



## IR2020-6 Consultation with Indigenous groups on new information from information requests

### Background

The minister of environment and climate change (the minister) has asked the Vancouver Fraser Port Authority (the port authority) to provide details regarding the outcomes of consultation with Indigenous groups on all of the information provided in response to the minister's request, including details of which groups have been consulted on the new information, the nature of the feedback received, and how activities described in this new information would impact or intersect the exercise of rights by Indigenous peoples.

The port authority's consultation with Indigenous groups on the Roberts Bank Terminal 2 (RBT2) Project has been extensive and included, prior to the issuance of the minister's request in August 2020, consultation on matters that overlap with the minister's request, particularly in relation to the minister's questions within IR2020-1 through IR2020-4. Over the past year, the port authority broadened this consultation to include engagement with Indigenous groups on all of the information presented by the port authority in response to the minister's request. 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 have been supported virtually during the pandemic with fieldwork videos, virtual engagement, and development of the online RBT2 consultation portal.

All 46 Indigenous groups identified by the Impact Assessment Agency of Canada (IAAC) were invited by the port authority to provide feedback on the information presented in the responses to the minister's request (see Appendix IR2020-5-A11 for a list of Indigenous groups). This consultation included information sharing on the minister's request, outlining the approach to the response development, holding meetings and workshops to provide updates on the analysis and work to support the drafting of the responses, and sharing of the draft responses with request for feedback for incorporation into the final responses. Since August 2020, the port authority has participated in over 220 one-on-one meetings with Indigenous groups and organized 19 multi-group workshops to discuss the draft response to the minister's request on topics including fish and fish habitat, offsetting, juvenile salmon, southern resident killer whales (SRKW), Dungeness crab, and biofilm. Consultation with each Indigenous group has been adapted to respond to their specific areas of interest and preferred approaches to consultation and document review.

As requested by the IAAC in discussion with the port authority, this response describes feedback from Indigenous groups on key concerns with the new information presented in the draft responses, areas where their input led to substantive adjustments to the responses, and outstanding issues following the integration of their feedback received into responses. These outcomes of consultation on the responses, including how the new information contained in those responses might impact or intersect with the exercise of rights, is organized by Indigenous group within each response section to the minister's request presented below.

### Response

**Minister's request: Provide details regarding the outcomes of consultation with Indigenous groups on all the information provided in response to the requests contained herein, including details of which groups have been consulted on the new information, the nature of feedback, and how the activities described in this new information would impact or intersect with the exercise of rights by Indigenous peoples. Present the above noted information specific to each Indigenous group.**

The response below describes sequentially the outcomes of consultation with Indigenous groups on the information presented in response to the minister's request. For clarity, the port authority consulted on the

information provided in response to IR2020-1 through IR2020-4, which directly address the minister's request for further information regarding fish and fish habitat offsetting, avoidance and mitigation measures for juvenile salmon and SRKW, and information related to effects on biofilm. With regard to IR2020-5, the port authority sought the new information requested by the minister from Indigenous groups and has described the outcome of that consultation in relation to the overall responses to the minister's requests below. Finally, IR2020-7 provides new economic information the port authority was invited to include in the response, and the outcomes of consultation on the updated economic information are set out in the relevant section below.

While all 46 Indigenous groups were invited by the port authority to provide feedback on the minister's request, not all Indigenous groups provided feedback within this process. Indigenous groups that provided feedback on a given response are listed in the applicable section for that response below, followed by a group-specific analysis of outcomes of consultation with those groups based on their feedback.

## **IR2020-1.1 – RBT2 fish and fish habitat potential offsetting projects**

### Summary of the request and response

The minister requested that the port authority describe all potential projects that are being considered for the offsetting plan, all contingency projects, and all other available offsetting opportunities, including preliminary designs, habitat characteristics and functions, assessments of technical feasibility, the status of land tenure, a description of benefits to fish, and a summary of the effectiveness of past projects delivered by the port authority.

Since the public hearing, the port authority has identified 86 hectares (ha) of offsetting, an increase of more than 55 ha since the environmental impact statement (EIS). The offsetting projects include habitat bank projects, enhanced onsite offsetting, and offsite offsetting projects, including three priority projects identified by Indigenous groups, focusing on species and habitat types of interest. The response includes other available offsetting opportunities such as a Tsawwassen First Nation (TFN) opportunity, a potential complementary measure, and the Non-Conventional Offsetting Program (NCOP). Contingency plans are also described. Extensive technical supporting documentation, including design reports, archaeology reports, modelling, geotechnical assessments, and ecological conditions reports, are included in the response.

### Overview of consultation outcomes

The port authority shared the draft IR2020-1.1 response with all Indigenous groups with a request for feedback and an offer to meet to discuss feedback.

Popkum First Nation and Pacheedaht First Nation advised the port authority that they had no specific feedback to provide in relation to IR2020-1.1. The following Indigenous groups provided oral feedback during consultation meetings and workshops during the development of the IR2020-1.1 draft or formal written feedback on the IR2020-1.1 draft, with a subset advising the port authority that their oral feedback provided in consultation meetings and workshops were to be considered their formal response to the new information provided by the port authority in the IR2020-1.1 draft:

- Halalt First Nation
- Lyackson First Nation
- Maa-nulth First Nations (via Tsawwassen First Nation)
- Malahat Nation
- Musqueam Indian Band
- Semiahmoo First Nation
- Tsawwassen First Nation
- Tseil-Waututh Nation
- Ts'uubaa-asatx First Nation

## Nature of the feedback

Consistent with the extent of consultation the port authority has already undertaken with Indigenous groups on the offsetting projects, feedback from Indigenous groups on the information in the IR2020-1.1 response was generally supportive. Additional technical information on some individual projects was requested, as well as more detail regarding planned monitoring of existing habitat banking sites, proposed offsetting project sites, and donor sites for eelgrass. Some Indigenous groups raised concerns about time lag and what steps would be taken to mitigate the effects to salmon before offsetting projects were functional. Several Indigenous groups raised concerns with the inclusion or extent of rock reef habitat proposed, indicating that rock reef tends to attract species not naturally occurring in the area, as well as predatory reef fish with potential effects on Dungeness crab habitat.

