for the same reasons noted in the comments on draft condition 4.1.1. 	<p>The port authority recommends this condition be removed to avoid redundancy with and duplication of draft condition 4.1.1.</p> <p>If this condition is not removed, the port authority suggests the following revision:</p> <p>use soft start procedures <i>where feasible</i> to increase the sound levels emitted by construction equipment gradually before use at full operational power;</p>
8.1.2	<p>minimize impulse noise emitted by construction and operation activities, including by giving preference to the use of vibratory pile-driving over impact pile-driving unless not technically feasible;</p>	<ul style="list-style-type: none"> There are no impulsive noises expected from in-water activities during operation (i.e., no pile driving). 	<p>The port authority suggests the following revision:</p> <p>minimize impulse noise emitted by construction and operation activities, including by giving preference to the use of vibratory pile-driving over impact pile-driving unless not technically feasible;</p>
8.1.3	<p>sequence in-water work activities to limit underwater noise aggregation to the extent feasible, as determined by a qualified professional;</p>	<ul style="list-style-type: none"> No comment. 	

¹ Government of Canada. 2020. Recovery Planning. <https://www.dfo-mpo.gc.ca/species-especes/sara-lep/recovery-retablissement-eng.html>

Condition #	Condition	Feedback / rationale	Suggested revision
8.1.4	use sound attenuation method(s) and/or technology(ies) when impact pile-driving underwater;	<ul style="list-style-type: none"> No comment. 	
8.1.5	conduct vibratory hammer and impact pile driving only during daytime hours in order to be able to detect marine mammals;	<ul style="list-style-type: none"> See comment on draft condition 4.1.6. For clarity, the suggested addition of reference to weekdays is in relation to mitigation of potential effects of atmospheric noise (per draft condition 4.1.6, which this condition would replace) and in no way implies that marine mammals can only be detected on weekdays. 	The port authority suggests the following revision: conduct vibratory hammer and impact pile driving only <i>on weekdays in order to mitigate potential effects of atmospheric noise and</i> during daytime hours in order to be able to detect marine mammals;
8.1.6	require all construction vessel operators to implement applicable management measures established by the Government of Canada to protect Southern Resident Killer Whale (<i>Orcinus orca</i>) that are in effect, unless not feasible for safety reasons;	<ul style="list-style-type: none"> No comment. 	
8.1.7	avoid, from June 1 or the date Southern Resident Killer Whale (<i>Orcinus orca</i>) are confirmed by marine mammal observers to be present in the Salish Sea, whichever is later, to September 30:	<ul style="list-style-type: none"> No comment. 	
8.1.7.1	all vibratory and impact pile driving;	<ul style="list-style-type: none"> No comment. 	
8.1.7.2	vibro-densification of the caisson foundation mattress rock; and	<ul style="list-style-type: none"> No comment. 	
8.1.7.3	removal of the piles for the temporary barge ramps;	<ul style="list-style-type: none"> No comment. 	
8.1.8	limit, to the extent feasible as determined by a qualified professional, the number of dredge equipment in use and tug and barge movements required for dredging activities when Southern Resident Killer Whale (<i>Orcinus orca</i>) are confirmed present in the Salish Sea by marine mammal observers.	<ul style="list-style-type: none"> No comment. 	
8.2	The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups and Indigenous groups (marine shipping), a marine mammal detection and response plan to reduce adverse effects to marine mammals caused by construction, consistent with any Fisheries and Oceans authorization under the Fisheries Act. The Proponent shall implement the plan during all in-water work activities during construction that pose a risk to marine mammals, and have a qualified professional oversee the implementation of the plan. As part of the marine mammal detection and response plan, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups (<i>Roberts Bank</i>) and Indigenous groups (marine shipping), a marine mammal detection and response plan to reduce adverse effects to marine mammals caused by construction, consistent with any Fisheries and Oceans authorization under the Fisheries Act. The Proponent shall implement the plan during all in-water work activities during construction that pose a risk to marine mammals, and have a qualified professional oversee the implementation of the plan. As part of the marine mammal detection and response plan, the Proponent shall:
8.2.1	establish behavioral disturbance threshold(s) for continuous (non-impulse) noise for Southern Resident Killer Whale (<i>Orcinus orca</i>) and group-specific injury threshold(s) for impulse and continuous (non-impulse) noise for other marine mammal species, and describe the expected effects to marine mammals above and below the thresholds;	<ul style="list-style-type: none"> No comment. 	
8.2.2	identify the in-water work activities that are predicted to generate impulse and continuous (non-impulse) underwater noise (which shall include pile driving and dredging) during construction;	<ul style="list-style-type: none"> No comment. 	
8.2.3	establish minimum exclusion zone(s) for each activity referred to in condition 8.2.2 corresponding to the distance from each activity at which the underwater noise levels are below the thresholds established pursuant to condition 8.2.1, and implement and maintain these exclusion zones(s) when carrying each of these activities;	<ul style="list-style-type: none"> No comment. 	
8.2.4	monitor underwater noise within and directly outside the injury threshold exclusion zone(s) established pursuant to condition 8.2.3 during activities that generate impulse noise identified pursuant to condition 8.2.2 to validate the size of the exclusion zone(s) based on the injury threshold(s) established pursuant to condition 8.2.1. If underwater noise directly outside the exclusion	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
	zone(s) exceeds injury thresholds established pursuant to condition 8.2.1, the Proponent shall implement modified or additional mitigation measures, which may include expanding the exclusion zone;		
8.2.5	at the start of each new in-water work activity identified pursuant to condition 8.2.2 that generates continuous noise, validate the exclusion zone(s) established based on the behavioral disturbance threshold(s) for continuous noise for Southern Resident Killer Whale (<i>Orcinus orca</i>) referred to in condition 8.2.1 to confirm it is of appropriate size. If the exclusion zone is not of the appropriate size, the Proponent shall expand the exclusion zone;	<ul style="list-style-type: none"> The port authority notes that the condition should also require the validation of the SRKW exclusion zone based on the impulse behavioural threshold (IR2020-2.3, CIAR #2083). For impulse noise, the port authority chose behavioural disturbance thresholds for SRKW rather than injury thresholds as they are more protective. The thresholds for impulse and continuous noise are different and as such the size of the exclusion zones are different. The port authority notes that the condition should also provide the opportunity for the contractor to adopt quieter construction equipment than assumed when estimating the size of the exclusion zones in the response to the minister's IR (IR2020-2.3, CIAR #2083) and thus reduce the applicable exclusion zone. 	The port authority suggests the following revision: at the start of each new in-water work activity identified pursuant to condition 8.2.2 that generates impulse and continuous noise, validate the exclusion zone(s) established based on the behavioral disturbance threshold(s) for continuous noise for Southern Resident Killer Whale (<i>Orcinus orca</i>) referred to in condition 8.2.1 to confirm it is of appropriate size. If the exclusion zone is not of the appropriate size, the Proponent shall expand modify the exclusion zone to be applicable ;
8.2.6	establish a monitoring buffer zone around the exclusion zone implemented for Southern Resident Killer Whale (<i>Orcinus orca</i>) to account for the time needed to initiate stop/modify work procedures before Southern Resident Killer Whale (<i>Orcinus orca</i>) enter the applicable exclusion zone;	<ul style="list-style-type: none"> No comment. 	
8.2.7	monitor for the presence of the applicable marine mammal(s) within their applicable exclusion zone(s) established pursuant to condition 8.2.3 and, also for Southern Resident Killer Whale (<i>Orcinus orca</i>) within the buffer zone established pursuant to condition 8.2.6 during all activities identified pursuant to condition 8.2.2. The Proponent shall conduct year-round visual monitoring, using marine mammal observer(s) in combination with non-visual monitoring, in order to observe if a marine mammal enters the exclusion zone. In doing so, the Proponent shall:	<ul style="list-style-type: none"> No comment. 	
8.2.7.1	determine minimum training and experience requirements of the marine mammal observer(s) to determine, verify, and monitor exclusion zones and record the location and behaviour of observed marine mammals;	<ul style="list-style-type: none"> No comment. 	
8.2.7.2	develop and implement procedures to adjust location and number of marine mammal observer(s) if Southern Resident Killer Whale (<i>Orcinus orca</i>) are approaching the exclusion zone(s) established pursuant to condition 8.2.3 or the buffer zone established pursuant to condition 8.2.6;	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
8.2.7.3	determine the type and placement of monitoring technologies, including passive acoustic and infrared technologies, to be deployed for detecting marine mammals;	<ul style="list-style-type: none"> Infrared technologies are only in the testing phase and have not yet been proven to be effective for monitoring cetaceans, specifically killer whales, over large areas during construction or similar applications. The condition should, therefore, refer to feasible technologies, which may, in future, include infrared technologies if they are proven to be feasible. Of note, in their recent submission during the public comment period (CIAR #2407), DFO acknowledges “[t]he information provided in the [IR] response increases DFO’s confidence that technically and economically feasible measures to mitigate underwater noise from Project construction have been explored and appropriate mitigation measures have been identified for further development.” Passive acoustic monitoring is intended to detect cetaceans that are vocalizing and communicating underwater. It is not intended and would not be expected to detect other marine mammals that do not. The exclusion zones for marine mammals, with the exception of SRKW, are focused on injury zones associated with impulsive and continuous noise from piling activities (per draft condition 1.13), which are small (<20 m or <200 m for impact and vibratory piling, respectively) and these activities will occur during the day (per draft condition 8.1.5). Piling activities are of relative short duration (a limited number of days). The use of marine mammal observers to detect the presence of marine mammals other than SRKW will be sufficient to enable these activities to be modified or stopped if marine mammals are detected within the relevant exclusion zones. 	<p>The port authority suggests the following revision:</p> <p>determine the type and placement of monitoring technologies, including passive acoustic and <i>or other technically and economically feasible technologies, which may include</i> infrared technologies, to be deployed for detecting marine mammals <i>cetaceans</i>;</p>
8.2.7.4	develop and implement protocols that specify the conditions under which any non-visual monitoring shall be used, including during periods of low visibility, darkness and fog;	<ul style="list-style-type: none"> No comment. 	
8.2.7.5	develop and implement procedures for marine mammal observer(s) to receive any available information on the presence of cetaceans in the area surrounding the local assessment area from whale sighting networks, and use this information to inform observation requirements in condition 8.2.7;	<ul style="list-style-type: none"> No comment. 	
8.2.7.6	develop and implement protocols to document cetaceans observed as part of the marine mammal detection and response plan, and communicate these observations to British Columbia’s Cetacean Sightings Network and Fisheries and Oceans Canada;	<ul style="list-style-type: none"> No comment. 	
8.2.8	develop and implement stop work procedures to shut down or modify in-water work activities identified pursuant to condition 8.2.2 when marine mammals exclusion zone(s) are present within their applicable exclusion zone(s) established pursuant to condition 8.2.3, including communication protocols to facilitate stop work procedures. In doing so, the Proponent shall:	<ul style="list-style-type: none"> There is a typographical error that may create confusion. 	<p>The port authority suggests the following revision:</p> <p>develop and implement stop work procedures to shut down or modify in-water work activities identified pursuant to condition 8.2.2 when marine mammals exclusion zone(s) are present within their applicable exclusion zone(s) established pursuant to condition 8.2.3, including communication protocols to facilitate stop work procedures. In doing so, the Proponent shall:</p>
8.2.8.1	grant stop work authority to marine mammal observer(s);	<ul style="list-style-type: none"> As marine mammal observers (MMOs) may not be located on site where construction activity is underway, it would be more appropriate for them to engage with on-site points of contact who would be directly aware of circumstances or factors relevant to safe modification or shut-down of in-water work. For this reason, the port authority considers it appropriate that MMOs have the authority to <u>initiate</u> stop work procedures, but actual work stoppage (or modification) would be authorized by designated individuals on site who would be responsible for ensuring safe implementation of stop work procedures. The port authority notes that the marine mammal detection team comprises other roles in addition to MMOs, such as the operator of the passive acoustic monitoring (PAM) system. All members of the marine 	<p>The port authority suggests the following revision:</p> <p>grant <i>authority to initiate</i> stop work <i>procedures</i> authority to <i>the</i> marine mammal observer(s) detection team;</p>

Condition #	Condition	Feedback / rationale	Suggested revision
		mammal detection team should have the authority to initiate stop work procedures.	
8.2.8.2	initiate stop work procedures prior to Southern Resident Killer Whales (<i>Orcinus orca</i>) entering the exclusion zone(s) established pursuant to condition 8.2.3;	<ul style="list-style-type: none"> No comment. 	
8.2.8.3	start or restart in-water work activities identified pursuant to condition 8.2.2 only once it has been visually confirmed that marine mammal(s) are not present within their applicable exclusion zone(s), or if a minimum of 30 minutes has elapsed since the marine mammal was last sighted within the applicable exclusion zone(s); and	<ul style="list-style-type: none"> No comment. 	
8.2.9	if marine mammals are observed in distress notify Fisheries and Oceans Canada. The Proponent shall implement mitigation measures, including stopping, if it is safe to do so, or modifying in-water work activities identified pursuant to condition 8.2.2 to address the situation of marine mammal distress as a result of the Designated Project under the advisement and to the satisfaction of a qualified professional.	<ul style="list-style-type: none"> No comment. 	
8.3	The Proponent shall require container vessels calling on the Designated Project to participate in the Enhancing Cetacean Habitat and Observation Program, or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:	<ul style="list-style-type: none"> This condition and its sub-conditions pertain to mitigating effects of underwater noise associated with operation of the marine terminal and should be grouped with other conditions pertaining to mitigating underwater noise at the marine terminal (i.e., 8.5, 8.6, and 8.9) for greater clarity. Marine shipping is incidental to, not part of, the RBT2 Project. The port authority cannot directly require the container vessels calling at RBT2 to participate in the ECHO Program. However, the port authority <u>can</u> contractually require the terminal operator to do so. The vessel slowdown initiative is the relevant measure to reduce underwater noise from container vessels. Other initiatives carried out pursuant to the ECHO Program may not be relevant to underwater noise. 	The port authority suggests the following revision: The Proponent shall <i>contractually</i> require <i>the terminal operator to require</i> container vessels calling on the Designated Project to participate in the Enhancing Cetacean Habitat and Observation Program <i>vessel slowdown initiative</i> , or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:
8.3.1	provide, or provide the mean to access, reporting of the underwater noise levels measured as part of the Enhancing Cetacean Habitat and Observation Program, or any future equivalent program, throughout operation; and	<ul style="list-style-type: none"> The ECHO Program is administered by the port authority separately from any specific project or terminal in the Port of Vancouver, including the RBT2 Project. To access ECHO Program data, a request must be made to the ECHO Program administrators, who will review the request and determine whether and how the requested data can be shared. For example, prior to release or reporting, data are typically anonymized, so that individual vessels or ship owners are not identifiable. The reported data are thus anonymous statistical representations of vessel source levels. The process for data access should be reflected in this condition. The port authority notes that the condition should be focused on the data used in the assessment of the project, specifically reporting related to container ships calling at RBT2 and the Port of Vancouver. 	The port authority suggests the following revision: <i>request and make available to the Agency provide, or provide the mean to access</i> , reporting of the underwater noise levels <i>related to container vessels calling at RBT2 and the Port of Vancouver</i> measured <i>and available</i> as part of the Enhancing Cetacean Habitat and Observation Program, or any future equivalent program, throughout operation; and
8.3.2	evaluate, in consultation with Fisheries and Oceans Canada, Transport Canada, Indigenous groups, and Indigenous groups (marine shipping), the effectiveness of the participation of container vessels calling on the Designated Project in the Enhancing Cetacean Habitat and Observation Program in mitigating underwater noise and the risk of fatal vessel strikes to humpback whales (<i>Megaptera novaeangliae</i>) and Southern Resident Killer Whales (<i>Orcinus orca</i>).	<ul style="list-style-type: none"> See comment on draft condition 8.3; for consistency, this condition should also refer to the vessel slowdown initiative specifically and acknowledge that the measure may be implemented through some other future equivalent program (not necessarily the ECHO Program). The port authority notes this condition should be focused on mitigating <u>the effects</u> of underwater noise on cetaceans, as the mechanism by which an effect of underwater noise is mitigated may not be limited to reducing (mitigating) underwater noise. For example, the effect of underwater noise may be mitigated by reducing SRKW acoustic exposures. This is consistent with Transport Canada's observation in their recent submission during the public comment period (CIAR #2298), in which they state: "Furthermore, these solutions, and the proposed draft conditions, 	The port authority suggests the following revision: evaluate, in consultation with Fisheries and Oceans Canada, Transport Canada, Indigenous groups (<i>Roberts Bank</i>), and Indigenous groups (marine shipping), the effectiveness of the participation of container vessels calling on the Designated Project in the Enhancing Cetacean Habitat and Observation Program <i>vessel slowdown initiative, or any future equivalent program</i> , in mitigating <i>the potential adverse environmental effects of</i> underwater noise and the risk of fatal vessel strikes to humpback whales (<i>Megaptera novaeangliae</i>) and Southern Resident Killer Whales (<i>Orcinus orca</i>).

Condition #	Condition	Feedback / rationale	Suggested revision
		<p>are appropriate as they target the environmental impact of the vessel traffic (underwater noise) rather than the activity itself."</p> <ul style="list-style-type: none"> See also comments on draft condition 1.22. 	
New		<ul style="list-style-type: none"> In their recent submissions, both Transport Canada (CIAR #2298, p.14) and DFO (CIAR #2407, p.42) recommended the conditions contemplate alignment with the anticipated requirements of a <i>Species at Risk Act</i> (SARA)-compliant <i>Fisheries Act</i> Authorization. Both Transport Canada (CIAR #2298, p.3, p.13) and DFO (CIAR #2407, p.47) also acknowledge that measures to mitigate underwater noise and resulting effects on SRKW are the shared responsibility of the port authority, where such measures are within its care and control, and other federal authorities. As noted by DFO in its submission (CIAR #2407), further work is required to finalize mitigation measures and plans and DFO intends to continue to work with the port authority in this regard in the context of the port authority's application for a SARA-compliant <i>Fisheries Act</i> Authorization. It is anticipated that the SARA-compliant <i>Fisheries Act</i> Authorization will specify the measures deemed necessary by DFO to avoid jeopardizing the survival and recovery of SRKW, taking into account other measures that are being and will be implemented by other federal authorities. 	<p>The port authority suggests the following new condition:</p> <p><i>In carrying out the Designated Project, the Proponent shall collaborate with Indigenous groups (Roberts Bank), Indigenous groups (marine shipping), Transport Canada, Fisheries and Oceans Canada, and other relevant federal authorities to identify measures that might further mitigate potential adverse effects on Southern Resident Killer Whale (Orcinus orca), and shall implement feasible mitigation measures specified in any authorization for the Designated Project pursuant to the Species at Risk Act within its care and control intended to further reduce the likelihood that the construction and operation of the Designated Project will jeopardize the survival and recovery of Southern Resident Killer Whale (Orcinus orca),</i></p>
8.4	<p>The Proponent shall develop, prior to operations, in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada, a plan to address effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) due to underwater noise produced as a result of the operations of the Designated Project, including both marine shipping and operations at the marine terminal. The Proponent shall implement the plan in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada during operation. As part of the plan, the Proponent shall:</p>	<ul style="list-style-type: none"> This condition and its sub-conditions pertain to marine shipping incidental to the project and should be grouped with other conditions pertaining to incidental marine shipping (i.e., 8.7) for greater clarity. The port authority notes that the plan contemplated in this condition would be focused on managing underwater noise produced by marine shipping incidental to the project in the marine shipping area. The management of underwater noise produced by operation of the marine terminal would be addressed through the follow-up program contemplated in draft condition 8.9. The suggested addition of consultation with specified Indigenous groups is consistent with Transport Canada's and DFO's recommendation on this condition, noted in Transport Canada's submission (CIAR #2298, p.12). 	<p>The port authority suggests the following revisions:</p> <p>The Proponent shall develop, prior to operations, in consultation with <i>Indigenous groups (Roberts Bank), Indigenous groups (marine shipping), and Transport Canada</i> and to the satisfaction of Fisheries and Oceans Canada, a plan to <i>determine whether there are additional measures to mitigate the potential adverse effects to Southern Resident Killer Whale (Orcinus orca) due to underwater noise produced as a result of marine shipping incidental to the operations of the Designated Project and implement technically and economically feasible measures during operation including both marine shipping and operations at the marine terminal. The Proponent shall implement the plan in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada during operation.</i> As part of the plan, the Proponent shall:</p>
New		<ul style="list-style-type: none"> The port authority notes that the underwater noise management plan contemplated in draft condition 8.4 would be developed in consideration of the Recovery Strategy for the Northern and Southern Resident Killer Whales (<i>Orcinus orca</i>) in Canada (DFO 2018)² and the Action Plan for the Northern and Southern Resident Killer Whale (<i>Orcinus orca</i>) in Canada (DFO 2017).³ 	<p>The port authority suggests the following new sub-condition:</p> <p><i>consider the objectives and actions identified by Fisheries and Oceans Canada in the Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada and in the Action Plan for the Northern and Southern Resident Killer Whale (Orcinus orca) in Canada;</i></p>
8.4.1	<p>establish a budget for underwater noise for the operation of the Designated Project, specifying the amount, locations, and timing of underwater noise that will be generated, reduced, and/or offset, in order to meet the predicted effects to Southern Resident Killer Whales (<i>Orcinus orca</i>) due to underwater noise described in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672);</p>	<ul style="list-style-type: none"> The Government of Canada is working separately on a noise budget for the Salish Sea, using different approaches and metrics and taking into account cumulative noise sources. For clarity and to avoid confusion, it is recommended the term "noise budget" not be used in project-specific conditions. The proponent is unlikely to be able to feasibly apply the same approach or metrics to project-specific noise. 	<p>The port authority suggests this draft condition be removed and replaced with the following feasible sub-conditions:</p> <p><i>obtain, prior to the start of operation of the Designated Project, noise source levels and vessel speeds representative of container vessels calling at the Port of Vancouver;</i></p>

² DFO. 2018. Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada. Species at Risk Act Recovery Strategy Series, Fisheries & Oceans Canada, Ottawa, x + 84 pp. Available at: https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/Rs-ResidentKillerWhale-v00-2018dec-Eng.pdf.

³ DFO. 2017. Action Plan for the Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada. Species at Risk Act Action Plan Series. Fisheries and Oceans Canada, Ottawa. v + 33 pp. Available at: https://wildlife-species.canada.ca/species-risk-registry/virtual_sara/files/plans/Ap-ResidentKillerWhale-v00-2017Mar-Eng.pdf.

Condition #	Condition	Feedback / rationale	Suggested revision
		<ul style="list-style-type: none"> The proponent can, prior to the start of operation, request from the ECHO Program noise source levels and vessel speeds representative of container vessels calling at the Port of Vancouver. These noise source levels and vessel speeds would serve to model a “baseline” against which any change in noise levels (e.g., due to an increase in the average size of container vessels or a reduction in vessel speeds) would be evaluated. See related comments on draft condition 8.3.1 regarding access to ECHO Program data. The proponent also can, prior to the start of operation, monitor the number, size, and destination of container vessels calling at the Port of Vancouver. These data would serve to model a “baseline” against which a change in noise levels (e.g., due to an increase in the number of container vessels) would be evaluated. The proponent also can, prior to the start of operation, update the Transit Exposure Model used to determine sound exposure levels (i.e., predicted effects) to SRKW. The proponent also can, prior to the start of operation, update the “baseline” effect predictions provided in IR2020-3 to reflect the conditions existing at the time. These actions are captured in the new conditions suggested here, which are consistent with Transport Canada’s and DFO’s recommendation, noted in Transport Canada’s submission (CIAR #2298, p.12), that the proponent be required to establish baseline conditions based on noise levels associated with container vessels currently calling at the Port of Vancouver. The port authority notes that the registry number for the response to the minister’s IR, including IR2020-3, is #2083. 	<p><i>determine, prior to the start of operation of the Designated Project, the number, size, and destination of container vessels calling at the Port of Vancouver;</i></p> <p><i>update, prior to the start of operation of the Designated Project and in consultation with Fisheries and Oceans Canada and Transport Canada, the modelling approach developed in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 2083) to estimate sound exposure levels to Southern Resident Killer Whale (Orcinus orca) in representative locations in the area of the Salish Sea between the jurisdiction of the Vancouver Fraser Port Authority and the 12 nautical mile limit of Canada’s territorial sea transited by container vessels calling at the Port of Vancouver, considering the number, size, speed, and noise source levels of container vessels calling at the Port of Vancouver;</i></p> <p><i>update, prior to the start of operation of the Designated Project, the predicted effects to Southern Resident Killer Whales (Orcinus orca) due to underwater noise described in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 2083), if the noise source levels and vessel speeds referred to in condition 8.4.X [the new sub-condition suggested above] and the number, size, and destination of container vessels referred to in condition 8.4.X [the new sub-condition suggested above] are different from those used in preparing IR2020-3.</i></p>
New		<ul style="list-style-type: none"> The predicted effects on SRKW due to underwater noise are stated in terms of sound exposure levels. The metrics used to determine sound exposure levels were established in IR2020-3 and can be specified in the condition for certainty. The use of these metrics will allow comparison of the annually modelled sound exposure levels with the “baseline” predicted sound exposure levels. The port authority can, in the plan to be developed and implemented, articulate the threshold(s) or limit(s) that would trigger adaptive management measures to be implemented. The predicted effects with the project (compared to future conditions without the project) described in IR2020-3, updated prior to the start of operation as suggested above, would effectively serve as the “limit” that should not be exceeded. The suggested additional sub-conditions are consistent with and would enable implementation of DFO’s recommendation in their submission during the public comment period (CIAR #2407, p.46) that “the Project decision statement include enforceable conditions requiring additional mitigation measures be implemented should underwater noise from container vessels calling the Port of Vancouver exceed the predictions for the most realistic vessel scenario of 16 to 17 transits per week.” 	<p>The port authority suggests the following additional sub-conditions:</p> <p><i>establish the metrics to be used to determine sound exposure levels to Southern Resident Killer Whale (Orcinus orca) due to marine shipping incidental to the Designated Project, which shall include annual time-averaged equivalent continuous sound level and annual exceedance hours above the behavioural threshold established pursuant to condition 8.2.1 or other equivalent metrics determined in consultation with Fisheries and Oceans Canada;</i></p> <p><i>establish thresholds based on the predicted effects described in IR2020-3 or, if the predicted effects have been updated pursuant to condition 8.4.X [the new sub-condition suggested above], the updated predicted effects, that would, if exceeded, require the Proponent to implement modified or additional mitigation measure(s);</i></p>
		<ul style="list-style-type: none"> The port authority, in its response to IR2020-3, identified and assessed the effectiveness of additional contingency mitigation measures that could further mitigate underwater noise levels in the marine shipping area and any resulting effects on SRKW. In its recent submission (CIAR #2298), Transport Canada noted that it “believes that these solutions will be feasible at ensuring that marine shipping-related underwater vessel noise impacts as a result of Roberts Bank Terminal 2 are mitigated or avoided throughout the operational life cycle of the project. Furthermore, these solutions, and the proposed draft 	<p>The port authority suggests the following additional sub-condition:</p> <p><i>identify, in consultation with Indigenous groups (Roberts Bank), Indigenous groups (marine shipping), Transport Canada, Fisheries and Oceans Canada, and other relevant federal authorities, modified or additional measures to mitigate potential effects on Southern Resident Killer Whale (Orcinus orca), including mitigation measures that may be implemented by the Government of Canada;</i></p> <p><i>update the identified modified or additional measures five years after the start of operation or when full operation is reached, whichever occurs earlier, in</i></p>

Condition #	Condition	Feedback / rationale	Suggested revision
		<p>conditions, are appropriate as they target the environmental impact of the vessel traffic (underwater noise) rather than the activity itself."</p> <ul style="list-style-type: none"> In its recent submission (CIAR #2407), DFO stated that it " considers the contingency mitigation put forward by the Proponent as potential offsets for potential increases in underwater noise due to additional container vessels transiting to the Port of Vancouver." This suggested condition is consistent with DFO's observation that ongoing work by DFO to evaluate the effectiveness of measures related to TMX "could inform the approach for addressing underwater noise from other commercial vessel traffic, such as vessels transiting to Roberts Bank Terminal 2" in future (CIAR #2407, p.45). This suggested condition is also consistent with Transport Canada's recommendation that the underwater noise management plan include the identification of additional mitigation measures to be implemented (CIAR #2298, p.12). The suggested condition is also consistent with comments by Transport Canada in their recent submission regarding the need for collaboration to address underwater noise (CIAR #2298, p. 13) and Transport Canada's "commitment to continue to work with the proponent on implementing additional mitigation and/or adaptive management measures" (CIAR #2298, p.3). The second suggested condition is consistent with Transport Canada's recommendation to include provision for updating the plan to ensure new effective measures are integrated (CIAR #2298, p.13). This suggested sub-condition would effectively replace draft condition 8.4.4. 	<p><i>consultation with Indigenous groups (Roberts Bank), Indigenous groups (marine shipping), Transport Canada, Fisheries and Oceans Canada;</i></p>
8.4.2	<p>monitor underwater noise levels and conduct analysis in order to ensure that the underwater noise budget established in condition 8.4.1 is being met;</p>	<ul style="list-style-type: none"> It is not technically feasible to monitor in situ noise levels in the marine shipping area to determine the noise contribution of the project. It is, however, feasible to monitor the number, size, and destination of container vessels calling at RBT2 and the Port of Vancouver and to obtain representative noise source levels (i.e., noise profiles) and vessel speeds and to use the data to model the noise contribution of the project and the associated potential acoustic effect to SRKW. This is the approach taken with the Transit Exposure Model (Appendix IR2020-3-I) developed to respond to the minister's IR. The port authority therefore recommends these conditions refer to parameters the proponent can obtain and monitor and refer to the use of models to evaluate potential effects. See related comments on draft condition 8.3.1 regarding acquisition of data from the ECHO Program. As noted above in relation to draft condition 8.4.1, the port authority considers a "noise budget" to be inappropriate for this purpose. Rather, the port authority considers the effects predicted in IR2020-3, updated as suggested above, to constitute the "limit" against which future changes should be compared and which would, if exceeded, trigger a requirement to implement modified or additional mitigation. Based on current projections (Mercator International 2021, Appendix IR2020-3-B), the RBT2 terminal is assumed to be operating at the design capacity, of on average 2.4 million TEUs per year, by 2040 and the redistribution of container vessel traffic calling at the Port of Vancouver will have stabilized; hence, no further project-related change in container vessel traffic would be expected beyond this time period. Further revisions and additional sub-conditions are suggested below to implement this feasible approach and to ensure that, if the updated effect predictions are exceeded as a result of marine shipping incidental to the 	<p>The port authority suggests this draft condition be removed and replaced with the following feasible sub-conditions:</p> <p><i>obtain annually during operation, noise source levels and vessel speeds representative of container vessels calling at the Port of Vancouver;</i></p> <p><i>monitor the number, size, and destination of container vessels calling at the Port of Vancouver;</i></p> <p><i>determine annually, starting in the first year of terminal operation and continuing until it can be demonstrated that the terminal has reached full operation and redistribution of container vessel traffic in the Port of Vancouver has stabilized, using the model updated pursuant to condition 8.4.X [the new sub-condition suggested above], sound exposure levels to Southern Resident Killer Whale (Orcinus orca) in representative locations in the area of the Salish Sea between the jurisdiction of the Vancouver Fraser Port Authority and the 12 nautical mile limit of Canada's territorial sea transited by container vessels calling at the Port of Vancouver, considering the number, size, speed, and noise source levels of container vessels calling at the Designated Project and at the Port of Vancouver; and</i></p>

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8.4.3	implement modified or additional mitigation measures, and report to the Agency, Transport Canada, and Fisheries and Oceans, if the results of the monitoring and modelling referred to in condition 8.4.2 demonstrate that levels of underwater noise are nearing exceedance of the budget established in condition 8.4.1. Measures may include:	<p>project, resulting in adverse environmental effects on SRKW, measures are implemented by the appropriate authority.</p> <ul style="list-style-type: none"> As noted above, the port authority understands that these conditions are intended to be focused on mitigating the contribution of the project to underwater noise and potential effects on SRKW. The port authority notes that analysis would be required to evaluate whether these project-related changes result in increases in acoustic effects to SRKW. This analysis should be reflected in the conditions. With respect to the hierarchy of implementation contemplated by draft conditions 8.4.3 and 8.4.4, the port authority agrees with Transport Canada that the implementation of measures should be prioritized according to what is most effective, rather than by who is implementing the measure(s). "Transport Canada is of the view that contingency or adaptive management measures should not be implemented based on the proposed hierarchy, rather by the most effective response to the measurable impact (if it occurs)" (CIAR #2298, p.13). The suggested conditions here integrate this approach. The port authority notes that other relevant federal authorities have legislative authority and ability to implement mitigation measures in relation to marine shipping in the marine shipping area. Both Transport Canada and DFO in their submissions to the public comment period (CIAR #2298 and CIAR #2407, respectively) confirmed and clarified their responsibilities and the need for a regional approach. In particular, the port authority emphasizes that it can only implement measures that are within its care and control. The port authority notes that this should be reflected in the conditions. This is consistent with DFO's acknowledgement that this condition should require the proponent to implement modified or additional measures within its control (CIAR #2407, p.47). The suggested sub-conditions are also consistent with Transport Canada's "commitment to continue to work with the proponent on implementing additional mitigation and/or adaptive management measures" (CIAR #2298, p.3). The term "nearing exceedance" used in draft condition 8.4.3 is unclear and may create difficulty in determining when mitigation measures need to be implemented. As noted above, the suggested additional sub-conditions are consistent with and would enable implementation of DFO's recommendation in their submission during the public comment period (CIAR #2407, p.46) that "the Project decision statement include enforceable conditions requiring additional mitigation measures be implemented should underwater noise from container vessels calling the Port of Vancouver exceed the predictions for the most realistic vessel scenario of 16 to 17 transits per week." This approach is also consistent with Transport Canada's and DFO's recommendation, noted in Transport Canada's submission (CIAR #2298, p.12), that the conditions reflect a performance-based approach that addresses unanticipated effects by implementing identified feasible mitigation measures. 	<p>The port authority suggests this draft condition be removed and replaced with the following feasible sub-conditions:</p> <p><i>if the results of the modelling referred to in condition 8.4.X [the new sub-condition suggested above] demonstrate that levels of sound exposure are exceeding the levels predicted in IR2020-3 with the project (Canadian Impact Assessment Registry Reference Number 80054, Document Number 2083), or, if the predicted effects have been updated pursuant to condition 8.4.X [the new sub-condition suggested above in relation to draft condition 8.4.1], the updated predicted effects with the project, determine whether the exceedance is attributable to marine shipping incidental to the Designated Project and is resulting in adverse acoustic effects to Southern Resident Killer Whale (Orcinus orca);</i></p> <p><i>if the analysis pursuant to condition 8.4.X [the preceding new sub-condition] indicates that marine shipping incidental to the Designated Project is the cause of the exceedance and the exceedance is resulting in adverse acoustic effects to Southern Resident Killer Whale (Orcinus orca), collaborate with Indigenous groups (Roberts Bank), Indigenous groups (marine shipping), Transport Canada, Fisheries and Oceans Canada, and other relevant federal authorities to identify the modified or additional measures that would most effectively mitigate those effects;</i></p> <p><i>if the modified or additional measures that are determined pursuant to condition 8.4.X [the preceding new sub-condition] to be the most effective to mitigate acoustic effects to Southern Resident Killer Whale (Orcinus orca) are within the Proponent's care and control, the Proponent shall implement them. The Proponent shall submit these measures to the Agency prior to implementing them.</i></p>
8.4.3.1	mandatory speed reductions for vessels and/or tugs in addition to those required pursuant to condition 8.3;	<ul style="list-style-type: none"> The port authority can currently only implement mandatory speed reductions within its jurisdiction as acknowledged in DFO's submission to the public comment period (CIAR #2407, p.47). Further, for competitive fairness, any mandatory speed reductions imposed within port jurisdiction would have to apply to all vessels, not just 	The port authority suggests this condition be removed and the measure addressed as appropriate in the Whole of Government Response.

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		<p>those that call at or serve RBT2, which would make such a requirement port-wide and not project-specific.</p> <ul style="list-style-type: none"> The establishment of mandatory speed reductions in the marine shipping area is within the legislative authority of Transport Canada (as acknowledged by them in their recent submission (CIAR #2298, p.4); if the Government of Canada considers mandatory speed reductions to be appropriate and necessary to mitigate the effects of underwater noise produced by marine shipping on SRKW, its ability to implement that measure should be reflected in the Whole of Government Response. With the revisions and new sub-conditions suggested above, modified and additional measures would be identified prior to the start of operation, including measures that could be implemented by other federal authorities, which may include additional speed reductions. Reduction of tug speed during project operation is addressed in relation to suggested additions to draft condition 8.5. 	
8.4.3.2	additional offsets for underwater noise in Southern Resident Killer Whale (<i>Orcinus orca</i>) critical habitat in the Salish Sea;	<ul style="list-style-type: none"> The port authority notes that feasible mitigation measures within the care and control of the port authority would be identified through the new sub-conditions suggested above, which may include additional offsets. 	The port authority suggests this sub-condition be removed, as it is addressed in the new sub-conditions suggested above.
8.4.3.3	limits on container vessel calls to the Designated Project; and	<ul style="list-style-type: none"> As noted previously, limiting the number of container vessel calls to RBT2 may not affect the number of container vessel calls to the Port of Vancouver, as container vessels prevented from calling at RBT2 may choose to call at another Port of Vancouver terminal instead. Moreover, limiting the number of container vessel calls to either RBT2 or the Port of Vancouver could have significant economic repercussions for Canada and may not be economically feasible. Transport Canada considered whether a limit or cap on the number of vessels calling at RBT2 might be effective and feasible mitigation to manage impacts associated with marine shipping activities. As stated in its submission during the public comment period on these draft conditions (CIAR #2298, pg. 11), "Transport Canada is of the view that this would not be a good solution." Transport Canada went on to state, "a cap or limit on the number of vessels calling at the proposed terminal to 260 (maximum terminal capacity) would not have any bearing on the number of container vessels transiting the shipping lanes and would not mitigate marine shipping related impacts including the existing impacts on Indigenous rights." Transport Canada also stated, "[a] cap or limit on the number of vessels would run at cross-purposes to the government's trade diversification strategy, which relies on marine shipping to support Canadian exports and bring goods to Canada. It could signal to Canada's trading partners that Canada is not open for business and would run counter to federal investments over the last 15 years to support the Vancouver Fraser Port Authority in becoming a priority trade gateway for Canadian exporters and North American supply chains. Moreover, should a cap impede the efficiency and fluidity of container traffic in the broader area, or inadvertently contribute to port congestion during periods of minor fluctuations in traffic, it may have the unintended consequence of contributing to other impacts including additional underwater noise or disturbances" (CIAR #2298, pg. 11). For these reasons, the port authority suggests this condition be removed. 	The port authority suggests this condition be removed.
8.4.4	identify measures, out of the care and control of the Proponent, that could be undertaken by relevant authorities in order to achieve the budget for underwater noise established in condition 8.4.1 or to limit effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) to those predicted in IR2020-3	<ul style="list-style-type: none"> The port authority notes that the substance of this draft condition is included in its suggested revisions to earlier conditions above. 	The port authority suggests this condition be removed, in light of the revisions and new sub-conditions suggested above.