Indigenous groups requested more information regarding contingency projects and contingency measures and expressed a desire to better understand how and when these would be selected and implemented should offsetting projects not perform as intended. Indigenous groups indicated support for an NCOP and interest in further consultation and a prioritization of Indigenous views and perspectives in its development. Some Indigenous groups expressed interest in the NCOP as a complementary measure and in better understanding more detail behind how this would be implemented.

## Adjustments to the response made in response to Indigenous group feedback

The port authority has followed up with individual Indigenous groups on projects of specific interest identified in their feedback on IR2020-1.1 and has included some of this detail in the revised response. In response to Indigenous groups' input on rocky reefs, the port authority will decrease the spatial extent of proposed subtidal rocky reefs, as indicated in Section 2.1 of the response. IR2020-1.1 was also adjusted to reflect that the port authority remains committed to continuing to work with Indigenous groups and regulators to understand and address concerns relating to rock reef offsetting and explore alternative designs and options leading up to the submission of the RBT2 *Fisheries Act* authorization application.

In response to feedback from Indigenous groups, Sections 5 and 6 of the IR2020-1.1 draft relating to "Other available offsetting opportunities" and "Contingency measures and projects" were revised to include more detailed information regarding these topics and proposed complementary measures. Additional information on the process by which contingency measures would be considered and implemented is included as an Appendix IR2020-1.2-C to IR2020-1.2. IR2020-1.2 was also updated to include fish and fish habitat balances and details on how offsetting analyses were undertaken in response to Indigenous group feedback on IR2020-1.1 and IR2020-1.2 (refer to the IR2020-1.2 section of this response for further details on how IR2020-1.2 was adjusted in response to feedback).

The IR2020-1.1 response has been updated to indicate that the NCOP will be advanced in conjunction with the RBT2 Project and in consultation with Indigenous groups.

Although the long-term effectiveness monitoring of proposed offsetting projects did not form part of the minister's request, a summary of proposed monitoring has been provided in Table IR2020-1.1-B1 in Appendix IR2020-1.1-B, including monitoring specific to eelgrass offsetting habitat, in response to feedback from Indigenous groups reflecting an interest in this topic.

## Outstanding issues

As described above, the port authority has considered the feedback of Indigenous groups on IR2020-1.1 and has adjusted the response to reflect that feedback. As part of the feedback received, Indigenous groups raised matters that fall within the scope of permitting under the *Fisheries Act*. This feedback is reflected in the group-specific sections below.

Consistent with the draft project conditions, the port authority will continue to consult with Indigenous groups on the offsetting plan and individual offsetting projects, mitigation measures for fish and fish habitat, including measures implemented as part of the offsetting plan, and the implementation of follow-up program (FUP) elements to verify effect predictions and mitigation effectiveness for fish and fish habitat.

## Impact on or intersection with the exercise of rights

The feedback provided by Indigenous groups on IR2020-1.1 (or in response to the minister's questions within IR2020-5 related to effects to Indigenous peoples) did not identify new conduct related to harvesting or cultural use of fish that had not already been considered by the review panel, nor any new impacts to that conduct as a result of the new information provided by the port authority in response to the minister's request. Rather, in general, the feedback focused on questions and comments that reflect concerns with the extent and/or effectiveness of the measures to offset impacts on fish and fish habitat that have already been identified, and by extension, on previously identified conduct that depends on those resources.

## Indigenous group-specific consultation outcomes

In the following subsections, the port authority presents the nature of the key feedback received from each group that provided feedback on IR2020-1.1 (as listed at the outset of this section), focusing on key concerns, areas where input led to substantive adjustments to the response, and outstanding issues. The group-specific sections also discuss whether and how any new information or feedback provided by each group in consultation on the responses may indicate the potential for a new impact on, or a new intersection with, the exercise of rights.

### 1. Halalt First Nation

Halalt First Nation (Halalt) provided oral feedback to the port authority in consultation meetings and workshops on the proposed offsetting projects described in IR2020-1.1, as well as written feedback on the draft IR2020-1.1 response.

Halalt indicated concerns with the adequacy of offsetting given the time lag between the project effect and the functionality of proposed offsetting sites, the stability of banking sites that are less than five years old, and the number of factors that influence habitat site success. Halalt wished to understand the steps that would be taken should an offsetting project fail. Halalt raised questions regarding transplanting, monitoring and the suitability of different types of eelgrass, and how effectiveness of offsetting projects will be monitored. Halalt stated a concern that baseline geotechnical studies are becoming outdated and asked for more detailed information on elements of select sites, such as South Arm Jetty and Westham Island, including the presence of shorebirds. Halalt expressed concern with the inclusion of rocky reef as a habitat type and requested that the amount of rocky reef be decreased.

Halalt indicated in their comments that the project overlaps with one of Halalt's prime fishing areas and that this had not been referenced in the IR2020-1.1 response. Halalt said they remain concerned about project-related effects to valued aquatic resources, including reduced access to their traditional territory and rights.

The port authority has provided formal responses directly to feedback received from Halalt and considered that feedback during the drafting of the IR2020-1.1 response. The port authority has updated IR2020-1.1 to reference Halalt values and concerns in relation to access and invasive species. In response to Indigenous group feedback, including Halalt, the port authority has adjusted the IR2020-1.1 response to reduce the amount of proposed rocky reef habitat in the offsetting plan for the project. As noted in the responses to IR2020-1.1 and IR2020-1.2, the port authority is advancing rigorous follow-up monitoring and will be implementing an adaptive management approach.

While not requested by the minister, the port authority has adjusted the IR2020-1.1 response to include a summary of proposed monitoring in Table IR2020-1.1-B1 in Appendix IR2020-1.1-B, which includes the potential for invasive vegetation removal. The port authority has also included additional information in an appendix to IR2020-1.2 regarding time lag and the process by which contingency measures would be considered and implemented.