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	(Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672) should the Proponent be of the opinion that measures developed and implemented pursuant to condition 8.4.3 have been exhausted.		
8.5	The Proponent shall implement, in consultation with Transport Canada and Fisheries and Oceans Canada, technically and economically feasible technologies for reducing underwater noise related to berthing activities. In doing so, the Proponent shall:	<ul style="list-style-type: none"> The port authority notes that this condition and its sub-conditions pertain to underwater noise in the area of the marine terminal during terminal operation. For clarity, the port authority suggests that all conditions pertaining to underwater noise related to terminal operation be kept together. 	The port authority suggests this condition and its sub-conditions be moved before what is now draft condition 8.3.
New		<ul style="list-style-type: none"> In Appendix IR2020-3 (CIAR #2083), the port authority evaluated reducing tug travel speeds from 8 knots to 5 knots when transiting from the tug basin to the berth area to mitigate acoustic effects to SRKW. The port authority determined the benefit of this mitigation to be small (~0.4 minutes/whale/year). The port authority acknowledges DFO's suggestion (CIAR #2407, p.44) that this measure be implemented if feasible. The port authority notes that safety of marine vessel operations will be paramount. 	The port authority suggests the following new sub-condition: <i>require tugs to reduce speeds when transiting between the tug basin and the arrival and berth areas when Southern Resident Killer Whale (Orcinus orca) are present to mitigate acoustic effects to Southern Resident Killer Whale (Orcinus orca), if feasible and safe to do so.</i>
8.5.1	evaluate, prior to operation, the effectiveness of technologies to reduce underwater noise associated with berthing activities, including the use of electric tugs. The Proponent shall determine, as part of its evaluation, whether the use of the technology would increase the extent to which environmental effects, other than underwater noise, are adverse. The Proponent shall submit the evaluation to the Agency one year prior to the start of operation and shall include the sources of information and methodology used;	<ul style="list-style-type: none"> See comment on parent condition 8.5. 	
8.5.2	upon completion of the initial evaluation referred to in condition 8.5.1, conduct a review every three years in order to identify and evaluate any new and emerging underwater noise reduction technologies for berthing activities. The Proponent shall conduct a review until such time that the Proponent has determined, in consultation with Transport Canada and Fisheries and Oceans Canada, that a review is no longer warranted. The results of the review shall be included as part of the annual report referred to condition 2.10; and	<ul style="list-style-type: none"> See comment on parent condition 8.5. 	
8.5.3	implement any technically and economically feasible new or emerging underwater noise reduction technologies for berthing activities determined by the Proponent, as part of a review conducted pursuant to condition 8.5.2, to be effective at reducing underwater noise associated with berthing activities, without increasing the extent to which other environmental effects are adverse, and to meet requirements for safe operations. The Proponent shall submit these measures to the Agency prior to implementing them.	<ul style="list-style-type: none"> See comment on parent condition 8.5. 	
8.6	The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada, Canadian Coast Guard, Pacific Pilotage Authority, and other relevant authorities, procedures to delay, where necessary, the daytime departure of container vessels calling on the Designated Project to mitigate effects to Southern Resident Killer Whale (<i>Orcinus orca</i>). The procedures shall include communication protocols, monitoring and criteria for determining whale presence, and safety and regulatory requirements. As part of the development of the procedures, the Proponent shall take into account the potential impacts of the implementation of the criteria and procedures on the Proponent's tenants and users of the Proponent's facilities at Roberts Bank.	<ul style="list-style-type: none"> The port authority notes that this condition and its sub-conditions pertain to underwater noise in the area of the marine terminal during terminal operation. For clarity, the port authority suggests that all conditions pertaining to underwater noise related to terminal operation be kept together. See related comment on draft condition 8.5. See also comments on draft condition 1.22. 	The port authority suggests this condition be moved before what is now draft condition 8.3. The port authority suggests the following revision: The Proponent shall develop and implement, in consultation with Indigenous groups (<i>Roberts Bank</i>), Fisheries and Oceans Canada, Canadian Coast Guard, Pacific Pilotage Authority, and other relevant authorities, procedures to delay, where necessary, the daytime departure of container vessels calling on the Designated Project to mitigate effects to Southern Resident Killer Whale (<i>Orcinus orca</i>). The procedures shall include communication protocols, monitoring and criteria for determining whale presence, and safety and regulatory requirements. As part of the development of the procedures, the Proponent shall take into account the potential impacts of the implementation

Condition #	Condition	Feedback / rationale	Suggested revision
			of the criteria and procedures on the Proponent's tenants and users of the Proponent's facilities at Roberts Bank.
New		<ul style="list-style-type: none"> In its response to IR2020-3, the port authority evaluated delaying night-time departure and determined it to be not feasible. The port authority acknowledges DFO's recommendation to further explore the feasibility of measures to mitigate the exposure of SRKW to underwater noise at night in the vicinity of the marine terminal during project operation (CIAR #2407, p.44). The port authority notes that further work would be required to confirm whether the measures identified by DFO are feasible prior to their implementation. 	The port authority suggests the additional sub-condition: <i>The Proponent shall evaluate the technical and economic feasibility of measures to mitigate exposure of Southern Resident Killer Whale (Orcinus orca) to underwater noise attributable to the Designated Project at night in the vicinity of the marine terminal, including the feasibility of a real-time passive acoustic monitoring system and delayed unberthing at night. If any such measures are feasible and effective at reducing potential acoustic effects to Southern Resident Killer Whale (Orcinus orca), the Proponent shall implement them in consultation with Fisheries and Oceans Canada.</i>
8.7	The Proponent shall distribute, prior to and throughout operation, the marine mammal awareness pamphlet Marine Mammals of the Roberts Bank Area and Mariner's Guide to Whales, 28 Dolphins, Porpoises of Western Canada, or any future equivalent document, to marine pilots working within the Port of Vancouver.	<ul style="list-style-type: none"> This condition pertains to marine shipping incidental to the project and should be grouped with other conditions pertaining to incidental marine shipping (i.e., 8.4) for greater clarity. 	
8.8	The Proponent shall document Indigenous knowledge it has received and how it was considered in the development and implementation of measures to mitigate effects on Southern Resident Killer Whales (<i>Orcinus orca</i>) throughout all phases of the Designated Project. The Proponent shall respect Indigenous knowledge protocols and shall keep Indigenous knowledge it has received confidential, if requested, and/or if required by legal and regulatory requirements.	<ul style="list-style-type: none"> This condition should be more clearly focused on the effects of the project. This condition is of general applicability and should be grouped with other conditions of general applicability (i.e., 8.10 to 8.13) for greater clarity. 	The port authority suggests the following revision: The Proponent shall document Indigenous knowledge it has received and how it was considered in the development and implementation of measures to mitigate effects of <i>the Designated Project</i> on Southern Resident Killer Whales (<i>Orcinus orca</i>) throughout all phases of the Designated Project. The Proponent shall respect Indigenous knowledge protocols and shall keep Indigenous knowledge it has received confidential, if requested, and/or if required by legal and regulatory requirements.
8.9	The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as a result of operation of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	<ul style="list-style-type: none"> The port authority notes that this condition and its sub-conditions pertain to underwater noise in the area of the marine terminal during terminal operation. For clarity, the port authority suggests that all conditions pertaining to underwater noise related to terminal operation be kept together (i.e., 8.3, 8.5, and 8.6) and that this condition refer more clearly to operation of the marine terminal, as shown. For consistency with other conditions that require FUPs and refer to the tables in Appendix G of the Federal Review Panel Report, the port authority suggests this condition refer to the outline of the FUP element for underwater noise during terminal operation provided in Table C13 of that appendix. Additional revisions are suggested below, consistent with Transport Canada's recommendation that the conditions include clarification of follow-up requirements (CIAR #2298, p.13). See also comments on draft condition 1.22. 	The port authority suggests this condition be moved before what is now draft condition 8.3. The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and Indigenous groups (<i>Roberts Bank</i>), a follow-up program <i>as described in Table C13 of Appendix G in the Federal Review Panel Report</i> to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as a result of operation of the <i>marine terminal Designated Project</i> . The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
New		<ul style="list-style-type: none"> The port authority notes that the follow-up program contemplated in draft condition 8.9 would be developed in consideration of the Recovery Strategy for the Northern and Southern Resident Killer Whales (<i>Orcinus orca</i>) in Canada (DFO 2018) and the Action Plan for the Northern and Southern Resident Killer Whale (<i>Orcinus orca</i>) in Canada (DFO 2017). 	The port authority suggests the following new sub-condition: <i>consider the objectives and actions identified by Fisheries and Oceans Canada in the Recovery Strategy for the Northern and Southern Resident Killer Whales (Orcinus orca) in Canada and in the Action Plan for the Northern and Southern Resident Killer Whale (Orcinus orca) in Canada;</i>
New		<ul style="list-style-type: none"> The predicted effects on SRKW due to underwater noise are stated in terms of sound exposure levels. The metrics used to determine sound exposure levels were established in IR2020-3 and can be specified in the condition for certainty. The use of these metrics will allow comparison of the modelled sound exposure levels with the "baseline" predicted sound exposure levels. The port authority can, in the FUP to be developed and implemented, articulate the threshold(s) or limit(s) that would trigger adaptive 	The port authority suggests the following additional sub-conditions: <i>establish the metrics to be used to determine sound exposure levels to Southern Resident Killer Whale (Orcinus orca) due to operation of the marine terminal, which shall include annual time-averaged equivalent continuous sound level or other equivalent metrics determined in consultation with Fisheries and Oceans Canada;</i>

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		<p>management measures to be implemented. The predicted effects of the project described in IR2020-3 would effectively serve as the “limit” that should not be exceeded.</p> <ul style="list-style-type: none"> The suggested additional sub-conditions are consistent with and would enable implementation of DFO’s recommendation in their submission during the public comment period (CIAR #2407, p.43) that “the Project decision statement include enforceable conditions that hold the Proponent accountable to its updated underwater noise predictions...” 	<p><i>establish thresholds based on the predicted effects described in IR2020-3 that would, if exceeded, require the Proponent to implement modified or additional mitigation measure(s);</i></p>
8.9.1	<p>monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (<i>Orcinus orca</i>). The Proponent shall conduct monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring;</p>	<ul style="list-style-type: none"> See comments on parent condition 8.9 regarding re-numbering. For greater clarity during implementation, the port authority suggests separating the monitoring requirements from the modelling requirements. 	<p>The port authority suggests the following revisions: monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (<i>Orcinus orca</i>). The Proponent shall conduct hydrophone monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring;</p>
<i>New</i>		<ul style="list-style-type: none"> As suggested above in relation to draft condition 8.9.1, the port authority suggests separating the modelling requirements from the monitoring requirements. The port authority would use the models developed for IR2020-3 to implement this condition. 	<p>The port authority suggests the following new sub-condition: <i>determine, using the underwater noise data collected during monitoring pursuant to condition 8.9.1 and the acoustic models developed in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 2083), estimated sound exposure levels for Southern Resident Killer Whale (<i>Orcinus orca</i>) due to operation of the marine terminal;</i></p>
8.9.2	<p>evaluate and determine whether meeting the underwater noise budget established pursuant to condition 8.4 is mitigating effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672); and</p>	<ul style="list-style-type: none"> See comments on parent condition 8.9 regarding re-numbering. As noted above, the predicted effects described in IR2020-3 would effectively serve as the “limit” against which future changes should be compared and which would, if exceeded, trigger a requirement to implement modified or additional mitigation. 	<p>The port authority suggests the following revision: evaluate and determine whether meeting the underwater noise estimated sound exposure levels generated by operation of the marine terminal are budget established pursuant to condition 8.4 is mitigating effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 2083); and</p>
<i>New</i>		<ul style="list-style-type: none"> For greater certainty, the port authority suggests the conditions for this FUP include requirements to identify and implement appropriate mitigation measures, similar to the conditions suggested above in relation to the underwater noise management plan. This approach is consistent with Transport Canada’s and DFO’s recommendation, noted in Transport Canada’s submission (CIAR #2298, p.12), that the conditions reflect a performance-based approach that addresses unanticipated effects by implementing identified feasible mitigation measures. 	<p>The port authority suggests the following new sub-conditions: <i>if the results of the modelling referred to in condition 8.9.X [the new sub-condition suggested above under 8.9.1] demonstrate that levels of sound exposure are exceeding the levels predicted in IR2020-3 with the project (Canadian Impact Assessment Registry Reference Number 80054, Document Number 2083), collaborate with Indigenous groups (Roberts Bank), Indigenous groups (marine shipping), Transport Canada, Fisheries and Oceans Canada, and other relevant federal authorities to determine whether modified or additional measures will be required to mitigate any potential adverse effects on Southern Resident Killer Whale (<i>Orcinus orca</i>), and identify those measures;</i> <i>if the modified or additional measures that are determined pursuant to condition 8.9.X [the preceding new sub-condition] to be the most effective to mitigate acoustic effects to Southern Resident Killer Whale (<i>Orcinus orca</i>) are within the Proponent’s care and control, the Proponent shall implement them. The Proponent shall submit these measures to the Agency prior to implementing them.</i></p>
8.9.3	<p>monitor the effectiveness of any technologies implemented pursuant to condition 8.5.</p>	<ul style="list-style-type: none"> See comment on draft condition 8.5 regarding re-numbering. If that draft condition is re-numbered as suggested, the reference in this draft condition should be updated accordingly. 	
8.10	<p>The Proponent shall sign on, as a party to the Species at Risk Act Section 11 Conservation Agreement to Support the recovery of the Southern Resident Killer Whale, to an additional five year term of the agreement, or equivalent, if the other parties of the agreement also agree.</p>	<ul style="list-style-type: none"> No comment. 	

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8.11	The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at effective management and recovery of the Southern Resident Killer Whale (<i>Orcinus orca</i>), including the Oceans Protection Plan, the Whales Initiative, or equivalent, and any other initiative supporting the recovery objectives for the Southern Resident Killer Whale (<i>Orcinus orca</i>) outlined in the Southern Resident Killer Whale Action Plan.	<ul style="list-style-type: none"> There is a minor error in the title of the referenced action plan. 	The port authority suggests the following revision: The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at effective management and recovery of the Southern Resident Killer Whale (<i>Orcinus orca</i>), including the Oceans Protection Plan, the Whales Initiative, or equivalent, and any other initiative supporting the recovery objectives for the Southern Resident Killer Whale (<i>Orcinus orca</i>) outlined in the <i>Northern and</i> Southern Resident Killer Whale Action Plan.
8.12	The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at managing underwater noise due to commercial vessel traffic.	<ul style="list-style-type: none"> No comment. 	
8.13	The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at identifying the portions of the Salish Sea where marine shipping overlaps spatially and temporally with Southern Resident Killer Whale (<i>Orcinus orca</i>) habitat use.	<ul style="list-style-type: none"> No comment. 	
9	Terrestrial vegetation and wetlands		
9.1	The Proponent shall implement site-specific measures to monitor and control invasive plant species prior to and during construction, and for a minimum period of five years following construction of offsetting habitats, including by:	<ul style="list-style-type: none"> For clarity, definition of the term “invasive plant species” is recommended. See new definition suggested following draft condition 1.24. 	
9.1.1	limiting, in consultation with British Columbia’s Ministry of Forests, Lands, Natural Resource Operations and Rural Development, seed dispersal of English cordgrass (<i>Spartina anglica</i>) prior to and during construction;	<ul style="list-style-type: none"> No comment. 	
9.1.2	managing and disposing, in consultation with British Columbia’s Ministry of Forests, Lands, Natural Resource Operations and Rural Development, of existing English cordgrass (<i>Spartina anglica</i>) within the Designated Project area; and	<ul style="list-style-type: none"> No comment. 	
9.1.3	managing and disposing of invasive plant species found within offsetting habitats constructed as part of the Designated Project.	<ul style="list-style-type: none"> No comment. 	
9.2	The Proponent shall develop, prior to construction, and in consultation with Environment and Climate Change Canada, British Columbia’s Ministry of Forests, Lands, Natural Resource Operations and Rural Development, and Indigenous groups, a wetland compensation plan, which shall consider the principles outlined in Environment and Climate Change Canada’s Operational Framework for Conservation Allowances and meet the objective of no net loss of the Federal Policy on Wetland Conservation on Federal Lands (Government of Canada, 1991), and include measures to compensate for residual adverse environmental effects on wetland functions caused by the Designated Project that cannot be avoided or minimized and that are not already accounted for as part of the offsetting plan(s) required pursuant to condition 7.11. The Proponent shall begin implementing the compensation plan during construction. As part of the implementation of the compensation plan, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. The port authority suggests using language more consistent with the definition of “mitigation measures” in CEAA 2012 (see also comments on draft condition 1.29). 	The port authority suggests the following revision: The Proponent shall develop, prior to construction, and in consultation with Environment and Climate Change Canada, British Columbia’s Ministry of Forests, Lands, Natural Resource Operations and Rural Development, and Indigenous groups (<i>Roberts Bank</i>), a wetland compensation plan, which shall consider the principles outlined in Environment and Climate Change Canada’s Operational Framework for Conservation Allowances and meet the objective of no net loss of the Federal Policy on Wetland Conservation on Federal Lands (Government of Canada, 1991), and include measures to compensate for residual adverse environmental effects on wetland functions caused by the Designated Project that cannot be avoided or <i>reduced minimized</i> and that are not already accounted for as part of the offsetting plan(s) required pursuant to condition 7.11. The Proponent shall begin implementing the compensation plan during construction. As part of the implementation of the compensation plan, the Proponent shall:
9.2.1	determine the compensation area required for each wetland and its associated functions remaining after the implementation of the offsetting requirements set out in the offsetting plan(s) referred to in condition 7.11 and that must be included in the wetland compensation plan;	<ul style="list-style-type: none"> No comment. 	
9.2.2	delineate, based on field data, all wetland habitat that will be lost as a result of the Designated Project;	<ul style="list-style-type: none"> No comment. 	

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9.2.3	identify habitat suitable to be used as compensation for the lost wetland habitat referred to in 9.2.2, including by prioritizing wetlands within the local assessment area. For wetlands located outside the local assessment area, the Proponent shall favor sites located as close to the Designated Project as possible and that reflect equivalent wetland functions to those that are lost;	<ul style="list-style-type: none"> No comment. 	
9.2.4	prioritize wetland restoration over enhancement and wetland enhancement over creation;	<ul style="list-style-type: none"> No comment. 	
9.2.5	take into account time lags, technical limitations, and uncertainty when meeting the objective of no net loss as per the Federal Policy on Wetland Conservation on Federal Lands (Government of Canada, 1991);	<ul style="list-style-type: none"> No comment 	
9.2.6	use wetland plant species native to the Designated Project area, of importance to Indigenous groups, and of value to migratory birds, including plant species salvaged in condition 9.3 if technically feasible; and	<ul style="list-style-type: none"> It may not be feasible in every instance to use native species that are <u>also</u> of importance to Indigenous groups <u>and</u> of value to migratory birds. The technical feasibility caveat should apply more broadly, not just to the use of plant species salvaged as contemplated in draft condition 9.3. See also comments on draft condition 1.22. 	The port authority suggests the following revision: Use, <i>if technically feasible</i> , wetland plant species native to the Designated Project area, of importance to Indigenous groups (<i>Roberts Bank</i>), and of value to migratory birds, including plant species salvaged in condition 9.3 if technically feasible ; and
9.2.7	include intertidal marsh habitat offsets to promote the growth of native species that would compensate for the loss and degradation of ecological communities listed as red or blue by the British Columbia Conservation Data Centre identified in figure 11-5 of the Federal Review Panel Report resulting from the expanded causeway.	<ul style="list-style-type: none"> No comment. 	
9.3	The Proponent shall, in consultation with Indigenous groups, salvage and transplant native plant species, including ecological communities listed as red or blue by the British Columbia Conservation Data Centre and those of interest to Indigenous groups, prior to clearing vegetation within wetland habitats. The Proponent shall relocate salvaged plants to reclaimed areas or compensation habitats referred to in condition 9.2, if technically feasible. The Proponent shall develop, in consultation with Indigenous groups, criteria in order to evaluate the success of the transplantation.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall, in consultation with Indigenous groups (<i>Roberts Bank</i>), salvage and transplant native plant species, including ecological communities listed as red or blue by the British Columbia Conservation Data Centre and those of interest to Indigenous groups (<i>Roberts Bank</i>), prior to clearing vegetation within wetland habitats. The Proponent shall relocate salvaged plants to reclaimed areas or compensation habitats referred to in condition 9.2, if technically feasible. The Proponent shall develop, in consultation with Indigenous groups (<i>Roberts Bank</i>), criteria in order to evaluate the success of the transplantation.
9.4	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, Natural Resources Canada, British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Tsawwassen First Nation, Musqueam, and other Indigenous groups, a follow-up program to determine the effectiveness of the wetland compensation plan referred to in condition 9.2, and verify the accuracy of the environmental assessment as it pertains to the effects of the Designated Project on wetlands. The Proponent shall consider the implementation of the offsetting conducted pursuant to condition 7.11 and associated follow-up program when implementing the follow-up program and shall implement it in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	<ul style="list-style-type: none"> For clarity and consistency with other conditions, the scope of this condition and its sub-conditions should be focused on the project components that are predicted to potentially affect wetlands. See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, Natural Resources Canada, British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Tsawwassen First Nation, Musqueam, and other <i>Indigenous groups within the</i> Indigenous groups (<i>Roberts Bank</i>), a follow-up program to determine the effectiveness of the wetland compensation plan referred to in condition 9.2, and verify the accuracy of the environmental assessment as it pertains to the effects of the Designated Project <i>marine terminal, the widened causeway, and the expanded tug basin</i> on wetlands. The Proponent shall consider the implementation of the offsetting conducted pursuant to condition 7.11 and associated follow-up program when implementing the follow-up program and shall implement it in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
9.4.1	establish performance standards for wetland functions, including criteria by which functions will be measured;	<ul style="list-style-type: none"> No comment. 	
9.4.2	monitor, using a qualified professional, wetland compensation habitats, annually from the start of compensation and for five years and every ten years thereafter until performance standards have been met;	<ul style="list-style-type: none"> The port authority notes that the frequency of monitoring of offsetting habitat will be determined in the final offsetting plan, to be developed in consultation with DFO during the <i>Fisheries Act</i> Authorization regulatory permitting process. In order to avoid a potential conflict between this condition and a future <i>Fisheries Act</i> Authorization, this condition should 	The port authority suggests the following revision: monitor, using a qualified professional, wetland compensation habitats <i>that are not included in the offsetting plan required pursuant to condition 7.11, annually from the start of compensation and for five years and every ten years thereafter at the same frequency as monitoring of offsetting habitats</i>

Condition #	Condition	Feedback / rationale	Suggested revision
		<p>not specify monitoring frequency for any wetland compensation habitats included in the offsetting plan.</p> <ul style="list-style-type: none"> As outlined in IR2020-1.2 (CIAR #2083), offsetting habitats are expected to meet performance standards by Year 7, if not earlier. Subject to consultation with DFO and Indigenous groups, the port authority is planning to monitor the effectiveness of RBT2 offsetting habitats over a timeframe of 10 years following their construction completion, with monitoring and reporting activities occurring in years 1, 2, 3, 5, 7, and 10 (or until such time as offset habitat effectiveness is considered to have been achieved through communication with DFO). This monitoring approach provides for a longer potential monitoring timeframe than the 5 years that has typically been prescribed historically, while generally maintaining overall monitoring effort. The front-end loading of the monitoring effort in the years immediately following offsetting habitat construction allows for more intensive monitoring during the period when any issues potentially requiring remedial action would be expected to arise. Once offsetting habitats have met performance standards, ongoing monitoring is not expected to be warranted. 	<p><i>determined in the Fisheries Act Authorization</i> until performance standards have been met;</p>
9.4.3	<p>monitor the effects of the Designated Project on wetlands predicted to be affected by the Designated project, including:</p>	<ul style="list-style-type: none"> See comment on parent condition 9.4. 	<p>The port authority suggests the following revision: monitor the effects of the <i>Designated Project marine terminal, the widened causeway, and the expanded tug basin</i> on wetlands predicted to be affected by the <i>Designated Project marine terminal, the widened causeway, and the expanded tug basin</i>, including:</p>
9.4.3.1	<p>ecological communities listed as red or blue by the British Columbia Conservation Data Centre in the local assessment area predicted to be affected by the Designated Project identified on figure IR-11-22-A in the response to Information Request 11-22 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 1275);</p>	<ul style="list-style-type: none"> See comment on parent condition 9.4. 	<p>The port authority suggests the following revision: ecological communities listed as red or blue by the British Columbia Conservation Data Centre in the local assessment area predicted to be affected by the <i>Designated Project marine terminal, the widened causeway, and the expanded tug basin</i> identified on figure IR-11-22-A in the response to Information Request 11-22 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 1275);</p>
9.4.3.2	<p>the intertidal marsh communities, including at Brunswick Point, predicted to be affected by the Designated Project; and</p>	<ul style="list-style-type: none"> See comment on parent condition 9.4. 	<p>The port authority suggests the following revision: the intertidal marsh communities, including at Brunswick Point, predicted to be affected by the <i>Designated Project construction and operation of the marine terminal, the widened causeway, and the expanded tug basin</i>; and</p>
9.4.4	<p>identify and implement additional or modified mitigation measures should monitoring conducted pursuant to condition 9.4.2 indicates performance standards established pursuant to condition 9.4.1 have not been met or are no longer being met and/or the monitoring conducted pursuant to condition 9.4.3 indicates that the effects of the Designated Project exceed those predicted in the environmental assessment.</p>	<ul style="list-style-type: none"> As outlined in IR2020-1.2 (CIAR #2083), offsetting habitats are expected to meet performance standards by Year 7, if not earlier. The port authority notes that additional or modified mitigation measures may not be needed in the first few years after the wetland compensation habitats have been constructed, if those habitats are performing as expected and on track to meet the performance standards within the expected timeline. The port authority understands the intent of this draft condition is to require additional or modified mitigation measures only if the wetland compensation habitats are not performing as expected and on track to meet the performance standards within the expected timeline. 	<p>The port authority suggests the following revision: identify and implement additional or modified mitigation measures should monitoring conducted pursuant to condition 9.4.2 indicates performance standards established pursuant to condition 9.4.1 have not been met <i>or are not expected to be met within the expected timeline</i> or are no longer being met and/or the monitoring conducted pursuant to condition 9.4.3 indicates that the effects of the Designated Project exceed those predicted in the environmental assessment.</p>
10	Avifauna		
10.1	<p>The Proponent shall carry out the Designated Project in a manner that protects migratory birds and avoids injuring, killing or disturbing migratory birds, destroying or disturbing their nests or eggs, or taking them. In this regard, the Proponent shall take into account Environment and Climate Change Canada's Avoidance Guidelines to reduce the risk to migratory birds. The Proponent's actions when carrying out the Designated Project shall be in</p>	<ul style="list-style-type: none"> As previously noted by the port authority, greater clarity of the intended scope of this condition would be beneficial, to focus the condition on those components and activities the port authority has the ability to address. The port authority proposes to construct and operate the marine terminal, widen the causeway, and expand the tug basin. The obligations imposed on the port authority should be directed to that activity. 	<p>The port authority suggests the following revision: The Proponent shall carry out the <i>Designated Project construction and operation of the marine terminal, the widened causeway, and the expanded tug basin</i> in a manner that protects migratory birds and avoids injuring, killing or disturbing migratory birds, destroying or disturbing their nests or eggs, or taking them. In this regard, the Proponent shall take into account Environment</p>

Condition #	Condition	Feedback / rationale	Suggested revision
	compliance with the Migratory Birds Convention Act, 1994, the Migratory Birds Regulations and with the Species at Risk Act.		and Climate Change Canada's Avoidance Guidelines to reduce the risk to migratory birds. The Proponent's actions when carrying out the Designated Project shall be in compliance with the Migratory Birds Convention Act, 1994, the Migratory Birds Regulations and with the Species at Risk Act.
10.2	The Proponent shall document, prior to construction and in consultation with internationally recognized and published experts on biofilm ecology, Indigenous groups, and Environment and Climate Change Canada, methods and best practices to create biofilm habitat, including details about the production of lipids, with specific reference to fatty acids in the Fraser river estuary. The Proponent shall publish a document compiling the results of its research on its website and shall provide it to the Agency prior to construction. The Proponent shall incorporate current knowledge peer-reviewed science in the document and shall update the document at years 2, 5, and 10 following the end of construction based on emerging knowledge and science, including science developed as part of condition 10.14.	<ul style="list-style-type: none"> The proponent will provide feedback on draft conditions related to salinity, biofilm, and western sandpiper under separate cover. 	
10.3	The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).	<ul style="list-style-type: none"> See comments on draft condition 1.22. The port authority notes the organizational name change requested by Birds Canada (CIAR #3133). 	The port authority suggests the following revision: The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups (<i>Roberts Bank</i>), types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (<i>Tyto alba</i>) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (<i>Hirundo rustica</i>), and shall, where technically feasible, conserve barn owl (<i>Tyto alba</i>) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).
10.4	The Proponent shall identify, in consultation with Environment and Climate Change Canada and Indigenous groups and to the satisfaction of a qualified professional, the number and locations of artificial nest structures that shall be installed within the regional assessment area to enhance barn owl (<i>Tyto alba</i>) habitat. The Proponent shall install at least five nest structures during the first year of construction and shall maintain the nest structures throughout construction and operation.	<ul style="list-style-type: none"> The port authority notes that changes in productivity are the basis for effect predictions in the assessment and the conclusions and recommendations of the review panel. As such, the FUP for the offsetting plan that would be required by draft condition 10.16 would necessarily be focused on verifying the predictions of productivity changes and the effectiveness of measures to mitigate productivity losses. Retaining reference to productivity is therefore important to ensure that this and linked conditions, such as draft condition 10.16, remain feasible. See comments on draft condition 7.11.1 regarding how productivity is defined. In the EIS, barn own productivity was measured in biomass. See also comments on draft condition 1.22. In response to Birds Canada's suggestion to include a role for public naturalist groups (CIAR # 3133), the port authority suggests adding Birds Canada as a consulting party similar to draft condition 10.3. 	The port authority suggests the following revision: The Proponent shall identify, in consultation with Environment and Climate Change Canada, <i>Birds Canada</i> , and Indigenous groups (<i>Roberts Bank</i>) and to the satisfaction of a qualified professional, the number and locations of artificial nest structures that shall be installed within the regional assessment area to enhance barn owl (<i>Tyto alba</i>) habitat productivity. The Proponent shall install at least five nest structures during the first year of construction and shall maintain the nest structures throughout construction and operation.
10.5	The Proponent shall contribute to third-party program(s) to establish and maintain barn owl (<i>Tyto alba</i>) foraging habitat close to existing or newly installed artificial nest structures.	<ul style="list-style-type: none"> No comment. 	
10.6	The Proponent shall cap all hollow steel pipes following their installation in the Designated Project area, and shall maintain capping throughout construction and operation.	<ul style="list-style-type: none"> No comment. 	
10.7	The Proponent shall determine, in consultation with Environment and Climate Change Canada, the extent to which the offsetting required pursuant to	<ul style="list-style-type: none"> The port authority notes that changes in productivity are the basis for effect predictions in the assessment and the conclusions and 	The port authority suggests the following revision:

Condition #	Condition	Feedback / rationale	Suggested revision
	<p>conditions 7.11 and 9.2 includes great blue heron (<i>Ardea herodias</i>) foraging habitat, and shall compensate residual loss to great blue heron (<i>Ardea herodias</i>) foraging habitat in the intertidal zone of the local assessment area indicated on figure 15-1 of the environmental impact statement not otherwise compensated.</p>	<p>recommendations of the review panel. As such, the FUP for the wetland compensation plan that would be required by draft condition 10.12 would necessarily be focused on verifying the predictions of productivity changes and the effectiveness of measures to mitigate productivity losses. Retaining reference to productivity is therefore important to ensure that this and linked conditions, such as draft condition 10.12, remain feasible. See related comment on draft condition 7.11.1, which is linked to this condition by the reference to its parent condition 7.11.</p> <ul style="list-style-type: none"> See comments on draft condition 7.11.1 regarding how productivity is defined. In the EIS, barn own productivity was measured in biomass. 	<p>The Proponent shall determine, in consultation with Environment and Climate Change Canada, the extent to which the offsetting required pursuant to conditions 7.11 and 9.2 includes great blue heron (<i>Ardea herodias</i>) foraging habitat, and shall compensate residual <i>productivity</i> loss to great blue heron (<i>Ardea herodias</i>) foraging habitat in the intertidal zone of the local assessment area indicated on figure 15-1 of the environmental impact statement not otherwise compensated.</p>
10.8	<p>The Proponent shall determine, in consultation with British Columbia's Ministry of Transportation and Infrastructure and Environment and Climate Change Canada, if the implementation of measures to decrease the potential for bird-vehicle collisions within the local and regional assessment area indicated by the Proponent on figures 15-1 and 15-2 of the environmental impact statement (including reduced speed limits) is technically and economically feasible. If technically and economically feasible, the Proponent shall provide these measures to the Agency prior to construction. The Proponent shall ensure vehicles associated with the Designated Project adhere to these measures during construction and operation within the Designated Project area.</p>	<ul style="list-style-type: none"> No comment. 	
10.9	<p>The Proponent shall develop and implement measures to increase awareness among employees, contractors and truck drivers associated with the Designated Project, who may encounter wildlife within the Designated Project area, to reduce collisions between birds and vehicles.</p>	<ul style="list-style-type: none"> No comment. 	
10.10	<p>The Proponent shall develop, prior to each phase of the Designated Project, in consultation with Environment and Climate Change Canada and Metro Vancouver and to the satisfaction of a qualified professional, waste management measures to minimize waste generation and to avoid harm to birds. The Proponent shall implement these measures during the relevant phase of the Designated Project and shall provide them to the Agency prior to implementing.</p>	<ul style="list-style-type: none"> No comment. 	
10.11	<p>The Proponent shall develop and implement, in consultation with Indigenous groups, protocols to notify Indigenous groups of any bird mortality within the Designated Project area, and allow Indigenous groups access to the Designated Project area so that they may harvest the birds.</p>	<ul style="list-style-type: none"> Not all birds would necessarily be of interest to Indigenous groups for the purposes of harvesting and notification regarding all bird mortality could become burdensome if not unwelcome. The protocols could include determining which birds are of interest to Indigenous groups for this purpose. Depending on the location and timing of bird mortality, it may not be safe or practical to have Indigenous groups harvest the bird(s) themselves. The protocols could include procedures for the safe removal of the bird(s), which, if undertaken by the construction contractor, terminal operator, or independent environmental monitor, could also include procedures for providing the harvested bird to Indigenous groups. See also comments on draft condition 1.22. 	<p>The port authority suggests the following revision: The Proponent shall develop and implement, in consultation with Indigenous groups (<i>Roberts Bank</i>), protocols to notify Indigenous groups (<i>Roberts Bank</i>) of any bird mortality <i>of birds of interest to Indigenous groups (Roberts Bank)</i> within the Designated Project area, and allow for the safe harvest of the birds by or for the use of <i>allow for the safe harvest of the birds by or for the use of</i> Indigenous groups (<i>Roberts Bank</i>) access to the Designated Project area so that they may harvest the birds.</p>
10.12	<p>The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C4 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to the abundance and use of foraging habitat, including any created as a result of condition 10.7, by great blue heron (<i>Ardea herodias</i>). The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.</p>	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	<p>The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups (<i>Roberts Bank</i>), a follow-up program as described in Table C4 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to the abundance and use of foraging habitat, including any created as a result of condition 10.7, by great blue heron (<i>Ardea herodias</i>). The</p>

Condition #	Condition	Feedback / rationale	Suggested revision
			Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.
10.13	The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C15 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to salinity changes in the intertidal water column. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. The Proponent shall share results of the follow-up program with researchers in mudflat and biofilm ecology.	<ul style="list-style-type: none"> The proponent will provide feedback on draft conditions related to salinity, biofilm, and western sandpiper under separate cover. 	
10.14	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C14 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to the effects of the Designated Project on the capability of the local assessment area to support Western sandpiper (<i>Calidris mauri</i>) populations due to potential alterations to distribution and abundance of biofilm and invertebrate prey. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9 and take into account past biofilm studies, most up-to-date research and best practices for sampling and analysis and developing and implementing the follow-up program. As part of the follow-up program, the Proponent shall:	<ul style="list-style-type: none"> The proponent will provide feedback on draft conditions related to salinity, biofilm, and western sandpiper under separate cover. 	
10.14.1	implement a before-after-control-impact design study using mudflats off Westham Island, or another suitable location as referenced in Table C14 of Appendix G in the Federal Review Panel Report, as the control site;	<ul style="list-style-type: none"> The proponent will provide feedback on draft conditions related to salinity, biofilm, and western sandpiper under separate cover. 	
10.14.2	collect, during the northern migration period of the Western sandpiper (<i>Calidris mauri</i>) prior to and throughout construction and the first three years of operation, fatty acids and carbohydrates of invertebrate prey and biofilm and chlorophyll for biofilm, and record and report as both concentration (measure per m ²) and content (measure per gram of dry sediment);	<ul style="list-style-type: none"> The proponent will provide feedback on draft conditions related to salinity, biofilm, and western sandpiper under separate cover. 	
10.14.3	conduct total lipid and fatty acid analyses on the invertebrate prey and biofilm collected pursuant to condition 10.14.2 at a laboratory determined in consultation with Environment and Climate Change Canada;	<ul style="list-style-type: none"> The proponent will provide feedback on draft conditions related to salinity, biofilm, and western sandpiper under separate cover. 	
10.14.4	evaluate the potential effects of a compression in the range of variability of salinity experienced at Roberts Bank on polyunsaturated fatty acid production in biofilm; and	<ul style="list-style-type: none"> The proponent will provide feedback on draft conditions related to salinity, biofilm, and western sandpiper under separate cover. 	
10.14.5	submit the follow-up program, including the planned sampling and analysis methodology, before it is implemented for review and approval by an independent tripartite technical review process composed of representatives, who have knowledge or experience relative to biofilm monitoring, sampling and statistical analysis and who have been appointed by the Proponent, Environment and Climate Change Canada and other relevant authorities.	<ul style="list-style-type: none"> The proponent will provide feedback on draft conditions related to salinity, biofilm, and western sandpiper under separate cover. 	
10.15	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, City of Delta, City of Richmond and Indigenous groups, a follow-up program as described in Table C16 of Appendix G in the Federal Review Panel Report to determine the effectiveness of mitigation measures as it pertains to the artificial nest structures for barn owl (<i>Tyto alba</i>) installed pursuant to condition 10.4 in the local and regional assessment areas. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, City of Delta, City of Richmond and Indigenous groups (<i>Roberts Bank</i>), a follow-up program as described in Table C16 of Appendix G in the Federal Review Panel Report to determine the effectiveness of mitigation measures as it pertains to the artificial nest structures for barn owl (<i>Tyto alba</i>) installed pursuant to condition 10.4 in the local and regional assessment areas. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.