In providing feedback on IR2020-1.1, while Halalt reiterated that the project overlaps with Halalt's fishing areas, Halalt did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 2. Lyackson First Nation

Lyackson First Nation (Lyackson) provided oral feedback to the port authority in consultation meetings and workshops on the proposed offsetting projects described in IR2020-1.1.

Lyackson expressed concern that all potential impacts of the offsetting projects be considered, including downstream effects of the use of particular plants. Lyackson asked if federal regulators were in support of more conventional offsetting measures. Lyackson indicated the importance of an Indigenous lens being brought to the work of the NCOP, and that it be inclusive and broad-reaching. Lyackson said that many of their clam gardens are degraded, in part because of reduced access due to freight traffic, and expressed interest in clam garden opportunities to improve food security for the nation.

The port authority has responded directly to feedback received from Lyackson and considered that feedback in the drafting of the IR2020-1.1 response, which has been updated in Section 5.1.3 and Section 6.2 to reflect continued Indigenous group involvement in the development of the NCOP. With regard to Lyackson's feedback on clam gardens, the port authority notes that, in response to Indigenous group concerns about the residual effects to bivalves and acknowledging the opportunity to support Indigenous-led food security initiatives, the port authority proposes that projects for bivalves be considered through the NCOP (see IR2020-1.1, Section 6.2).

In providing feedback on IR2020-1.1, Lyackson did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 3. Maa-nulth First Nations (via Tsawwassen First Nation)

Maa-nulth First Nations (Maa-nulth) coordinated their review of the draft IR2020-1.1 response with Tsawwassen First Nation (TFN). In a written response, Maa-nulth confirmed their support of TFN's comments regarding this information request, and specifically indicated their support on the following:

- The conventional offsetting projects proposed by TFN and other lower mainland Indigenous groups, subject to Maa-nulth receiving periodic updates regarding the implementation and outcome of those projects
- An NCOP, subject to further engagement regarding the details of that program

The port authority has responded directly to feedback received from Maa-nulth and considered that feedback in the drafting of the IR2020-1.1 response, which has been updated to reflect that under the proposed conditions, the port authority will continue to consult with Indigenous groups, including Maa-nulth, on the development of the offsetting projects. The port authority has also updated Section 5.1.3 and Section 6.2 of IR2020-1.1 to reflect continued Indigenous group involvement in the development of the NCOP.

In providing feedback on IR2020-1.1, Maa-nulth did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 4. Malahat Nation

Malahat Nation (Malahat) provided oral feedback to the port authority in consultation meetings and workshops regarding IR2020-1.1.

Malahat was interested to understand the plans for follow-up monitoring and for measurable and specific targets and hard commitments should offsetting sites underperform. Malahat emphasized the importance of confirming these targets earlier in the process to ensure steps can be taken proactively. Malahat said they are interested in sharing any data, including satellite imagery used in monitoring initiatives, to assist with their own efforts to protect and restore the environment within their core territory. Malahat indicated that with respect to direct feedback on individual projects, Malahat is deferring to Indigenous groups in proximity to RBT2 as the proposed offsetting projects are not within their core territory.

The port authority has responded directly to feedback received from Malahat and considered that feedback in the drafting of the IR2020-1.1 response. As noted in the responses to IR2020-1.1 and IR2020-1.2, the port authority

is advancing rigorous follow-up monitoring and will be implementing an adaptive management approach. While not requested by the minister, the port authority has adjusted the IR2020-1.1 response to include a summary of proposed monitoring in Table IR2020-1.1-B1 in Appendix IR2020-1.1-B,

In providing feedback on IR2020-1.1, Malahat did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 5. Musqueam Indian Band

Musqueam Indian Band (Musqueam) provided oral feedback to the port authority in consultation meetings and workshops on the proposed offsetting projects described in IR2020-1.1, as well as written feedback on the draft IR2020-1.1 response.

Musqueam has been involved in discussions with the port authority in relation to the development of the offsetting plan since 2019. The port authority has been working closely with Musqueam to identify Musqueam priority offsetting projects and are advancing two of these in the offsetting plan. Musqueam's comments on the IR2020-1.1 response highlighted relevant connections to Musqueam stewardship responsibility and to ensuring there are adequate ecological and cultural resources to support the cultural continuity of future generations of Musqueam people. Musqueam asked for the port authority to further define the distinction between habitat enhancement, restoration, or creation and how they may be credited by Fisheries and Oceans Canada (DFO) in the context of the offsetting plan. Musqueam requested detail regarding the productivity of certain species of interest. Musqueam noted the importance of the Raincoast Conservation Foundation breaches near the South Arm Jetty Tidal Marsh Project to the ecosystem of the Fraser River estuary. Musqueam requested more detail regarding the TFN priority project. Musqueam also noted the importance of conducting an additional archaeological assessment in relation to the Westham Island Canoe Pass Tidal Marsh Project.

The port authority has responded directly to feedback received from Musqueam and considered that feedback in the drafting of the IR2020-1.1 response, with multiple sections updated to reflect Musqueam's input. This input includes direct language provided by Musqueam regarding the alignment of the proposed offsetting plan with their stewardship vision. In response to the feedback regarding the Westham Island Canoe Pass Tidal Marsh Project, the IR2020-1.1 response has been updated to reflect additional archaeological work planned for 2021.

In providing feedback on IR2020-1.1, Musqueam did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 6. Semiahmoo First Nation

Semiahmoo First Nation (Semiahmoo) provided oral feedback to the port authority in consultation meetings and workshops regarding IR2020-1.1.

In addition to several editorial comments, Semiahmoo requested that the port authority acknowledge the importance of the Semiahmoo Bay-Little Campbell River Enhancement Project to Semiahmoo's food security, health, and culture.

The port authority has responded directly to feedback received from Semiahmoo and considered that feedback in the drafting of the IR2020-1.1 response, incorporating all of Semiahmoo's requests and clarifications in Section 3.6 and Section 3.6.1.