Condition #	Condition	Feedback / rationale	Suggested revision
10.16	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, a follow-up program as described in Table C17 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to barn owl (<i>Tyto alba</i>) in the local assessment area. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	<ul style="list-style-type: none"> The port authority notes that the potential effects of the project on barn owl were predicted to occur within the local assessment area. However, mitigation measures, such as physical barriers, may be implemented in the regional assessment area. See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups (<i>Roberts Bank</i>), a follow-up program as described in Table C17 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment <i>in the local assessment area</i> and determine the effectiveness of mitigation measures as it pertains to barn owl (<i>Tyto alba</i>) in the local assessment area . The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
10.16.1	monitor the effectiveness of physical barrier(s) installed to reduce vehicle collision with barn owl (<i>Tyto alba</i>) and other avian species, including barn swallow (<i>Hirundo rustica</i>) pursuant to condition 10.3.	<ul style="list-style-type: none"> No comment. 	
10.17	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C18 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to the abundance, density and diversity of diving birds. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups (<i>Roberts Bank</i>), a follow-up program as described in Table C18 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to the abundance, density and diversity of diving birds. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.
10.18	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C19 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to the effect of artificial light from the Designated Project on coastal bird population viability. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups (<i>Roberts Bank</i>), a follow-up program as described in Table C19 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to the effect of artificial light from the Designated Project on coastal bird population viability. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
10.18.1	conduct surveys of light-induced stranding events of migratory birds aligned with the periods for which light-induced stranding events are expected to occur based on methodology information provided by Environment and Climate Change Canada.	<ul style="list-style-type: none"> The port authority notes that accepted scientific methods may evolve and this condition should provide flexibility to use methods available at the time the surveys are conducted. Such methods may be developed by parties <u>other than</u> Environment and Climate Change Canada, including experts in academia and non-governmental organizations. The port authority therefore considers it appropriate for this condition to accommodate consideration of other relevant methods. 	The port authority suggests the following revision: conduct surveys of light-induced stranding events of migratory birds aligned with the periods for which light-induced stranding events are expected to occur <i>taking into consideration based on</i> methodology information provided by Environment and Climate Change Canada.
10.19	The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to barn swallow (<i>Hirundo rustica</i>) habitat. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.	<ul style="list-style-type: none"> As noted in Section 3.1 of this submission, the conditions must be related to the environmental effects of the project identified during the assessment. During the environmental assessment, no potential adverse environmental effects on barn swallow habitat were predicted. Consequently, no specific measures to mitigate potential adverse environmental effects on barn swallow habitat were proposed. Therefore, this FUP is not warranted. Barn swallows forage on aerial insects over marsh habitat within the local assessment area. The Roberts Bank Ecosystem Model predicted an increase in marsh productivity within the local assessment area (+777.3 tons/year, before offsetting) with the project in place, increasing overall foraging habitat for barn swallows. 	The port authority suggests the removal of this condition.

Condition #	Condition	Feedback / rationale	Suggested revision
		<ul style="list-style-type: none"> In addition, the port authority is planning to construct 9.4 ha of on-site and 36.6 ha of off-site marsh, further enhancing barn swallow foraging habitat. Other conditions establish requirements for FUPs for predicted effects on other avifauna. 	
11	Communication Plan		
11.1	The Proponent shall develop, prior to construction and in consultation Indigenous groups, relevant authorities, and commercial and recreational marine users (including the Area I Crab Fisherman Association and the Lower Fraser Sport Fishing Advisory Committee), a communication plan. The Proponent shall implement the plan during construction and operation. The plan shall include measures applicable to each phase of the Designated Project to provide up-to-date information to Indigenous groups and commercial and recreational marine users about activities related to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin that may adversely affect access within the local assessment area for land and water use indicated on figure 26-1 of the environmental impact statement. As part of the plan, the Proponent shall include the following:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation Indigenous groups (<i>Roberts Bank</i>), relevant authorities, and commercial and recreational marine users (including the Area I Crab Fisherman Association and the Lower Fraser Sport Fishing Advisory Committee), a communication plan. The Proponent shall implement the plan during construction and operation. The plan shall include measures applicable to each phase of the Designated Project to provide up-to-date information to Indigenous groups (<i>Roberts Bank</i>) and commercial and recreational marine users about activities related to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin that may adversely affect access within the local assessment area for land and water use indicated on figure 26-1 of the environmental impact statement. As part of the plan, the Proponent shall include the following:
11.1.1	the type of information that will be communicated to Indigenous groups and commercial and recreational marine users about the nature, location, status and progress of planned and unplanned activities associated with the Designated Project, including:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: the type of information that will be communicated to Indigenous groups (<i>Roberts Bank</i>) and commercial and recreational marine users about the nature, location, status and progress of planned and unplanned activities associated with the Designated Project, including:
11.1.1.1	information on navigational closure areas implemented during construction or operation of the Designated Project;	<ul style="list-style-type: none"> No comment. 	
11.1.1.2	vessel traffic schedules for vessels associated with the Designated Project; and	<ul style="list-style-type: none"> No comment. 	
11.1.1.3	procedures for navigational safety and any other measures implemented by the Proponent to mitigate adverse effects to navigation as a result of the Designated Project.	<ul style="list-style-type: none"> No comment. 	
11.1.2	procedures to communicate the information referred to in condition 11.1.1 to Indigenous groups and commercial and recreational marine users, including timing and frequency of distribution of this information;	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: procedures to communicate the information referred to in condition 11.1.1 to Indigenous groups (<i>Roberts Bank</i>) and commercial and recreational marine users, including timing and frequency of distribution of this information;
11.1.3	procedures for Indigenous groups and commercial and recreational marine users to provide feedback to the Proponent on adverse effects related to marine use as result of construction and operation of the marine terminal, the widened causeway, and the expanded tug basin including unanticipated issues and interactions with other users; and	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: procedures for Indigenous groups (<i>Roberts Bank</i>) and commercial and recreational marine users to provide feedback to the Proponent on adverse effects related to marine use as result of construction and operation of the marine terminal, the widened causeway, and the expanded tug basin including unanticipated issues and interactions with other users; and
11.1.4	procedures for the Proponent to document and respond in a timely manner to feedback received pursuant to 11.1.3, and to demonstrate how feedback has been addressed.	<ul style="list-style-type: none"> No comment. 	
12	Current use of lands and resources for traditional purposes		
12.1	The Proponent shall allow access to closure area(s), including navigational closure area(s) that are within the care and control of the Proponent, for the purpose of Indigenous harvesting of crab for domestic or food, social and	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
	ceremonial purposes, to the extent that such access is safe. In doing so, the Proponent shall:		
12.1.1	consult with Tsawwassen First Nation, Musqueam, and other Indigenous groups on the development and implementation of the closure area(s), including the timing of implementation, location and spatial extent;	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: consult with Tsawwassen First Nation, Musqueam, and other <i>interested</i> Indigenous groups <i>listed in condition 1.22</i> on the development and implementation of the closure area(s), including the timing of implementation, location and spatial extent;
12.1.2	provide the final details related to the closure area(s) referred to in condition 12.1.1 to Tsawwassen First Nation, Musqueam, other Indigenous groups, and Fisheries and Oceans Canada prior to implementation, and any update to that information; and	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: provide the final details related to the closure area(s) referred to in condition 12.1.1 to Tsawwassen First Nation, Musqueam, other <i>interested</i> Indigenous groups <i>listed in condition 1.22</i> , and Fisheries and Oceans Canada prior to implementation, and any update to that information; and
12.1.3	develop and implement measures, in consultation with Tsawwassen First Nation, Musqueam, other Indigenous groups, and Fisheries and Oceans Canada, to address safety concerns and the practicality for members of Tsawwassen First Nation and Musqueam and other Indigenous groups to harvest crab for food, social and ceremonial purposes within the navigational closure area(s).	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: develop and implement measures, in consultation with Tsawwassen First Nation, Musqueam, other <i>interested</i> Indigenous groups <i>listed in condition 1.22</i> , and Fisheries and Oceans Canada, to address safety concerns and the practicality for members of Tsawwassen First Nation and Musqueam and other those Indigenous groups to harvest crab for food, social and ceremonial purposes within the navigational closure area(s).
12.2	The Proponent shall, prior to construction, work collaboratively with Musqueam and Tsawwassen First Nation on a stewardship initiative to retrieve and dispose of lost or discarded fishing gear in the Roberts Bank area.	<ul style="list-style-type: none"> No comment. 	
12.3	[The Agency is considering additional conditions regarding mitigating effects of the project on current use of lands and resources for traditional purposes commensurate with the proponent's predictions regarding container vessel traffic]	<ul style="list-style-type: none"> The port authority has suggested additional conditions below, taking into account input received by the port authority from Indigenous groups, to address the potential effects of the project on current use of lands and resources for traditional purposes. Please refer to the joint letter regarding these suggested revisions and additional conditions submitted by the port authority together with Tsawwassen First Nation and Musqueam Indian Band on March 15, 2022. 	The port authority suggests this placeholder be removed. The revisions and conditions suggested below would establish appropriate mitigation measures and follow-up to address the predicted effects of the project on current use of lands and resources for traditional purposes.
12.4	The Proponent shall develop, prior to construction, and implement, throughout the first eight years of operation, a follow-up program in consultation with Tsawwassen First Nation, Musqueam, and other Indigenous groups as it relates to their current use of lands and resources for traditional purposes. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the development of the follow-up program, the Proponent shall identify:	<ul style="list-style-type: none"> As this condition and its sub-conditions pertain to the marine terminal, widened causeway, and expanded tug basin, it would make sense to keep this condition together with the preceding conditions 12.1 and 12.2 that also pertain to the marine terminal, widened causeway, and expanded tug basin, before transitioning into conditions that pertain to marine shipping incidental to the project. The port authority notes that sub-conditions to this condition pertain to the construction phase, implying implementation of this FUP during construction as well. See also comments on draft condition 1.22. 	The port authority suggests this condition be re-numbered 12.3. The port authority suggests the following revision: The Proponent shall develop, prior to construction, and implement, <i>during construction and</i> throughout the first eight years of operation, a follow-up program in consultation with Tsawwassen First Nation <i>and</i> Musqueam, and <i>with</i> other <i>interested</i> Indigenous groups <i>listed in condition 1.22</i> as it relates to their current use of lands and resources for traditional purposes. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the development of the follow-up program, the Proponent shall identify:
12.4.1	parameters to monitor changes in environmental components identified as important for the current use of lands and resources for traditional purposes, including crab and juvenile salmon, and the contribution of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin to these changes;	<ul style="list-style-type: none"> See comment on draft condition 12.4 regarding re-numbering. The port authority notes that the sub-conditions within draft condition 12.4 as currently worded appear to be focused on potential changes in current use of lands and resources for traditional purposes as a result of changes in environmental components important for current use. The assessment also considered other changes in current use (e.g., access, quality of experience) related to potential changes in other environmental components. The port authority suggests this and other sub-conditions of draft condition 12.4, as noted below, be revised to include these other changes. 	The port authority suggests this condition be re-numbered 12.3.1. The port authority suggests the following revision: parameters to <i>gather information about levels and patterns of harvesting or consumption due to changes in access and quality of experience and to</i> monitor changes in environmental components identified as important for the current use of lands and resources for traditional purposes, including crab and juvenile salmon, and the contribution of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin to these changes;

Condition #	Condition	Feedback / rationale	Suggested revision
		<ul style="list-style-type: none"> See related comments on draft condition 13.1.4. 	
12.4.2	how the Proponent will monitor the parameters identified pursuant to condition 12.4.1, including the means, timing and location of monitoring, and how monitoring conducted as part of the other follow-up programs set out in this document for environmental components referred to in condition 12.4.1 will be utilized;	<ul style="list-style-type: none"> See comment on draft condition 12.4 regarding re-numbering. See comment on draft condition 12.4.1 regarding the scope of the FUP; the port authority notes that information about levels and patterns of harvesting or consumption and quality of experience would be gathered through consultation with Indigenous groups and may not be measured ("monitored") directly. 	The port authority suggests this condition be re-numbered 12.3.2. The port authority suggests the following revision: how the Proponent will <i>gather information about or otherwise</i> monitor the parameters identified pursuant to condition 12.4.1, including the means, timing and location of monitoring, and how monitoring conducted as part of the other follow-up programs set out in this document for environmental components referred to in condition 12.4.1 will be utilized;
12.4.3	the levels of changes to environmental components referred to in condition 12.4.1 relative to baseline and attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin that would require the Proponent to implement modified or additional mitigation measure(s);	<ul style="list-style-type: none"> See comment on draft condition 12.4 regarding re-numbering. See comment on draft condition 12.4.1 regarding the scope of the FUP; the suggested revision would accommodate consideration of changes to environmental components as well as to other relevant parameters, such as access, quality of experience, harvesting, or consumption. 	The port authority suggests this condition be re-numbered 12.3.3. The port authority suggests the following revision: the levels of changes to <i>harvesting or consumption or to</i> environmental components referred to in condition 12.4.1 relative to baseline and attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin that would require the Proponent to implement modified or additional mitigation measure(s);
12.4.4	a process for developing and implementing any modified or additional mitigations if the levels of environmental change identified pursuant to condition 12.4.3 are exceeded; and	<ul style="list-style-type: none"> See comment on draft condition 12.4 regarding re-numbering See comment on draft condition 12.4.1 regarding the scope of the FUP; the suggested revision would accommodate both environmental changes and changes in other parameters, such as access or quality of experience or harvesting or consumption. 	The port authority suggests this condition be re-numbered 12.3.4. The port authority suggests the following revision: a process for developing and implementing any modified or additional mitigations if the levels of <i>environmental</i> change identified pursuant to condition 12.4.3 are exceeded; and
12.4.5	opportunities for the participation of Tsawwassen First Nation, Musqueam, and other Indigenous groups in monitoring and reporting on the follow-up program	<ul style="list-style-type: none"> See comment on draft condition 12.4 regarding re-numbering. See also comments on draft condition 1.22. 	The port authority suggests this condition be re-numbered 12.3.5. The port authority suggests the following revision: opportunities for the participation of Tsawwassen First Nation, Musqueam, and other <i>interested</i> Indigenous groups <i>listed in condition 1.22</i> in monitoring and reporting on the follow-up program
12.5	The Proponent shall participate, at the request of Transport Canada and/or Fisheries and Oceans Canada, in the development and implementation of regional initiatives, including as part of the Oceans Protection Plan, or equivalent, related to effects on current use of lands and resources for traditional purposes as a result of marine shipping.	<ul style="list-style-type: none"> Given the suggested re-numbering of conditions above, re-numbering of this condition would also be required. 	The port authority suggests this condition be re-numbered 12.4.
New		<ul style="list-style-type: none"> Please refer to the narrative feedback on marine shipping provided in Section 2.2 of this submission. The port authority previously proposed to develop and implement a marine shipping FUP that would enable verification of the predicted effects of marine shipping incidental to the project on current use in the marine shipping area. Further, the marine shipping FUP would also provide a mechanism to ensure that further actions are taken if and when incremental effects of marine shipping incidental to the project on current use occur. The port authority considers this FUP to be an important means of enabling incremental effects of marine shipping incidental to the project to be addressed if and when they may occur and recommends it be included in the conditions. The suggested conditions draw on the marine shipping FUP that was previously proposed and outlined most recently in Appendix IR2020-3-I (CIAR #2083), as well as feedback received from Indigenous groups during ongoing consultation by the port authority. See also comments on draft condition 1.22. 	The port authority suggests the following additional conditions: <i>12.5 The Proponent shall develop prior to construction and in consultation with Transport Canada and Indigenous groups (Roberts Bank) and Indigenous groups (marine shipping), a follow-up program to verify the predictions of the environmental assessment as it pertains to changes in container vessel traffic as a result of the Designated Project and related effects on current use of lands and resources for traditional purposes by Indigenous groups (Roberts Bank) and Indigenous groups (marine shipping). The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:</i>

Condition #	Condition	Feedback / rationale	Suggested revision
New		<ul style="list-style-type: none"> The port authority notes that some of the specific actions that may be required as part of this FUP will be the same as those that may be required as part of the underwater noise FUP contemplated in Part 8 of the conditions. For clarity in this submission and to facilitate consultation with Indigenous groups, the port authority has articulated all specific actions here, but recognizes that, to avoid duplication, the final version of these conditions may refer back to final conditions in Part 8. 	<p><i>12.5.1 monitor the number, capacity based on twenty-foot equivalent units, and route of container vessels calling at the Port of Vancouver;</i></p>
New		<ul style="list-style-type: none"> See preceding comment. See also comments on draft condition 1.22. 	<p><i>12.5.2 report annually, as part of the annual report referred to in condition 2.10 and to Indigenous groups (Roberts Bank) and Indigenous groups (marine shipping), the parameters referred to in condition 12.5.1 starting at the beginning of construction;</i></p>
New		<ul style="list-style-type: none"> This FUP should include a trigger for further action, which would appropriately be an exceedance of the predictions of the environmental assessment. 	<p><i>12.5.3 if the results of the monitoring referred to in condition 12.5.1, once operation has commenced, exceed the predictions of the environmental assessment, the Proponent shall:</i></p>
New		<ul style="list-style-type: none"> As noted in Appendix IR2020-3-I, the identification of interactions between container shipping incidental to the project and current use will be based on inputs received by the port authority from affected Indigenous groups during consultation. 	<p><i>12.5.3.1 consult with Indigenous groups (Roberts Bank) and Indigenous groups (marine shipping) to develop and implement a process by which to determine whether any increase in container vessels attributable to the Designated Project is resulting in incremental interference with current use of lands and resources for traditional purposes in the marine shipping area outside the Proponent's care and control. The process shall include documenting the specific nature and characteristics of the interference, based on input received from the Indigenous groups consulted; and</i></p>
New		<ul style="list-style-type: none"> As the port authority has previously noted, its ability to implement mitigation measures outside of its jurisdiction in the marine shipping area is limited. In contrast, other relevant federal authorities, notably Transport Canada, but also the Canadian Coast Guard, DFO, and Environment and Climate Change Canada, have legislative authority and mandates that pertain directly or indirectly to marine shipping and the environmental effects of marine shipping. As outlined in Section 3.1 of this submission, the port authority understands that conditions can only be directed to the proponent and cannot be directed to another party or make the proponent's compliance dependent on the action of another party. For this reason, it is necessary and appropriate to make a distinction between the <u>identification</u> of mitigation measures related to marine shipping and the <u>implementation</u> of those measures. The port authority considers that it would be feasible for it to <u>identify</u> mitigation measures that could be implemented by other relevant federal authorities, in consultation with those federal authorities. The port authority anticipates this would be a valuable and meaningful contribution to the management of marine shipping and effects of marine shipping by other relevant federal authorities. However, the port authority cannot be required to implement measures beyond its care and control. The port authority considers that it would be feasible for the condition to require it to implement any identified mitigation measures that are <u>within</u> its care and control. 	<p><i>12.5.3.2 if incremental interference with the current use of lands and resources for traditional purposes is identified pursuant to 12.5.3.1, identify, in consultation with Indigenous groups (Roberts Bank), Indigenous groups (marine shipping), Transport Canada, and Canadian Coast Guard, modified or additional measures that could be implemented to mitigate the incremental interference, including measures that could be implemented by relevant federal authorities, including through the regional initiatives referenced in 12.4 [currently 12.5, but suggested above to be re-numbered to 12.4]. The Proponent shall implement any technically and economically feasible measures that are identified that are within its care and control. The Proponent shall submit these measures to the Agency prior to implementing them.</i></p>

Condition #	Condition	Feedback / rationale	Suggested revision
13	Health and socio-economic conditions		
13.1	The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Health Canada, British Columbia's Ministry of Health, Fraser Health Authority and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the effects of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on Indigenous health related to the quality and consumption of marine traditional food. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revisions: The Proponent shall develop, prior to construction and in consultation with Indigenous groups (<i>Roberts Bank</i>), Health Canada, British Columbia's Ministry of Health, Fraser Health Authority and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the effects of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on Indigenous health related to the quality and consumption of marine traditional food. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
13.1.1	collect, prior to, during and post in-water construction, samples of marine species consumed by Indigenous groups;	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revisions: collect, prior to, during and post in-water construction, samples of marine species consumed by Indigenous groups (<i>Roberts Bank</i>);
13.1.2	develop a list of potential contaminants of concern to be analyzed;	<ul style="list-style-type: none"> No comment. 	
13.1.3	conduct laboratory analysis of tissue samples of the marine species identified pursuant to condition 13.1.1 for the contaminants of concern identified during the development of the follow-up program;	<ul style="list-style-type: none"> No comment. 	
13.1.4	survey Indigenous communities, during and post-in water construction, regarding any changes to levels and patterns of harvesting and consumption of marine traditional foods in the area potentially impacted by the Designated Project; and	<ul style="list-style-type: none"> It is clear that the parent condition 13.1, and its other sub-conditions, contemplate the collection and analysis of samples of marine species consumed by Indigenous groups and the carrying out of a human health risk assessment to verify the accuracy of the environmental assessment as it pertains to potential effects on Indigenous health related to the consumption of those marine species. As previously noted by the port authority, the necessary input to carry out such an assessment is an appropriate consumption rate for the marine species in question for Indigenous groups. The port authority considers the requirement to gather information regarding levels and patterns of harvesting and consumption of marine traditional foods to be appropriately addressed through the FUP for potential effects on current use of land and resources for traditional purposes; see our comments on and suggested revisions to draft condition 12.4.1 in this regard. The port authority notes that that information, properly gathered through the FUP, may be considered in determining the consumption rate(s) to be used in the human health risk assessment. The suggested revisions here and to draft condition 12.4.1 would achieve this. See also comments on draft condition 1.22. 	The port authority suggests the following revisions: survey taking into consideration any changes in levels and patterns of harvesting or consumption identified pursuant to condition 12.4.1, consult with Indigenous communities groups (<i>Roberts Bank</i>), during and post-in water construction, regarding to determine the consumption rate(s) to be used in the human health risk assessment pursuant to condition 13.1.5 any changes to levels and patterns of harvesting and consumption of marine traditional foods in the area potentially impacted by the Designated Project; and
13.1.5	conduct analysis of results of the follow-up program using a human health risk assessment prior to, during and post in-water construction.	<ul style="list-style-type: none"> No comment. 	
13.2	The Proponent shall participate, at the request of a relevant federal authority, in any regional initiative related to improving the understanding of shellfish quality at Roberts Bank.	<ul style="list-style-type: none"> No comment. 	
13.3	The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation and the Maa-nulth Nations, a process for Tsawwassen First Nation and the Maa-nulth Nations to report concerns to the Proponent about any adverse environmental effect caused by the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin and incidental marine shipping activities on their commercial ventures. The Proponent shall implement the process during	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
	construction and the first five years of operation. As part of the implementation of the process, the Proponent shall:		
13.3.1	document the concerns received from Tsawwassen First Nation and Maa-nulth Nations, including a description of how these concerns relate to effects of the Designated Project on their commercial ventures;	<ul style="list-style-type: none"> No comment. 	
13.3.2	implement technically and economically feasible modified or additional mitigation measures, in consultation with Tsawwassen First Nation and the Maa-nulth Nations, to address concerns that relate to issues within the Proponent's care and control;	<ul style="list-style-type: none"> The port authority notes that reference to the concerns as documented through draft condition 13.3.1 would improve the clarity and certainty of this condition. 	The port authority suggests the following revisions: implement technically and economically feasible modified or additional mitigation measures, in consultation with Tsawwassen First Nation and the Maa-nulth Nations, to address concerns <i>documented in accordance with condition 13.3.1</i> that relate to issues within the Proponent's care and control;
13.3.3	report concerns that relate to issues outside the Proponent's care and control to Transport Canada and the Canadian Coast Guard; and	<ul style="list-style-type: none"> The port authority notes that reference to the concerns as documented through draft condition 13.3.1 would improve the clarity and certainty of this condition. 	The port authority suggests the following revisions: report concerns <i>documented in accordance with condition 13.3.1</i> that relate to issues outside the Proponent's care and control to Transport Canada and the Canadian Coast Guard; and
13.3.4	provide to the Agency, as part of the annual report referred to in condition 2.10, all concerns received during the reporting year and how the Proponent has addressed all concerns related to issues within the Proponent's care and control, including any modified or additional mitigation measure that the Proponent has implemented or plans to implement, or a rationale as to why no modified or additional mitigation measure(s) is/are required to address the concerns received.	<ul style="list-style-type: none"> No comment. 	
13.4	The Proponent shall develop, prior to construction and in consultation with the Area I Crab Fisherman Association, Indigenous groups that hold commercial licences to harvest crab within the local assessment area indicated on figure 21-3 of the environmental impact statement, the Lower Fraser Sport Fishing Advisory Committee, and Fisheries and Oceans Canada, measures to mitigate adverse environmental effects on commercial and recreational crab fishery attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement these mitigation measures during construction and operation and shall submit these measures to the Agency prior to implementing them.	<ul style="list-style-type: none"> The port authority notes that consultation with the AICFA has been ongoing since 2016 and will continue in advance of construction to identify agreed upon mitigation measures to address potential effects to commercial crab harvesters due to expansion of the Navigational Closure Area during construction and operation of the project. The port authority has reviewed the submission of the Area I Commercial Fisherman's Association (AICFA) (CIAR #2808), which raises concerns regarding the mitigation of potential effects to commercial crab harvesting due to the expansion of the Navigational Closure Area. The residual effect of the project on marine commercial use is specifically related to reduction in commercial crab harvest (which is an economic effect) due to expansion of the existing Navigational Closure Area, and resultant reduced access to commercial crab harvesting areas (as described in the review panel report, pp.379-380 (CIAR #2062)). For clarity, the port authority suggests this condition be revised to explicitly refer to this potential effect, which was the only potential effect on marine commercial use identified by the review panel. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with the Area I Crab Fisherman Association, Indigenous groups that hold commercial licences to harvest crab within the local assessment area indicated on figure 21-3 of the environmental impact statement, the Lower Fraser Sport Fishing Advisory Committee, and Fisheries and Oceans Canada, measures to mitigate adverse environmental effects on <i>the</i> commercial and recreational crab fishery attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. <i>The measures to mitigate potential impacts to the commercial crab fishery must consist of measures to determine the extent of any reduction in commercial crab harvest resulting from any loss of access to commercial crab fishing grounds for Area I commercial licence holders, and measures to mitigate any reduction in commercial crab harvests resulting from any loss of access.</i> The Proponent shall implement these mitigation measures during construction and operation and shall submit these measures to the Agency prior to implementing them.
13.5	The Proponent shall invite commercial crab harvesters, including the Area I Crab Fisherman Association, Indigenous groups that hold commercial licences to harvest crab within the local assessment area indicated by the Proponent on figure 21-3 of the environmental impact statement, and the Lower Fraser Sport Fishing Advisory Committee, to meetings annually during construction and the first five years of operation to discuss:	<ul style="list-style-type: none"> See comments on sub-conditions below. 	
13.5.1	mitigation measures developed pursuant to condition 13.4 including the nature, location, status of relevant Designated Project activities; and	<ul style="list-style-type: none"> In its submission during the public comment period, the AICFA (CIAR #2808) expresses concern that, with the condition as drafted, crab harvesters would have to wait five years before receiving compensation in the event of financial loss due to the expanded Navigational Closure Area. The port authority suggests revisions to these conditions to clarify the intention to undertake the monitoring and analysis of commercial crab 	The port authority suggests the following revision: <i>the effectiveness of</i> mitigation measures developed pursuant to condition 13.4 <i>and any modified or additional measures developed pursuant to condition 13.X</i> [new sub-condition suggested below] including the nature, location, <i>and</i> status of relevant Designated Project activities; and

Condition #	Condition	Feedback / rationale	Suggested revision
		harvest landing data and the evaluation of the effectiveness of mitigation measures annually.	
13.5.2	annual monitoring and harvesting landing data referred to in condition 13.6.	<ul style="list-style-type: none"> See comments on draft condition 13.5.1 above. 	The port authority suggests the following revision: <i>the results of the annual commercial crab harvest landing data monitoring, analysis, and evaluation</i> , referred to in condition 13.6.
13.6	The Proponent shall undertake analysis, during construction and the first five years of operation, of landing data of commercial crab harvesting within the local assessment area to the extent that such data is available to the Proponent, to inform activities pursuant to condition 13.5.	<ul style="list-style-type: none"> See comments on draft condition 13.5.1 above. 	The port authority suggests the following revision: The Proponent shall <i>annually</i> undertake <i>monitoring and analysis</i> , during construction and the first five years of operation, of monitoring and commercial crab harvesting landing data of commercial crab harvesting within the local assessment area to the extent that such data is available to the Proponent <i>and evaluate the effectiveness of the mitigation measures developed pursuant to condition 13.4</i> , to inform activities pursuant to condition 13.5.
<i>New</i>		<ul style="list-style-type: none"> The port authority also suggests an additional sub-condition to clarify that if the annual evaluation of the effectiveness of mitigation measures developed pursuant to draft condition 13.4 indicates those measures are not effective, modified or additional measures would be developed in consultation with the AICFA and other parties. 	The port authority also suggests the following additional sub-condition: <i>The Proponent shall, if the evaluation pursuant to condition 13.6 determines that the mitigation measures developed pursuant to condition 13.4 are not effective, develop, in consultation with the Area 1 Crab Fisherman Association, Indigenous groups that hold commercial licences to harvest crab within the local assessment area indicated on figure 21-3 of the environmental impact statement, and Fisheries and Oceans Canada, and implement modified or additional measures.</i>
13.7	The Proponent shall evaluate the feasibility of implementing land use options related to or in support of agriculture, for portions of the land referred as Lot 3 in the Vancouver Fraser Port Authority's 2018 Approved Land Use Plan Amendments that are not required for Designated Project components or activities. The Proponent shall provide the Agency with the results of the evaluation, provide a reasonable justification for options determined not economically or technically feasible, and implement technically and economically feasible land use options related to or in support of agriculture.	<ul style="list-style-type: none"> No comment. 	
13.8	The Proponent shall participate, at the request of a relevant authority, in any regional initiative related to the prevention, monitoring and compensation of any adverse environmental effect attributable to the Designated Project on Agricultural Land Reserve properties located adjacent to the Designated Project area.	<ul style="list-style-type: none"> No comment. 	
14	Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance		
14.1	The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and other Indigenous groups, and to the satisfaction of a qualified professional, and implement a plan to conduct an inventory of fish trap stakes across the eastern end of the causeway expansion area within the area of moderate archaeological potential indicated by the Proponent on figure 8 of Appendix 28-A of the environmental impact statement. If the Proponent encounters any fish trap stakes during the inventory, it shall expand excavation towards the existing causeway. The Proponent shall implement the procedures developed pursuant to condition 14.3 when encountering any fish trap stake.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and other <i>interested</i> Indigenous groups <i>listed in condition 1.22</i> , and to the satisfaction of a qualified professional, and implement a plan to conduct an inventory of fish trap stakes across the eastern end of the causeway expansion area within the area of moderate archaeological potential indicated by the Proponent on figure 8 of Appendix 28-A of the environmental impact statement. If the Proponent encounters any fish trap stakes during the inventory, it shall expand excavation towards the existing causeway. The Proponent shall implement the procedures developed pursuant to condition 14.3 when encountering any fish trap stake.

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14.2	The Proponent shall monitor annually, in consultation with Indigenous groups and to the satisfaction of a qualified professional, during construction and for the first five years of operation, erosion of the area of moderate archeological potential indicated by the Proponent on figure 8 of Appendix 28-A of the environmental impact statement and of the historic tidal channel that lies northwest of the terminal, formerly draining Canoe Passage, to identify potential exposure of buried fish trap stakes or other archeological resource(s). The Proponent shall implement procedures developed pursuant to condition 14.3 when encountering any fish trap stake(s) or archeological resource(s).	<ul style="list-style-type: none"> The figure reference is incorrect, as it pertains to mitigation for a different potential effect. The figure relevant to monitoring of erosion in the area of moderate archaeological potential is Figure 28-3 of the EIS. See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall monitor annually, in consultation with Indigenous groups (<i>Roberts Bank</i>) and to the satisfaction of a qualified professional, during construction and for the first five years of operation, erosion of the area of moderate archeological potential indicated by the Proponent on figure 8 of Appendix 28-A <i>figure 28-3</i> of the environmental impact statement and of the historic tidal channel that lies northwest of the terminal, formerly draining Canoe Passage, to identify potential exposure of buried fish trap stakes or other archeological resource(s). The Proponent shall implement procedures developed pursuant to condition 14.3 when encountering any fish trap stake(s) or archeological resource(s).
14.3	The Proponent shall develop, prior to construction, in consultation with Indigenous groups and relevant authorities and to the satisfaction of a qualified professional, a Physical Heritage Resources Management Plan for any structure, site, or thing of historical, archaeological, paleontological, or architectural significance or physical heritage resources within the local assessment area indicated on figure 28-1 of the environmental impact statement. The Proponent shall implement the Physical Heritage Resources Management Plan during all phases of the Designated Project. The plan shall include:	<ul style="list-style-type: none"> See comment on draft definition condition 1.43. If the term “physical” is not added to the definition as suggested, it should be added here for clarity and certainty. Intangible cultural resources are addressed in other conditions. See also comments on draft condition 1.22. 	If the definition in draft condition 1.43 is not revised as suggested, the port authority suggests the following revision to this condition: The Proponent shall develop, prior to construction, in consultation with Indigenous groups (<i>Roberts Bank</i>) and relevant authorities and to the satisfaction of a qualified professional, a Physical Heritage Resources Management Plan for any <i>physical</i> structure, site, or thing of historical, archaeological, paleontological, or architectural significance or physical heritage resources within the local assessment area indicated on figure 28-1 of the environmental impact statement. The Proponent shall implement the Physical Heritage Resources Management Plan during all phases of the Designated Project. The plan shall include:
14.3.1	a description of how Indigenous knowledge and traditional use studies conducted as part of the environmental assessment have been integrated into the development of the plan, while respecting Indigenous knowledge protocols and keeping Indigenous knowledge confidential, if requested;	<ul style="list-style-type: none"> No comment. 	
14.3.2	a description of the predicted impacts of activities associated with the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on physical heritage resources and structures, sites, or things of historical, archaeological, paleontological or architectural significance within the local assessment area;	<ul style="list-style-type: none"> See comment on parent condition 14.3. 	If the definition in draft condition 1.43 is not revised as suggested, the port authority suggests the following revision to this condition: a description of the predicted impacts of activities associated with the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on physical heritage resources and <i>physical</i> structures, sites, or things of historical, archaeological, paleontological or architectural significance within the local assessment area;
14.3.3	protocols with respect to the discovery, handling, recognition, recording, transferring and safekeeping of fish trap stakes identified through the inventory conducted by the Proponent pursuant to condition 14.1 or through monitoring pursuant to condition 14.2;	<ul style="list-style-type: none"> No comment. 	
14.3.4	procedures to record, analyze, and mitigate the adverse environmental effects of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on physical heritage resources and structures, sites, or things of historical, archaeological, paleontological or architectural significance;	<ul style="list-style-type: none"> See comment on parent condition 14.3. 	If the definition in draft condition 1.43 is not revised as suggested, the port authority suggests the following revision to this condition: procedures to record, analyze, and mitigate the adverse environmental effects of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on physical heritage resources and <i>physical</i> structures, sites, or things of historical, archaeological, paleontological or architectural significance;
14.3.5	a process for reporting information about physical heritage resources and structures, sites or things of historical, archaeological, paleontological or architectural significance to Indigenous groups and relevant authorities;	<ul style="list-style-type: none"> See comment on parent condition 14.3. See also comments on draft condition 1.22. 	If the definition in draft condition 1.43 is not revised as suggested, the port authority suggests the following revision to this condition: a process for reporting information about physical heritage resources and <i>physical</i> structures, sites or things of historical, archaeological, paleontological or architectural significance to Indigenous groups (<i>Roberts Bank</i>) and relevant authorities;

Condition #	Condition	Feedback / rationale	Suggested revision
14.3.6	a chance find protocol to apply in the event that previously unidentified physical heritage features or structures, sites or things of historical, archaeological, paleontological or architectural significance are discovered by the Proponent. As part of the chance find protocol, the Proponent shall:	<ul style="list-style-type: none"> See comment on parent condition 14.3. 	<p>If the definition in draft condition 1.43 is not revised as suggested, the port authority suggests the following revision to this condition:</p> <p>a chance find protocol to apply in the event that previously unidentified physical heritage features or <i>physical</i> structures, sites or things of historical, archaeological, paleontological or architectural significance are discovered by the Proponent. As part of the chance find protocol, the Proponent shall:</p>
14.3.6.1	as soon as it is safe to do so, halt work at the location of the discovery, except for actions required to be undertaken to protect the integrity of the discovery;	<ul style="list-style-type: none"> No comment. 	
14.3.6.2	delineate an area of at least 30 metres around the discovery as a no-work zone;	<ul style="list-style-type: none"> No comment. 	
14.3.6.3	have a qualified professional, whose expertise pertains to the requirements of British Columbia's Archaeological Impact Assessment Guidelines and British Columbia's Heritage Conservation Act, conduct an assessment at the location of the discovery; and	<ul style="list-style-type: none"> No comment. 	
14.3.6.4	inform the Agency and Indigenous groups within 24 hours of the discovery, and allow Indigenous groups to monitor archaeological works.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: inform the Agency and Indigenous groups (<i>Roberts Bank</i>) within 24 hours of the discovery, and allow Indigenous groups (<i>Roberts Bank</i>) to monitor archaeological works.
14.3.7	a process for qualified individuals to provide training to employees and contractors involved in or overseeing Designated Project construction activities that involve physical disturbance of previously undisturbed ground about:	<ul style="list-style-type: none"> No comment. 	
14.3.7.1	how to identify physical heritage features or structures, sites or things of historical, archaeological, paleontological or architectural significance;	<ul style="list-style-type: none"> See comment on parent condition 14.3. 	<p>If the definition in draft condition 1.43 is not revised as suggested, the port authority suggests the following revision to this condition:</p> <p>how to identify physical heritage features or <i>physical</i> structures, sites or things of historical, archaeological, paleontological or architectural significance;</p>
14.3.7.2	how to implement the protocols developed pursuant to conditions 14.3.3 and 14.3.6;	<ul style="list-style-type: none"> No comment. 	
14.3.7.3	the locations of sensitive physical heritage resources and structures, sites or things of historical, archeological, paleontological or architectural significance within the Designated Project area; and	<ul style="list-style-type: none"> See comment on parent condition 14.3. 	<p>If the definition in draft condition 1.43 is not revised as suggested, the port authority suggests the following revision to this condition:</p> <p>the locations of sensitive physical heritage resources and <i>physical</i> structures, sites or things of historical, archeological, paleontological or architectural significance within the Designated Project area; and</p>
14.3.7.4	cultural sensitivity, confidentiality and heritage values in relation to these sensitive physical heritage resources and structures, sites or things of historical, archeological, paleontological or architectural significance within the Designated Project area.	<ul style="list-style-type: none"> See comment on parent condition 14.3. 	<p>If the definition in draft condition 1.43 is not revised as suggested, the port authority suggests the following revision to this condition:</p> <p>cultural sensitivity, confidentiality and heritage values in relation to these sensitive physical heritage resources and <i>physical</i> structures, sites or things of historical, archeological, paleontological or architectural significance within the Designated Project area.</p>
14.4	The Proponent shall develop, in consultation with Indigenous groups, criteria that the Proponent shall apply when retaining the services of the qualified individual(s) and professional(s) referred to in conditions 14.1 through 14.3.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, in consultation with Indigenous groups (<i>Roberts Bank</i>), criteria that the Proponent shall apply when retaining the services of the qualified individual(s) and professional(s) referred to in conditions 14.1 through 14.3.
14.5	The Proponent shall develop and implement, in consultation with Indigenous groups, additional or modified mitigation measures if the Proponent must conduct any pre-construction survey that may impact any structure, site, or thing of historical, archaeological, paleontological, or architectural significance	<ul style="list-style-type: none"> See comment on parent condition 14.3. See also comments on draft condition 1.22. 	<p>If the definition in draft condition 1.43 is not revised as suggested, the port authority suggests the following revision to this condition:</p> <p>The Proponent shall develop and implement, in consultation with Indigenous groups (<i>Roberts Bank</i>), additional or modified mitigation measures if the</p>