In providing feedback on IR2020-1.1, Semiahmoo did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 7. Tsawwassen First Nation

Tsawwassen First Nation (TFN) provided oral feedback to the port authority in several consultation meetings and workshops on the proposed offsetting projects described in IR2020-1.1, as well as written feedback on the draft IR2020-1.1 response. TFN and the port authority worked closely together during the development of the response to identify and advance an understanding of TFN's priorities for the offsetting plan for the project. This has

included close review of offsetting projects and the inclusion and description of a TFN priority project (Tsawwassen Marshlands Project) that is in alignment with TFN's Offsetting Vision. TFN's Offsetting Vision expresses the importance of reflecting TFN perspectives and traditional knowledge in offsetting planning and addressing both the physical needs of the environment as well as TFN members' use of and access to culturally relevant areas and resources in a way that benefits the holistic health and well-being of the TFN community. TFN and the port authority have also mapped out a process for advancing a *Fisheries Act* authorization, should the project be approved.

In addition to various editorial comments, TFN raised several questions on IR2020-1.1, including the value of the edge effect, understanding the effects of a rock berm on safe navigation, requesting empirical evidence to support the distinction between lower and higher value habitat, requests and recommendations for greater clarity in some sections of the response on project benefits, methods of analysis, interactions with adjacent land uses, explanation and analysis of existing habitats, and a comparison of offsetting project values against the effects of the project. TFN also expressed an interest in understanding the timing for the NCOP and asked for more information on existing and proposed rocky reef near the project site.

The port authority has responded directly to feedback received from TFN and considered that feedback in the drafting of the IR2020-1.1 response, with multiple sections updated to reflect TFN's input.

In providing feedback on IR2020-1.1, TFN did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 8. Tsleil-Waututh Nation

Tsleil-Waututh Nation (TWN) provided oral feedback to the port authority in consultation meetings and workshops on the proposed offsetting projects described in IR2020-1.1, as well as written feedback on the draft IR2020-1.1.

TWN was interested in eelgrass habitat implementation, including transplanting, and indicated a desire to see net gain met through monitoring. TWN said they are not supportive of rocky reef habitat and had questions regarding technical components of some offsetting projects, such as the South Causeway Eelgrass Project (formerly known as the Tsawwassen Eelgrass Project) and how it may be affected by adjacent activities. TWN had questions regarding contingency measures, complementary measures, the status of banked sites and the process for credit withdrawal of banked sites, and the NCOP, including understanding the status of, and level of DFO support for, the program. TWN indicated that further archaeological work is required for the Indigenous priority offsetting projects. TWN also indicated that detailed adaptive management plans will be required for all offsetting projects.

The port authority has responded directly to feedback received from TWN and considered that feedback in the drafting of the IR2020-1.1 response, including revising sections of IR2020-1.1 to include more detailed information regarding contingency measures, complementary measures, and Section 6.2 on the NCOP.

In providing feedback on IR2020-1.1, TWN did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 9. Ts'uubaa-asatx First Nation

Ts'uubaa-asatx First Nation (Ts'uubaa-asatx) provided oral feedback to the port authority on IR2020-1.1.

Ts'uubaa-asatx requested that the port authority include reference to Ts'uubaa-asatx's advocacy policy regarding native species and integrate the approach into planning for the offsetting projects. Ts'uubaa-asatx also requested reference to Ts'uubaa-asatx policies around archaeology, referencing discussion of expectations around implementation of those policies on a site visit. Ts'uubaa-asatx reiterated the cultural importance of shell hash and uses with respect to erosion and in shellfish development. Ts'uubaa-asatx referenced continued concern around herring and their support for eelgrass to support herring. Ts'uubaa-asatx expressed concern about leaving creosote-treated piles in for wildlife perches due to possible leaching.

The port authority has responded directly to feedback received from Ts'uubaa-asatx and considered that feedback in the drafting of the IR2020-1.1 response, including referencing Ts'uubaa-asatx's policies and updating Section 3.2.1 of IR2020-1.1 that describes the potential for, and possible benefits of, shell hash application to identify Ts'uubaa-asatx as one of the groups interested in shell hash application.

In providing feedback on IR2020-1.1, Ts'uubaa-asatx did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## **IR2020-1.2 – RBT2 proposed fish and fish habitat offsetting plan**

### Summary of the request and response

The minister requested the port authority propose an offsetting plan that would directly address the habitat loss and potential disruption of juvenile salmon migration caused by the project, provide an analysis of how project impacts to juvenile Chinook salmon habitat and migration will be fully offset, and provide an analysis of the how the offsetting plan will counterbalance residual effects of the project on fish and fish habitat.

The port authority has developed a comprehensive suite of mitigation measures, including a fish and fish habitat offsetting plan, for the project. The port authority has applied a mitigation hierarchy of first avoiding potential adverse effects, then reducing potential adverse effects that cannot be avoided, then compensating for or offsetting the effects that remain after the implementation of avoidance and reduction measures. The plan integrates the priorities and preferences of Indigenous groups and is based on a conservative and precautionary approach to calculating effects and applying avoidance, reduction, and offsetting measures. It accounts for all sources of potential uncertainty and time lag, proposes comprehensive follow-up monitoring, and includes adaptive management and contingency measures.

The offsetting plan proposed by the port authority directly addresses the habitat loss and potential disruption of migration of juvenile Chinook salmon migration from the project resulting in a net gain in juvenile salmon habitat and productivity, with disruption of juvenile salmon migration being mitigated following the application of avoidance, reduction, and offsetting measures.

### Overview of consultation outcomes

The port authority shared the draft IR2020-1.2 response with all Indigenous groups with a request for feedback and an offer to meet to discuss feedback.

Popkum First Nation advised the port authority that they had no specific feedback to provide in relation to IR2020-1.2. The following Indigenous groups provided oral feedback during consultation meetings and workshops during the development of the IR2020-1.2 draft or formal written feedback on the IR2020-1.2 draft, with a subset advising the port authority that their oral feedback provided in consultation meetings and workshops were to be considered their formal response to the new information provided by the port authority in the IR2020-1.2 draft:

- Halalt First Nation
- Maa-nulth First Nations (via Tsawwassen First Nation)
- Musqueam Indian Band
- Tsawwassen First Nation
- Tseil-Waututh Nation
- Ts'uubaa-asatx First Nation

### Nature of the feedback

In general, Indigenous group feedback on IR2020-1.2 was related to mitigation measures and offsetting projects, and calculations related to residual effects based on factors such as the inclusion of uncertainty and time lag.