Condition #	Condition	Feedback / rationale	Suggested revision
	<p>or physical heritage resources. The Proponent shall implement these measures prior to conducting these surveys, and shall provide these measures to the Agency prior to implementing them. The Proponent shall implement the procedures developed pursuant to condition 14.3 when encountering any structure, site, or thing of historical, archaeological, paleontological, or architectural significance or physical heritage resources during these activities.</p>		<p>Proponent must conduct any pre-construction survey that may impact any <i>physical</i> structure, site, or thing of historical, archaeological, paleontological, or architectural significance or physical heritage resources. The Proponent shall implement these measures prior to conducting these surveys, and shall provide these measures to the Agency prior to implementing them. The Proponent shall implement the procedures developed pursuant to condition 14.3 when encountering any <i>physical</i> structure, site, or thing of historical, archaeological, paleontological, or architectural significance or physical heritage resources during these activities.</p>
14.6	<p>The Proponent shall ensure Indigenous monitors referred to in condition 15.1 are on site when archeological works are being undertaken pursuant to conditions 14.1 through 14.3.</p>	<ul style="list-style-type: none"> The condition cannot be drafted in such a way that the proponent's compliance with it depends on the actions of a third party. In this case, the proponent cannot "ensure" Indigenous monitors are on site, as the proponent cannot compel any Indigenous monitor to take any specific action, including being on site. It would be feasible to require the proponent to notify Indigenous monitors prior to archeological works being undertaken and ensure they have access to the area where such works are being undertaken. 	<p>The port authority suggests the following revision: The Proponent shall ensure Indigenous monitors referred to in condition 15.1 are on-site when <i>notified prior to</i> archeological works are being undertaken pursuant to conditions 14.1 through 14.3 <i>and shall ensure those Indigenous monitors have access to the area where the archeological works are being undertaken while they are underway, subject to meeting safety, operational, or regulatory requirements.</i></p>
14.7	<p>The Proponent shall paint the cranes to be used during operation in colours that reduce contrast and enhance blending with the surrounding landscape, determined in consultation with Transport Canada, and shall maintain these colours throughout operation, subject to safety and regulatory requirements.</p>	<ul style="list-style-type: none"> No comment. 	
14.8	<p>The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation, nation-specific measures to address the effects described in the Federal Review Panel Report caused by the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on cultural heritage, including tangible and intangible cultural losses. The Proponent shall invite Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation to co-lead the development of these measures. The Proponent shall implement the measures during all phases of the Designated Project and shall submit these measures to the Agency prior to implementing them, while ensuring that confidential information is protected. As part of the annual report referred to in condition 2.10, the Proponent shall report its discussions with Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation, including the level of satisfaction of Indigenous groups on the implementation of the measures. As part of the measures, the Proponent shall consider:</p>	<ul style="list-style-type: none"> The port authority notes this potential condition would require the proponent to consult with the identified Indigenous groups during the development of nation-specific measures and to invite the identified Indigenous groups to co-lead the development of nation-specific measures. Based on clarification provided by IAAC, the port authority understands the intent of this condition is that each identified Indigenous group be consulted with and invited to co-lead the development of only the measures specific to their group, not the measures for any of the other identified groups. Further, the port authority assumes that the relevant "level of satisfaction" is of the three specified groups, not of all the Indigenous groups included in the definition of "Indigenous groups" in draft condition 1.22. The port authority notes that some measures could be relevant to and implemented in only one phase of the project, while others may be relevant to and implemented in all phases. 	<p>The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation, nation-specific measures to address the effects described in the Federal Review Panel Report caused by the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on cultural heritage, including tangible and intangible cultural losses. The Proponent shall invite <i>each of</i> Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation to co-lead the development of these the <i>the measures specific to their nation</i>. The Proponent shall implement the measures during the relevant at <i>the relevant</i> phases of the Designated Project, <i>as appropriate</i>, and shall submit these measures to the Agency prior to implementing them, while ensuring that confidential information is protected. As part of the annual report referred to in condition 2.10, the Proponent shall report its discussions with Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation, including the level of satisfaction of <i>those</i> Indigenous groups on the implementation of the measures. As part of the measures, the Proponent shall consider:</p>
14.8.1	<p>supporting continued access for cultural practices to the sea such as implementing safe marine access point(s); and</p>	<ul style="list-style-type: none"> The port authority notes that former (i.e., pre-public consultation) draft conditions 14.5, 14.6, and 14.7 on cultural heritage have been consolidated into new draft condition 14.8, which is focused on three Indigenous groups. However, the implementation of safe marine access point(s) (former draft condition 14.6) was a measure specific to Tsawwassen First Nation, consistent with the review panel's Recommendation #44. The port authority recommends this draft condition be revised to be applicable to all the groups identified in the consolidated parent condition. The port authority's suggested revision shown in the next column would allow for a specific measure (implementing safe marine access point(s)) to be implemented for Tsawwassen First Nation but would not require it to be implemented for the other groups. This would be consistent with review panel Recommendation #44. If reference to implementation of safe marine access point(s) is retained in the condition, the condition should be modified so that it is clear that that 	<p>The port authority suggests the following revision: supporting continued access for cultural practices to the sea <i>on a nation-specific basis such as implementing safe marine access point(s);</i> and</p>

Condition #	Condition	Feedback / rationale	Suggested revision
		specific measure pertains to Tsawwassen First Nation (i.e., “supporting continued access for cultural practices to the sea, <i>including, for Tsawwassen First Nation</i> , implementing safe marine access point(s)”).	
14.8.2	developing or contributing to Indigenous-led programs to preserve and enhance cultural heritage.	<ul style="list-style-type: none"> No comment. 	
14.9	The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects on cultural heritage caused by the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall invite Indigenous groups to co-lead the development of the follow-up program. As part of the follow-up program, the Proponent shall monitor, during construction and the first 10 years of operation, cultural heritage indicators identified in consultation with Tsawwassen First Nation, Musqueam, and the Tsleil-Waututh Nation, and shall establish thresholds for implementing additional mitigation measures, in accordance with conditions 2.5 to 2.9.	<ul style="list-style-type: none"> For consistency, the Indigenous groups invited to co-lead the development of the FUP should be the three specific groups referenced in relation to other aspects of this condition. 	The port authority suggests the following revision: The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects on cultural heritage caused by the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall invite Indigenous groups <i>Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation</i> to co-lead the development of the follow-up program. As part of the follow-up program, the Proponent shall monitor, during construction and the first 10 years of operation, cultural heritage indicators identified in consultation with Tsawwassen First Nation, Musqueam, and the Tsleil-Waututh Nation, and shall establish thresholds for implementing additional mitigation measures, in accordance with conditions 2.5 to 2.9.
15	Indigenous monitors		
15.1	The Proponent shall retain, prior to construction, the services of Indigenous monitors to observe, record, and report on the implementation of the conditions set out in this document during construction. Prior to retaining the services of Indigenous monitors, the Proponent shall undertake a collaborative process to determine, in consultation with Indigenous groups, the scope, purpose and objectives of the participation of Indigenous monitors and shall provide that information to the Agency prior to construction. As part of that process, the Proponent shall determine:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall retain, prior to construction, the services of Indigenous monitors to observe, record, and report on the implementation of the conditions set out in this document during construction. Prior to retaining the services of Indigenous monitors, the Proponent shall undertake a collaborative process to determine, in consultation with Indigenous groups (<i>Roberts Bank</i>), the scope, purpose and objectives of the participation of Indigenous monitors and shall provide that information to the Agency prior to construction. As part of that process, the Proponent shall determine:
15.1.1	how each Indigenous monitor shall be involved in monitoring their areas of interest, including the location, frequency, timing and duration of their participation;	<ul style="list-style-type: none"> No comment. 	
15.1.2	how the Proponent shall support the participation of Indigenous monitors, including through the provision of training (including safety or skills certifications), equipment (including personal protective equipment), and access to the Designated Project area;	<ul style="list-style-type: none"> No comment. 	
15.1.3	how Indigenous monitors shall collect information and shall communicate that information to the Proponent, the independent environmental monitor referred to in condition 16.1, the Indigenous Advisory Committee referred to in condition 17.1, and the Agency;	<ul style="list-style-type: none"> No comment. 	
15.1.4	how monitoring conducted by Indigenous monitors shall be informed by and shall inform the monitoring activities conducted by the independent environmental monitor referred to in condition 16.1 and any other monitor associated with the Designated Project;	<ul style="list-style-type: none"> No comment. 	
15.1.5	how each Indigenous monitor shall be involved in Proponent initiated stop work and corrective action processes should non-compliance with the conditions set out in this document be identified; and	<ul style="list-style-type: none"> No comment. 	
15.1.6	how the Proponent shall consider the information obtained from Indigenous monitors and how the Proponent shall report to Indigenous groups, relevant	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision:

Condition #	Condition	Feedback / rationale	Suggested revision
	authorities and the Agency about how information obtained from Indigenous monitors has been considered by the Proponent, including a rationale for why any action recommended by Indigenous monitors has, or has not been taken.		how the Proponent shall consider the information obtained from Indigenous monitors and how the Proponent shall report to Indigenous groups (<i>Roberts Bank</i>), relevant authorities and the Agency about how information obtained from Indigenous monitors has been considered by the Proponent, including a rationale for why any action recommended by Indigenous monitors has, or has not been taken.
16	Independent environmental monitor		
16.1	The Proponent shall retain, prior to construction, the services of a third-party independent environmental monitor, who is a qualified professional with a minimum of five-years' experience as it pertains to environmental monitoring in British Columbia and who has experience working with Indigenous groups. The Proponent shall make all reasonable efforts to obtain the approval of Tsawwassen First Nation and Musqueam for the retention of the services of the independent environmental monitor.	<ul style="list-style-type: none"> The port authority notes that the general reference to "Indigenous groups" here, without specific reference to the Indigenous groups listed in condition 1.22, would enable the best access to qualified independent environmental monitors with experience working with Indigenous groups. The port authority considers the requirement to seek approval from Tsawwassen First Nation and Musqueam Indian Band would provide assurance that those groups would have the opportunity to review the qualifications of any candidate independent environmental monitors who may not have worked with them directly in the past but who may otherwise have relevant and appropriate experience. For this reason, the port authority does not propose to revise the reference to Indigenous groups as it has for other draft conditions. 	
16.2	The Proponent shall require the independent environmental monitor to report to the Proponent, in writing, about the implementation of any condition set out in this document during construction. The Proponent shall also require the independent environmental monitor to recommend to the Proponent, in writing, which action(s) in their view, should be taken by the Proponent in respect to the implementation of conditions set out in this document during construction.	<ul style="list-style-type: none"> No comment. 	
16.3	The Proponent shall require the independent environmental monitor to provide directly to the Agency, at a frequency to be determined in consultation with the Agency, the information reported to the Proponent pursuant to condition 16.2.	<ul style="list-style-type: none"> No comment. 	
16.4	The Proponent shall consider the information obtained from the independent environmental monitor and shall report to the Agency and relevant authorities about how information obtained from the independent environmental monitor has been considered by the Proponent, including a rationale for why any action recommended by the independent environmental monitor has, or has not been taken.	<ul style="list-style-type: none"> No comment. 	
16.5	The Proponent shall require the independent environmental monitor to retain the information reported to the Proponent pursuant to condition 16.2 for five years following submission to the Agency pursuant to condition 16.3.	<ul style="list-style-type: none"> No comment. 	
17	Indigenous Advisory Committee		
17.1	The Proponent shall establish, prior to construction and in consultation with Indigenous groups, and maintain, throughout construction and operation, an Indigenous Advisory Committee (IAC) to support dialogue and issue resolution between the Proponent and Indigenous groups. The Proponent shall invite Indigenous groups to participate in all IAC activities, and shall consult participating Indigenous groups on the development of Terms of Reference for the IAC. The Proponent shall make reasonable efforts to come to agreement on the Terms of Reference with participating Indigenous groups. The Proponent shall submit the final Terms of Reference to the Agency prior to construction. As part of the Terms of Reference, the Proponent shall include:	<ul style="list-style-type: none"> The port authority notes that, through consultation with Indigenous groups (<i>Roberts Bank</i>) regarding this committee, a different name for the committee may be selected, and this condition should accommodate that potential outcome. The port authority notes that the committee is intended to facilitate the integration of Indigenous knowledge and expertise on matters related to the project. The port authority notes that direct consultation with Indigenous groups will continue and will not be superseded or replaced by the work of this committee. See comments on draft condition 1.22. 	The port authority suggests the following revisions: The Proponent shall establish, prior to construction and in consultation with Indigenous groups (<i>Roberts Bank</i>), and maintain, throughout construction and operation, an Indigenous Advisory Committee (IAC) <i>or equivalent</i> to support dialogue and issue resolution between the Proponent and Indigenous groups (<i>Roberts Bank</i>) on matters related to the Designated Project. The Proponent shall invite Indigenous groups (<i>Roberts Bank</i>) to participate in all IAC activities to support the integration of Indigenous knowledge and expertise in IAC activities, and shall consult participating Indigenous groups (<i>Roberts Bank</i>) on the development of Terms of Reference for the IAC. The Proponent shall make reasonable efforts to come to agreement on the Terms of Reference with participating Indigenous groups (<i>Roberts Bank</i>). The Proponent shall

Condition #	Condition	Feedback / rationale	Suggested revision
			submit the final Terms of Reference to the Agency prior to construction. As part of the Terms of Reference, the Proponent shall include:
17.1.1	the means by which the Proponent and Indigenous groups shall jointly identify issues to be discussed by the IAC and the means by which the Proponent shall document these issues;	<ul style="list-style-type: none"> The port authority notes that only those Indigenous groups (Roberts Bank) that choose to participate in the IAC or equivalent would be involved in IAC activities. See comments on draft condition 1.22. 	The port authority suggests the following revisions: the means by which the Proponent and <i>participating</i> Indigenous groups (<i>Roberts Bank</i>) shall jointly identify issues to be discussed by the IAC and the means by which the Proponent shall document these issues;
17.1.2	the frequency, timing and location of IAC meetings during each phase of the Designated Project and the means by which the Proponent shall document meeting minutes and shall seek approval of the meeting minutes by Indigenous groups;	<ul style="list-style-type: none"> See comments on draft condition 17.1.1 See also comments on draft condition 1.22. 	The port authority suggests the following revisions: the frequency, timing and location of IAC meetings during each phase of the Designated Project and the means by which the Proponent shall document meeting minutes and shall seek approval of the meeting minutes by <i>participating</i> Indigenous groups (<i>Roberts Bank</i>);
17.1.3	the means by which IAC meetings will be chaired, which may be jointly by the Proponent and a representative of the Indigenous groups and/or by a mutually acceptable third-party facilitator retained by the Proponent.	<ul style="list-style-type: none"> See comments on draft condition 17.1.1 See also comments on draft condition 1.22. 	The port authority suggests the following revisions: the means by which IAC meetings will be chaired, which may be jointly by the Proponent and a representative of the <i>participating</i> Indigenous groups (<i>Roberts Bank</i>) and/or by a mutually acceptable third-party facilitator retained by the Proponent.
17.1.4	the means by which the Proponent may consult the IAC when consultation with an Indigenous group is a requirement of a condition set out in this document, should it be agreeable to the Indigenous group(s) specified;	<ul style="list-style-type: none"> No comment. 	
17.1.5	the means by which the Proponent shall share with the IAC the following information, including when and how this information will be shared:	<ul style="list-style-type: none"> No comment. 	
17.1.5.1	the results of the follow-up programs, including any modified or additional mitigation measure implemented or proposed to be implemented by the Proponent as a result of each follow-up requirement;	<ul style="list-style-type: none"> No comment. 	
17.1.5.2	activities associated with the Proponent's participation in regional initiatives; and	<ul style="list-style-type: none"> No comment. 	
17.1.5.3	other information as determined by the IAC;	<ul style="list-style-type: none"> No comment. 	
17.1.6	the means by which the Proponent shall document the activities of the IAC, including:	<ul style="list-style-type: none"> No comment. 	
17.1.6.1	all views and information received through the IAC from Indigenous groups; and	<ul style="list-style-type: none"> See comments on draft condition 17.1.1 See also comments on draft condition 1.22. 	The port authority suggests the following revisions: all views and information received through the IAC from <i>participating</i> Indigenous groups (<i>Roberts Bank</i>); and
17.1.6.2	how the Proponent has considered all views and information received through the IAC from Indigenous groups;	<ul style="list-style-type: none"> See comments on draft condition 17.1.1 See also comments on draft condition 1.22. 	The port authority suggests the following revisions: how the Proponent has considered all views and information received through the IAC from <i>participating</i> Indigenous groups (<i>Roberts Bank</i>);
17.1.7	the means by which the Proponent shall document any issue for which IAC members are unable to find a resolution, including a rationale for the lack of resolution, and any solutions for finding a resolution proposed by the IAC;	<ul style="list-style-type: none"> No comment. 	
17.1.8	the means by which the Proponent shall share the information documented by the Proponent pursuant to conditions 17.1.6 and 17.1.7 with IAC members	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
	and with the Agency, including when and how this information shall be shared; and		
17.1.9	the means by which the Proponent shall evaluate, in consultation with Indigenous groups, the Terms of Reference throughout construction and operation to determine whether administrative or management improvements are required to increase the efficiency and effectiveness of the IAC.	<ul style="list-style-type: none"> See comments on draft condition 17.1.1 See also comments on draft condition 1.22. 	The port authority suggests the following revisions: The means by which the Proponent shall evaluate, in consultation with <i>participating</i> Indigenous groups (<i>Roberts Bank</i>), the Terms of Reference throughout construction and operation to determine whether administrative or management improvements are required to increase the efficiency and effectiveness of the IAC.
17.2	The Proponent shall implement the Terms of Reference developed pursuant to condition 17.1 throughout construction and operation, including any revision to the Terms of Reference made pursuant to condition 17.1.9.	<ul style="list-style-type: none"> No comment. 	
18	Environmental Monitoring Committee		
18.1	The Proponent shall participate, during all phases of the Designated Project and at the request of relevant federal authorities, in any Environmental Monitoring Committee (EMC), should one be established in relation to the Designated Project.	<ul style="list-style-type: none"> No comment. 	
18.2	The Proponent shall provide to the EMC, upon request, information relating to the mitigation measures and follow-up programs set out in this document to the EMC. If requested by the EMC, the Proponent shall also provide non-proprietary data files of the results of the follow-up programs.	<ul style="list-style-type: none"> No comment. 	
18.3	When provided with a written recommendation by the EMC, the Proponent shall provide a response in writing to the EMC, which set out whether the Proponent accepts the recommendation, and if it does not, the reasons for not accepting the recommendation.	<ul style="list-style-type: none"> The port authority notes that this condition should be focused on recommendations from the committee that pertain to the Designated Project. 	The port authority suggests the following revisions: When provided with a written recommendation by the EMC <i>that pertains to the Designated Project</i> , the Proponent shall provide a response in writing to the EMC, which set out whether the Proponent accepts the recommendation, and if it does not, the reasons for not accepting the recommendation.
18.4	The Proponent shall report to the Agency as part of the annual report referred to in condition 2.10, or more frequently if required by the Agency, on the Proponent's actions with respect to the EMC and the associated outcomes of the Proponent's actions.	<ul style="list-style-type: none"> No comment. 	
18.5	The Proponent shall allow access to the Designated Project area, to the extent that such access is safe, to any monitor(s) established as part of the EMC. The Proponent shall communicate with monitor(s) regarding coordination of monitoring activities.	<ul style="list-style-type: none"> No comment. 	
19	Accidents and malfunctions		
19.1	The Proponent shall take all reasonable measures to prevent accidents and malfunctions associated with the Designated Project that may result in adverse environmental effects and all reasonable measures to mitigate any adverse environmental effect from accidents and malfunctions that do occur. As part of these measures, the Proponent shall:	<ul style="list-style-type: none"> No comment. 	
19.1.1	consider sensitive time periods for vulnerable species found in the vicinity of the Designated Project (including juvenile salmon and migratory birds); and	<ul style="list-style-type: none"> No comment. 	
19.1.2	implement measures for the safe storage, refueling and handling of all substances identified pursuant to condition 19.3.1 in the Designated Project area, including containment specifications and equipment staging, and provide training about these measures to all persons involved in and responsible for safe storage, refueling and handling of these substances. The Proponent shall describe how it will ensure that these persons abide by these measures.	<ul style="list-style-type: none"> No comment. 	
19.2	The Proponent shall consult, prior to construction, Indigenous groups, Indigenous groups (marine shipping) and relevant authorities on the measures	<ul style="list-style-type: none"> As previously noted by the port authority, a contractor (referred to as the terminal concessionaire) will be retained to undertake terminal 	The port authority suggests the following revision:

Condition #	Condition	Feedback / rationale	Suggested revision
	referred to in condition 19.1 to be implemented to prevent accidents and malfunctions resulting from the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin.	infrastructure construction and installation and operation. The terminal concessionaire likely will not be retained until after the first stage of construction has commenced. <ul style="list-style-type: none"> The development of measures for the operation phase will therefore necessarily occur after the terminal concessionaire has been retained. Consultation regarding the measures for the operation phase cannot occur prior to construction. See comments on draft condition 1.22. 	The Proponent shall consult, prior to <i>the phase to which the measures pertain construction</i> , Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping) and relevant authorities on the measures referred to in condition 19.1 to be implemented to prevent accidents and malfunctions resulting from the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin.
19.3	The Proponent shall develop, in consultation with Indigenous groups, Indigenous groups (marine shipping), the City of Delta, British Columbia's Ministry of Environment and Climate Change Strategy, British Columbia's Ministry of Forests, Lands, Natural Resources Operations and Rural Development, Transport Canada, the Canadian Coast Guard, Parks Canada, Environment and Climate Change Canada, Western Canada Marine Response Corporation and other relevant authorities, an Accident and Malfunction Response Plan in relation to the each phase of the Designated Project. The Proponent shall develop each Accident and Malfunction Response Plan prior to the phase to which it pertains, and shall keep it up to date during that phase of the Designated Project. The Proponent shall incorporate and reference established response plans, procedures and organizations, as appropriate, into each Accident and Malfunction Response Plan, so as to avoid duplication with established plans, procedures and organizations. The Proponent shall implement each Accident and Malfunction Response Plan during the phase to which it pertains. As part of the Accident and Malfunction Response Plans, the Proponent shall describe:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall develop, in consultation with Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping), the City of Delta, British Columbia's Ministry of Environment and Climate Change Strategy, British Columbia's Ministry of Forests, Lands, Natural Resources Operations and Rural Development, Transport Canada, the Canadian Coast Guard, Parks Canada, Environment and Climate Change Canada, Western Canada Marine Response Corporation and other relevant authorities, an Accident and Malfunction Response Plan in relation to the each phase of the Designated Project. The Proponent shall develop each Accident and Malfunction Response Plan prior to the phase to which it pertains, and shall keep it up to date during that phase of the Designated Project. The Proponent shall incorporate and reference established response plans, procedures and organizations, as appropriate, into each Accident and Malfunction Response Plan, so as to avoid duplication with established plans, procedures and organizations. The Proponent shall implement each Accident and Malfunction Response Plan during the phase to which it pertains. As part of the Accident and Malfunction Response Plans, the Proponent shall describe:
19.3.1	the types, location, and quantities of all substances expected to be stored within the Designated Project area, other than substances contained in containers passing through or temporarily stored in the marine terminal, that may cause adverse environmental effects in case of a spill;	<ul style="list-style-type: none"> The port authority understands this condition is focused on the substances that would be stored on site, e.g., for the purpose of vehicle and equipment maintenance and refueling during project construction and operation. The port authority notes that vessels, trucks, and trains that call on the marine terminal will have substances, such as fuel and other engine fluids, on board; the transportation of dangerous goods by vessels, trucks, and trains is governed by other federal and/or provincial legislation and regulations. 	The port authority suggests the following revision: the types, location, and quantities of all substances expected to be stored within the Designated Project area, other than substances contained in containers <i>or in vessels, trucks, or trains</i> passing through or temporarily stored in the marine terminal, that may cause adverse environmental effects in case of a spill;
19.3.2	information on marine and terrestrial wildlife oil spill vulnerability for species, populations, and their habitats that may be affected by a spill attributable to the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin, including their spatial and temporal distributions;	<ul style="list-style-type: none"> No comment. 	
19.3.3	the types, location, and quantities of all substances expected to be stored within the Designated Project area, other than substances contained in containers passing through or temporarily stored in the marine terminal, that may cause adverse environmental effects in case of a spill;	<ul style="list-style-type: none"> The port authority notes this draft condition is a duplicate of draft condition 19.3.1. See also comments on draft condition 19.3.1. 	The port authority suggests this duplicative condition be removed and other conditions that reference it be revised to refer to condition 19.3.1 instead. If this condition is not removed, it should be revised in the same manner suggested for draft condition 19.3.1.
19.3.4	for each type of accident and malfunction identified pursuant to condition 19.3.3, the roles and responsibilities of each relevant party, including Tsawwassen First Nation and Musqueam, involved in the response to the accident or malfunction, including potential limitations associated with responding to an accident or malfunction in an effective and coordinated manner, and proposed solutions to these limitations;	<ul style="list-style-type: none"> With the focus of draft condition 19.3.3 (19.3.1) on the types of substances, the wording of this draft condition no longer makes sense. 	The port authority suggests the following revision: for each type of <i>accident and malfunction substance</i> identified pursuant to condition 19.3.3 <i>19.3.1</i> , the roles and responsibilities of each relevant party, including Tsawwassen First Nation and Musqueam, involved in the response to the an <i>an</i> accident or malfunction <i>involving the substance</i> , including potential limitations associated with responding to an accident or malfunction in an effective and coordinated manner, and proposed solutions to these limitations;

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19.3.5	thresholds for reporting and notification to the relevant parties identified pursuant to condition 19.3.4;	<ul style="list-style-type: none"> No comment. 	
19.3.6	for each type of accident and malfunction identified pursuant to condition 19.3.3, the measures, appropriate to the accident or malfunction and under the control of the Proponent, to mitigate any adverse environmental effect caused by the accident or malfunction;	<ul style="list-style-type: none"> With the focus of draft condition 19.3.3 (19.3.1) on the types of substances, the wording of this draft condition no longer makes sense. 	The port authority suggests the following revision: for each type of accident and malfunction <i>substance</i> identified pursuant to condition 19.3.3 <i>19.3.1</i> , the measures, appropriate to the <i>an</i> accident or malfunction <i>involving the substance</i> and under the control of the Proponent, to mitigate any adverse environmental effect caused by the accident or malfunction;
19.3.7	for each type of accident and malfunction identified pursuant to condition 19.3.3, the measures under the control of the Proponent for the long-term monitoring of any adverse environmental effect caused by the accident or malfunction; and	<ul style="list-style-type: none"> With the focus of draft condition 19.3.3 (19.3.1) on the types of substances, the wording of this draft condition no longer makes sense. 	The port authority suggests the following revision: for each type of accident and malfunction <i>substance</i> identified pursuant to condition 19.3.3 <i>19.3.1</i> , the measures under the control of the Proponent for the long-term monitoring of any adverse environmental effect caused by the <i>an</i> accident or malfunction <i>involving the substance</i> ; and
19.3.8	the measures under the control of the Proponent for documenting, reporting, and correcting instances of non-compliance with the Accident and Malfunction Response Plans.	<ul style="list-style-type: none"> No comment. 	
19.4	The Proponent shall conduct regular and coordinated training exercises for spill prevention and control of fuels, oils, lubricants and other hazardous and noxious substances that may be released during construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall document any deficiency observed during these training exercises, update the applicable Accident and Malfunction Response Plan to address these deficiencies, and provide the results of the training exercises and any update to the Accident and Malfunction Response Plan to the parties involved in the development of the plan. The Proponent shall provide opportunities for participation by Indigenous groups in the training exercises.	<ul style="list-style-type: none"> The port authority notes that training exercises for spill prevention and response are conducted by other relevant authorities, including the Canadian Coast Guard, and that such exercises sometimes include the facilities in the area of Roberts Bank. To avoid unnecessary duplication of training exercises, this condition should enable the proponent's participation in training exercises conducted by other relevant authorities to fulfil this condition, if those training exercises address "spill prevention and control of fuels, oils, lubricants and other hazardous and noxious substances that may be released during construction and operation of the marine terminal, the widened causeway, and the expanded tug basin." See also comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall <i>participate in or</i> conduct regular and coordinated training exercises for spill prevention and control of fuels, oils, lubricants and other hazardous and noxious substances that may be released during construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall document any deficiency observed during these training exercises, update the applicable Accident and Malfunction Response Plan to address these deficiencies, and provide the results of the training exercises and any update to the Accident and Malfunction Response Plan to the parties involved in the development of the plan. The Proponent shall provide opportunities for participation by Indigenous groups (<i>Roberts Bank</i>) in the training exercises.
19.5	The Proponent shall participate, at the request of the Canadian Coast Guard, in the development of all applicable integrated response plans to ensure effective and coordinated response to marine shipping accidents that may occur within the Proponent's navigational jurisdiction.	<ul style="list-style-type: none"> No comment. 	
19.6	In the event of an accident or malfunction associated with the Designated Project with the potential to cause adverse environmental effects, the Proponent shall, in conjunction with other relevant authorities, immediately implement the measures appropriate to the accident or malfunction referred to in condition 19.3.6, under the control of the Proponent, and shall:	<ul style="list-style-type: none"> No comment. 	
19.6.1	implement the communication plan referred to in condition 19.7;	<ul style="list-style-type: none"> No comment. 	
19.6.2	notify, as soon as possible through the means established pursuant to 19.7, Indigenous groups and Indigenous groups (marine shipping) and, through established notification procedures, relevant authorities, of the accident or malfunction, and notify the Agency in writing no later than 24 hours following the accident or malfunction, except where notification is required to be undertaken by another relevant authority. For the notification to Indigenous groups, Indigenous groups (marine shipping) and the Agency, the Proponent shall specify:	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: notify, as soon as possible through the means established pursuant to 19.7, Indigenous groups (<i>Roberts Bank</i>) and Indigenous groups (marine shipping) and, through established notification procedures, relevant authorities, of the accident or malfunction, and notify the Agency in writing no later than 24 hours following the accident or malfunction, except where notification is required to be undertaken by another relevant authority. For the notification to Indigenous groups (<i>Roberts Bank</i>), Indigenous groups (marine shipping) and the Agency, the Proponent shall specify:
19.6.2.1	the date when and location where the accident or malfunction occurred;	<ul style="list-style-type: none"> No comment. 	
19.6.2.2	a summary description of the accident or malfunction; and	<ul style="list-style-type: none"> No comment. 	

Condition #	Condition	Feedback / rationale	Suggested revision
19.6.2.3	a list of any substance potentially released into the environment as a result of the accident or malfunction.	<ul style="list-style-type: none"> No comment. 	
19.6.3	submit a written report to the Agency no later than 30 days after the day on which the accident or malfunction occurred. As part of the report, the Proponent shall not include information that, if disclosed, could cause specific harm to the environment or people. The written report shall include:	<ul style="list-style-type: none"> No comment. 	
19.6.3.1	a detailed description of the accident or malfunction and of its adverse environmental effects;	<ul style="list-style-type: none"> No comment. 	
19.6.3.2	a description of the measures that were taken by the Proponent and other relevant authorities to mitigate the adverse environmental effects caused by the accident or malfunction;	<ul style="list-style-type: none"> No comment. 	
19.6.3.3	a description of any residual adverse environmental effect and any modified or additional measures under the control of the Proponent to mitigate residual adverse environmental effects;	<ul style="list-style-type: none"> No comment. 	
19.6.3.4	any view from Indigenous groups and advice from relevant authorities received with respect to the accident or malfunction, its adverse environmental effects and the measures under the control of the Proponent to mitigate these adverse environmental effects; and	<ul style="list-style-type: none"> As other draft conditions here, notably draft condition 19.6.2, 19.7.1, and 19.7.2, include Indigenous groups (marine shipping), reference to those groups should be included here for consistency and clarity. See also comments on draft condition 1.22. 	The port authority suggests the following revision: any view from Indigenous groups (<i>Roberts Bank</i>) and Indigenous groups (<i>marine shipping</i>) and advice from relevant authorities received with respect to the accident or malfunction, its adverse environmental effects and the measures under the control of the Proponent to mitigate these adverse environmental effects; and
19.6.3.5	details concerning the implementation of the Accident and Malfunction Response Plan referred to in condition 19.3.	<ul style="list-style-type: none"> No comment. 	
19.6.4	submit a written report to the Agency no later than 90 days after the day on which the accident or malfunction occurred that includes a description of the changes made to avoid a subsequent occurrence of the accident or malfunction and of the modified or additional measure(s) under the control of the Proponent to mitigate and monitor residual adverse environmental effects and to carry out any required progressive reclamation, taking into account the information submitted in the written report pursuant to condition 19.6.3. The report shall include all additional views from Indigenous groups and advice from relevant authorities received by the Proponent since the views and advice referred to in condition 19.6.3.4 were received by the Proponent. As part of the report, the Proponent shall not include information that, if disclosed, could cause specific harm to the environment or people.	<ul style="list-style-type: none"> As other draft conditions here, notably draft condition 19.6.2, 19.7.1, and 19.7.2, include Indigenous groups (marine shipping), reference to those groups should be included here for consistency and clarity. See also comments on draft condition 1.22. 	The port authority suggests the following revision: submit a written report to the Agency no later than 90 days after the day on which the accident or malfunction occurred that includes a description of the changes made to avoid a subsequent occurrence of the accident or malfunction and of the modified or additional measure(s) under the control of the Proponent to mitigate and monitor residual adverse environmental effects and to carry out any required progressive reclamation, taking into account the information submitted in the written report pursuant to condition 19.6.3. The report shall include all additional views from Indigenous groups (<i>Roberts Bank</i>) and Indigenous groups (<i>marine shipping</i>) and advice from relevant authorities received by the Proponent since the views and advice referred to in condition 19.6.3.4 were received by the Proponent. As part of the report, the Proponent shall not include information that, if disclosed, could cause specific harm to the environment or people.
19.7	The Proponent shall develop, in consultation with Indigenous groups and Indigenous groups (marine shipping), a communication plan for accidents and malfunctions identified pursuant to condition 19.3.3. The communication plan shall not duplicate or conflict with communication aspects of any integrated response plan relevant to the Designated Project. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up to date during all phases of the Designated Project. The plan shall include:	<ul style="list-style-type: none"> With the revision of draft condition 19.3.3 to focus on the types of substances, referencing that draft condition no longer makes sense. See also comments on draft condition 1.22. 	The port authority suggests the following revisions: The Proponent shall develop, in consultation with Indigenous groups (<i>Roberts Bank</i>) and Indigenous groups (marine shipping), a communication plan for accidents and malfunctions identified pursuant to condition 19.3.3 . The communication plan shall not duplicate or conflict with communication aspects of any integrated response plan relevant to the Designated Project. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up to date during all phases of the Designated Project. The plan shall include:
19.7.1	the types of accidents and malfunctions requiring the Proponent to notify the each of the Indigenous groups and Indigenous groups (marine shipping);	<ul style="list-style-type: none"> Minor typographical corrections suggested for clarity. See also comments on draft condition 1.22. 	The port authority suggests the following revisions: the types of accidents and malfunctions requiring the Proponent to notify the each of the Indigenous groups (<i>Roberts Bank</i>) and Indigenous groups (marine shipping);

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19.7.2	the manner by which Indigenous groups Indigenous groups (marine shipping) wish to be notified by the Proponent of an accident or malfunction during each phase of emergency management, including clean-up, and of any opportunity for the Indigenous groups the Indigenous groups (marine shipping) to assist in the response to the accident or malfunction; and	<ul style="list-style-type: none"> Minor typographical corrections suggested for clarity. See also comments on draft condition 1.22. 	The port authority suggests the following revisions: the manner by which Indigenous groups (<i>Roberts Bank</i>) and Indigenous groups (marine shipping) wish to be notified by the Proponent of an accident or malfunction during each phase of emergency management, including clean-up, and of any opportunity for the Indigenous groups (<i>Roberts Bank</i>) and the Indigenous groups (marine shipping) to assist in the response to the accident or malfunction; and
19.7.3	the contact information of the representatives of the Proponent that the Indigenous groups and the Indigenous groups (marine shipping) may contact and of the representatives of each of the Indigenous groups and Indigenous groups (marine shipping) to which the Proponent provides notification.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: the contact information of the representatives of the Proponent that the Indigenous groups (<i>Roberts Bank</i>) and the Indigenous groups (marine shipping) may contact and of the representatives of each of the Indigenous groups (<i>Roberts Bank</i>) and Indigenous groups (marine shipping) to which the Proponent provides notification.
20	Schedules		
20.1	The Proponent shall submit to the Agency a schedule for all conditions set out in this document no later than 60 days prior to the start of the phase of the Designated Project to which they pertain. This schedule shall detail all activities planned to fulfill each condition set out in this document and the commencement and estimated completion month(s) and year(s) for each of these activities.	<ul style="list-style-type: none"> No comment. 	
20.2	The Proponent shall submit to the Agency a schedule outlining all activities required to carry out all phases of the Designated Project no later than 60 days prior to the start of each phase. The schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities.	<ul style="list-style-type: none"> No comment. 	
20.3	The Proponent shall submit to the Agency in writing an update to schedules referred to in conditions 20.1 and 20.2 every year no later than December 31, until completion of all activities referred to in each schedule.	<ul style="list-style-type: none"> No comment. 	
20.4	The Proponent shall provide Indigenous groups and the Indigenous groups (marine shipping) with the schedules referred to in conditions 20.1 and 20.2 and any update or revision to the initial schedules made pursuant to condition 20.3 at the same time the Proponent provides these documents to the Agency.	<ul style="list-style-type: none"> See comments on draft condition 1.22. 	The port authority suggests the following revision: The Proponent shall provide Indigenous groups (<i>Roberts Bank</i>) and the Indigenous groups (marine shipping) with the schedules referred to in conditions 20.1 and 20.2 and any update or revision to the initial schedules made pursuant to condition 20.3 at the same time the Proponent provides these documents to the Agency.
21	Record keeping		
21.1	The Proponent shall maintain all records relevant to the implementation of the conditions set out in this document. The Proponent shall retain the records and make them available to the Agency for 25 years following their publication. The Proponent shall provide the aforementioned records to the Agency upon demand within a timeframe specified by the Agency.	<ul style="list-style-type: none"> No comment. 	
21.2	The Proponent shall retain all records referred to in condition 21.1 at a facility in Canada and shall provide the address of the facility to the Agency. The records may be retained in electronic form. The Proponent shall notify the Agency at least 30 days prior to any change to the physical location of the facility where the records are retained, and shall provide to the Agency the address of the new location.	<ul style="list-style-type: none"> No comment. 	