Indigenous groups provided additional feedback on individual offsetting projects, species of concern, and reiterated a desire for further consultation on environmental management plans, contingency projects, and the NCOP. Some Indigenous groups commented on the structure of the response and raised questions regarding what was included in the final calculation of residual effects and offsetting amounts.

### Adjustments to the response made in response to Indigenous group feedback

The port authority has responded to feedback from Indigenous groups regarding the structure and content of IR2020-1.2 and made considerable adjustments to address these questions and suggestions. An appendix (Appendix IR2020-1.2-D) has been added to provide additional detail regarding the various lines of evidence used to estimate the amount of offsetting required, which includes both productivity approaches and an additional habitat equivalency approach. The appendix also details how uncertainty was factored and considered in the assessment.

### Outstanding issues

As described above, the port authority has considered the feedback of Indigenous groups on IR2020-1.2 and has adjusted the response to reflect that feedback. As part of the feedback received, Indigenous groups expressed the need for ongoing consultation on the offsetting plan, which is consistent with the draft project conditions, and raised matters that fall within the scope of permitting under the *Fisheries Act*. The feedback is reflected in the group-specific sections below.

### Impact on or intersection with the exercise of rights

The feedback provided by Indigenous groups on IR2020-1.2 (or in response to the minister's questions within IR2020-5 related to effects to Indigenous peoples) did not identify new conduct related to harvesting or cultural use of fish that had not already been considered by the review panel, nor any new impacts to that conduct as a result of the new information provided by the port authority in response to the minister's request. Rather, in general, the feedback focused on questions and comments that reflect concerns with the extent and/or effectiveness of the measures to offset impacts on fish and fish habitat that have already been identified, and by extension, on previously identified conduct that depends on those resources.

### Indigenous group-specific consultation outcomes

In the following subsections, the port authority presents the nature of the key feedback received from each group that provided feedback on IR2020-1.2 (as listed at the outset of this section), focusing on key concerns, areas where input led to substantive adjustments to the response, and outstanding issues. The group-specific sections also discuss whether and how any new information or feedback provided by each group in consultation on the responses may indicate the potential for a new impact on, or a new intersection with, the exercise of rights.

#### 1. Halalt First Nation

Halalt First Nation (Halalt) provided oral feedback to the port authority in consultation workshops and written feedback on the draft IR2020-1.2 response.

Halalt expressed disagreement with the port authority's assessment that the residual effects of the project will be addressed, saying that, while some habitat will be restored through the offsetting plan, the effects of the project are not fully understood and therefore cannot be fully addressed. Halalt also disagreed with the port authority's assessment of minor effects to Chinook salmon productivity based on already declining Chinook populations and potential project-related alterations to prey availability, disruption to migration pathways, light effects (influencing behavioural changes), and cumulative impacts.

Halalt stated that terminal placement was not an adequate avoidance measure and requested an evaluation of all outcomes of placing the marine terminal in subtidal waters prior to identifying it as an avoidance mitigation measure. Halalt expressed a desire for a greater understanding of how time lag was factored into the productivity analysis. Halalt raised a concern that there is not enough monitoring data to draw a conclusion on the effects of the existing facilities at Roberts Bank with respect to migration and requested clarity on the work conducted since

the public hearing on the existing conditions of the site. Halalt also requested clarity on the additional benefit of the 22 ha of offsetting not included in the calculations.

Halalt requested further information on what will be done to mitigate effects of dredging at the tug basin, and how marine species will be salvaged. Halalt requested to be consulted on the marine species management plan, and that no construction activities take place in the crab or fisheries windows.

Halalt requested more information on habitat complexing, how herring will be accounted for in offsetting measures, on light management measures, and how fish will be protected from pile-driving. Halalt recommended continuing to work on additional mitigation to the breach. Halalt said contingency projects will be necessary and asked how banking credits will be applied. Halalt also indicated that further engagement is needed on complementary measures.

The port authority acknowledges the ongoing concern that the effects of the project be fully offset. Throughout the environmental assessment process and in consultation with Indigenous groups, including Halalt, over the course of that process, including through developing the response to the minister's request, the port authority has described how project effects will be addressed and how residual effects to salmon will be fully offset. The port authority has restructured the IR2020-1.2 response to more clearly describe how this conclusion has been reached and the analysis to support it.

The port authority will consult with Indigenous groups on environmental management plans associated with the project, including marine species and light, as referenced in the responses to IR2020-1.2, IR2020-2.3, and IR2020-3. The response to IR 2020-1.2 has been updated to include more information on contingency approach and complementary measures, as well as further clarity on the 22 ha of offsetting over the required amount, based on feedback from Indigenous groups.

The port authority has responded directly to feedback received from Halalt regarding information on mitigation for dredging and marine species salvage and the construction schedule. The response to IR2020-1.2 has been updated with additional information regarding habitat complexing.

In providing feedback on IR2020-1.2, Halalt did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 2. Maa-nulth First Nations (via Tsawwassen First Nation)

Maa-nulth First Nations (Maa-nulth) coordinated their review of the draft IR2020-2.1 response with Tsawwassen First Nation (TFN). Maa-nulth confirmed their support of TFN's comments regarding this request, and specifically indicated their support regarding an NCOP, subject to further engagement regarding the details of that program with Maa-nulth.

The port authority has responded directly to feedback received from Maa-nulth and considered that feedback in the drafting of the IR2020-1.2 response, which has been updated to reflect continued Indigenous group involvement in the development of the NCOP.

In providing feedback on IR2020-1.2, Maa-nulth did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 3. Musqueam Indian Band

Musqueam Indian Band (Musqueam) provided oral and written feedback to the port authority on IR2020-1.2. The feedback was summarized by Musqueam as follows:

- Musqueam has worked collaboratively with the port authority to ensure the proposed fish and fish habitat offsetting plan aligns with Musqueam's long-term vision for restoring the Fraser River estuary, which is a component of Musqueam's responsibility to be the stewards of our traditional territory.

- In Musqueam's view the value of the offsetting projects is enhanced by their contribution to a network of interconnected habitat sites that support fish species by providing key linkages they use to transition through both the Fraser River and their life stages.
- Musqueam emphasizes that restoring these linkages are of critical importance for species of salmon, as the highest mortality for salmon occurs while juvenile salmon migrate through the Lower Fraser and Sturgeon Bank on their way to the ocean.

The port authority has responded directly to feedback received from Musqueam and considered that feedback in the drafting of the IR2020-1.2 response.

In providing feedback on IR2020-1.2, Musqueam did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

#### 4. Tsawwassen First Nation

Tsawwassen First Nation (TFN) provided oral feedback to the port authority on IR2020-1.2 during several consultation meetings and written feedback on the draft IR2020-1.2 response, including editorial feedback regarding the structure of the response.

TFN emphasized the importance of breaching the causeway and indicated that it was essential for the restoration of some of the habitats of interest to salmon. TFN requested a productivity analysis of the benefits of a causeway breach and indicated that one year of data on salmon movement was not adequate to draw strong conclusions on the potential project effect. TFN expressed appreciation of the work the port authority has done on causeway breach and TFN said they consider it critical mitigation for the project.

TFN suggested that the port authority provide more detail around how uncertainty and time lag were factored into the assessment, as well as clarification on the assessment of the 64 ha of offsetting required and the additional 22 ha described in the response and on the constraints to further footprint reductions.

TFN indicated that they share Musqueam's vision for a mosaic of habitat projects within the Lower Fraser estuary with a desire for this to extend to the inter-causeway area at Roberts Bank. TFN noted support for the Finn Slough Enhancement Project and Semiahmoo Bay-Little Campbell River Enhancement Project offsetting projects as part of the proposed offsetting plan.

TFN asked for more information on the status of the marine species management plan and the FUP on marine vegetation, as well as what measures will be used to reduce channel formation during dyke construction. TFN also asked questions of clarification regarding non-native eelgrass, rock reef, how predation risk would be managed, and more detail on contingency projects and the benefits of removing large woody debris.

The port authority has responded directly to feedback received from TFN and other Indigenous groups regarding the structure and content of IR2020-1.2. The port authority has made structural revisions and added Appendix IR2020-1.2-D to provide additional detail regarding the various lines of evidence used to estimate the amount of offsetting required and details how uncertainty was factored and considered in the assessment.

In providing feedback on IR2020-1.2, TFN did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

#### 5. Tsleil-Waututh Nation

Tsleil-Waututh Nation (TWN) provided oral feedback to the port authority during consultation meetings and written feedback on the draft IR2020-1.2 response.

In the course of consultation meetings, TWN asked for a number of clarifications to the response, including the origin and application of the discount rate of 3% applied to 50 ha of offsetting, whether habitat complexing would be undertaken along the perimeter of the terminal if a breach were implemented, how and when contingency and other potential offsetting projects would be included in calculations, clarity on calculations for the 86 ha (offsetting

proposed) as opposed to 64 ha (offsetting required), and for more detail on the NCOP, including timeframes for developing non-conventional offsetting projects.

The port authority has responded directly to feedback received from TWN regarding the requested clarifications and added additional information to the main IR2020-1.2 response and in the new Appendix IR2020-1.2-D as a result of that feedback.

In written feedback, TWN stated that should the port authority need to perform in-water works inside the fisheries-sensitive window, TWN is to be consulted prior to this works being approved by DFO. TWN also stated that should additional contingency habitat and other additional offsetting projects be considered as offsetting for RBT2, then detailed descriptions should be included in the DFO *Fisheries Act* authorization application for TWN's review.

TWN stated that conversations are ongoing between Indigenous groups as to how non-conventional offsetting will be managed, with a first step including the determination of the governance of, and a process for, NCOP before the types of offsetting projects are finalized. TWN requested that an update be provided by the port authority as to further engagement sessions to continue ongoing conversations regarding the NCOP.

In the response to IR2020-2.3, the port authority confirmed that it will consult with Indigenous groups on any changes to in-water works. In Section 6 of the IR2020-1.1 response, the port authority confirmed that, should the additional offsetting opportunities or contingency projects be included as RBT2 offsetting, then Indigenous groups will be consulted on those opportunities and projects.

In providing feedback on IR2020-1.2, TWN did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel.

TWN requested that offsetting projects be pursued until there is a net gain for all representative species or groups (i.e., including flat fish, forage fish, Pacific herring, infaunal bivalves, and orange sea pens), as verified through the relevant FUPs, and stated that TWN's rights will be impacted if habitat cannot support fish. This feedback and the potential impacts are consistent with feedback previously provided by TWN and has not raised new impacts to the exercise of these rights. The port authority has provided rationale within the IR2020-1.2 response to explain why Roberts Bank, with RBT2, will continue to support fish and fish habitat in perpetuity. TWN will be consulted on the FUP elements to verify effects predictions and mitigation effectiveness for fish and fish habitat, as required by the draft project conditions. The port authority has also adjusted Part C of the IR2020-1.2 response to note that, in response to TWN's concerns, the possibility exists to focus potential NCOP projects on these fish species and groups for which the current proposed RBT2 offsetting plan would not result in a net productivity gain.

TWN said that it is not involved in the process between the port authority and DFO to determine how credits are calculated for the proposed offsetting projects and that it is an infringement of TWN's rights not to have a say in those calculations.

The port authority notes its understanding that, should the project be approved, habitat bank credits would be confirmed in the review of an application for a *Fisheries Act* authorization and that TWN and other Indigenous groups would be consulted.

## 6. Ts'uubaa-asatx First Nation

Ts'uubaa-asatx First Nation (Ts'uubaa-asatx) provided oral and written feedback to the port authority on the draft IR2020-1.2 response.

Ts'uubaa-asatx stated in their comments that they are confident that there will be a net gain given the ongoing consultation and responsiveness of the port authority to feedback.

Ts'uubaa-asatx expressed their continued concern regarding rocky reef, forage fish, and herring and indicated that the port authority should consider the application of shell hash to address channel formation with a breach and predation risk with respect to the ultimate shape of the terminal and breach. Ts'uubaa-asatx asked for more

information regarding how eelgrass in the tug basin will be cared for during dredging and expressed continued concern regarding the transplanting of sea pens and the impacts of construction noise on herring.

Ts'uubaa-asatx recommended an archaeological assessment be undertaken for the Westham Island Canoe Pass Tidal Marsh Project and expressed support for the Finn Slough Enhancement Project. Ts'uubaa-asatx expressed support for the NCOP, indicating that Ts'uubaa-asatx were early proponents of this concept and that it should receive Indigenous group support regardless of DFO's position. Ts'uubaa-asatx said that it was unclear in the response how the residual effects will be fully offset and that the port authority should expand on this through continued dialogue with Indigenous groups. Ts'uubaa-asatx indicated that they will continue to monitor this process and participate to ensure concerns regarding the offsetting of residual effects are addressed by proponent or Crown.

In response to concerns raised by Indigenous groups, including Ts'uubaa-asatx, regarding rock reef, the amount of rock reef proposed by the port authority in the final response to IR2020-1.1 has been reduced. Additional information has been included in Section 6.2 of IR2020-1.1 and part (c) of the IR 2020-1.2 to respond to ongoing concerns regarding the net productivity of herring and other species (i.e., forage fish, flat fish, infaunal bivalves, orange sea pen) after offsetting. The port authority has also updated Section 3.2.1 of IR2020-1.1 that describes the potential for, and possible benefits of, shell hash application to identify Ts'uubaa-asatx as one of the groups interested in shell hash application. The port authority has also restructured the IR2020-1.2 response to more clearly describe how the conclusion that the effects of the project will be fully offset has been reached and the analysis to support it.

In response to input raised by Ts'uubaa-asatx and other Indigenous groups during their review of IR2020-1.1 and IR2020-1.2, an archaeological overview assessment (AOA) for the Westham Island Canoe Pass Tidal Marsh Project will be undertaken in fall 2021. Recommendations presented in the AOA will inform future archaeological work should the RBT2 Project advance to construction.

In providing feedback on IR2020-1.2, Ts'uubaa-asatx did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## **IR2020-2.1 – Avoidance and mitigation measures for project construction – fish and fish habitat**

### **Summary of the request and response**

The minister has requested that the port authority describe any technically feasible project design options that would reduce effects to fish and fish habitat, such as a reduced footprint, and the effects that would be avoided for each option.

The port authority has conducted an analysis of terminal and rail operations and evaluated options to reduce the project footprint. The outcomes of this work include technically and economically feasible options to reduce the project footprint at the marine terminal and widened causeway by approximately 14.4 ha—approximately 10.3 ha at the terminal and approximately 4.1 ha at the causeway. The port authority notes in the IR2020-2.1 response that a reduced terminal footprint may preclude future electrification of the terminal to accommodate zero-emission cargo handling equipment. If zero-emission cargo handling equipment is a project requirement, as contemplated in the draft project conditions, the potential terminal footprint reduction would be limited to approximately 6 ha.

The proposed design changes would result in a reduction in direct and indirect effects to fish and fish habitat benefiting adult and juvenile life stages of fish, including Chinook and chum salmon, herring, sand lance, and Dungeness crab, which use the habitats that will be avoided for life functions such as rearing, foraging, predator avoidance, and spawning.

## Overview of consultation outcomes

The port authority shared the draft IR2020-2.1 response with all Indigenous groups with a request for feedback and an offer to meet to discuss feedback.

Popkum First Nation advised the port authority that they had no specific feedback to provide in relation to IR2020-2.1. The following Indigenous groups provided oral feedback during consultation meetings and workshops during the development of the IR2020-2.1 draft and/or formal written feedback on the IR2020-2.1 draft, with a subset advising the port authority that their oral feedback provided in consultation meetings and workshops were to be considered their formal response to the new information provided by the port authority in the IR2020-2.1 draft:

- Halalt First Nation
- Lyackson First Nation
- Maa-nulth First Nations (via Tsawwassen First Nation)
- Musqueam Indian Band
- Semiahmoo First Nation
- Tsawwassen First Nation
- Tseil-Waututh Nation
- Ts'uubaa-asatx First Nation

## Nature of the feedback

Indigenous group feedback was generally related to the relationship between footprint reductions at the terminal and uncertainty related to the potential requirement for zero emission vehicles within the draft project conditions. Indigenous groups were interested in the implications of the footprint reduction on the amount of dredging required for terminal construction. Indigenous groups asked for information and clarification on the effects of the footprint reductions in the context of mitigation for project effects on fish and fish habitat generally. Several groups noted a desire not to see the effects of the footprint expressed as “benefits” to fish, but rather as a reduction of effects. Indigenous groups have emphasized during ongoing consultation the importance of exploring all opportunities to reduce effects to fish and fish habitat through refinements to design, particularly in the intertidal area.

## Adjustments to the response made in response to Indigenous group feedback

The port authority has provided information in follow-up to questions and comments raised during one-to-one and multi-nation workshop settings. This includes further describing the considerations regarding footprint reductions at the terminal and the draft project condition regarding zero-emission vehicles. Minor adjustments were made to the response at the request of Indigenous groups to clarify information and/or add additional references.

In relation to questions and comments raised about the nature and adequacy of fish and fish habitat mitigation measures for the project, these have been addressed in IR2020-1.1 and IR2020-1.2, which describe in detail the proposed avoidance, reduction, and offsetting measures proposed by the port authority and how they will offset the effects of the project on fish and fish habitat. Refer to the IR2020-1.1 and IR2020-1.2 sections within this response for a description of how those responses were adjusted based on Indigenous group feedback.

## Outstanding issues

As described above, Indigenous groups have emphasized the importance of exploring all opportunities to reduce effects to fish and fish habitat through refinements to design and in the context of consultation on the responses expressed general support the footprint design changes presented in IR2020-2.1. As required by the draft project conditions, the port authority will continue to consult Indigenous groups on mitigation measures for fish and fish habitat and the implementation of FUP elements to verify effect predictions and mitigation effectiveness for fish and fish habitat.

The port authority has provided feedback to the IAAC on the draft project condition relating to zero-emission vehicles and the trade-off that may be required in relation to footprint reductions and consulted with Indigenous groups.

### Impact on or intersection with the exercise of rights

The feedback provided by Indigenous groups on IR2020-2.1 (or in response to the minister's questions within IR2020-5 related to effects to Indigenous peoples) did not identify new conduct related to harvesting or cultural use of fish that had not already been considered by the review panel, nor any new impacts to that conduct as a result of the new information provided by the port authority in response to the minister's request. Rather, in general, the feedback focused on questions and comments that reflect interest and questions regarding the extent and/or effectiveness of the proposed footprint reduction to avoid or reduce impacts on fish and fish habitat that have already been identified, and by extension, on previously identified conduct that depends on those resources.

### Indigenous group-specific consultation outcomes

In the following subsections, the port authority presents the nature of the key feedback received from each group that provided feedback on IR2020-2.1 (as listed at the outset of this section), focusing on key concerns, areas where input led to substantive adjustments to the response, and outstanding issues. The group-specific sections also discuss whether and how any new information or feedback provided by each group in consultation on the responses may indicate the potential for a new impact on, or a new intersection with, the exercise of rights.

#### 1. Halalt First Nation

Halalt First Nation (Halalt) provided written feedback to the port authority on the draft IR2020-2.1 response.

Halalt expressed a concern that the reduced footprint as proposed would not act as an effective mitigation measure for the overall effects of the project footprint and its related effects to fish, fish habitat, and invertebrates. Halalt said that the measures proposed (i.e., footprint reduction) were uncertain and undecided and disagreed that the measures would provide indirect benefits to fish and fish habitat. Halalt requested that the port authority implement additional measures that will avoid impacts to fish and fish habitat.

Halalt expressed concern with effects to fish and fish habitat from dredging activities, requesting additional information regarding mitigation measures that will be in place beyond no work in fisheries-sensitive timing windows.

The port authority has responded directly to feedback received from Halalt and considered that feedback during the drafting of the IR2020-2.1 response. Halalt's perspectives on mitigation measures, along with those of other Indigenous groups, are reflected in the avoidance, reduction, and offsetting measures described in IR2020-1.1 and IR2020-1.2. The port authority also provided further information to Halalt regarding a description of the mitigation measures in place specifically with respect to the potential effects of dredging.

In providing feedback on IR2020-2.1, Halalt did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

#### 2. Lyackson First Nation

Lyackson First Nation (Lyackson) provided written feedback to the port authority on the draft IR2020-2.1 response.

Lyackson expressed concern that the analysis of the reduction of effects to fish and fish habitat is based on the higher potential reduction in footprint, rather than the lower amount possible with the requirement for zero-emissions vehicles. Lyackson believes the port authority should undertake scenario and sensitivity analysis of the various options as reductions are potentially overstated.

The port authority has responded directly to feedback received from Lyackson and considered that feedback in the drafting of the IR2020-2.1 response.

In providing feedback on IR2020-2.1, Lyackson did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

### 3. Maa-nulth First Nations

Maa-nulth First Nations (Maa-nulth) coordinated their review of the draft IR2020-2.1 response with Tsawwassen First Nation (TFN) and, in a written response, said that they support all of TFN's written comments. Refer to TFN's section below for details.

Maa-nulth reiterated their treaty right to harvest, within their Domestic Fishing Areas on the west coast of Vancouver Island, sockeye and other fish species that travel from Fraser River and Fraser estuary and their strong interest in the project terminal and matters that may impact that interest.

In providing feedback on IR2020-2.1, Maa-nulth did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

### 4. Musqueam Indian Band

Musqueam Indian Band (Musqueam) provided oral feedback to the port authority during consultation meetings and workshops regarding IR2020-2.1.

Musqueam's feedback included asking for clarification of the total number of hectares for the causeway footprint expansion. Throughout consultation on the project, Musqueam has emphasized the importance of reducing the footprint to reduce effects on fish and fish habitat.

The port authority has responded directly to feedback received from Musqueam's and considered that feedback in the drafting of the IR2020-2.1 response.

In providing feedback on IR2020-2.1, Musqueam did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

### 5. Semiahmoo First Nation

Semiahmoo First Nation (Semiahmoo) provided oral feedback to the port authority during consultation meetings and workshops regarding IR2020-2.1.

Semiahmoo expressed interest in the implications of the proposed footprint reductions on the amount of dredging required for project construction. Semiahmoo also noted that the studies undertaken to date have not included Semiahmoo Bay and it is important to do so, particularly regarding sedimentation and the potential for dredging to affect the bay.

The port authority has responded directly to feedback received from Semiahmoo and considered that feedback in the drafting of the IR2020-2.1 response.

In providing feedback on IR2020-2.1, Semiahmoo did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

### 6. Tsawwassen First Nation

Tsawwassen First Nation (TFN) provided oral comments to the port authority in consultation meetings and workshops and written feedback on the draft IR2020-2.1 response.

TFN noted that they are pleased to see that the port authority has altered the design to further reduce the footprint and impacts to fish and fish habitat. TFN also noted the uncertainty with respect to the reductions should there be a requirement to fully electrify the terminal and noted a desire to understand at which point in the design process the reductions could be confirmed. TFN also noted interest in how direct and indirect benefits were calculated with respect to Chinook salmon, juvenile, and adult life stages of Dungeness crab and forage fish, such as herring and

sand lance. While acknowledging the crab baiting away study, TFN noted they were somewhat surprised that additional measures to reduce the impacts on Dungeness crab (not just crab habitat) were not included in the IR2020-2.1 response. TFN also expressed interest in understanding whether the port authority's evaluation of how the project footprint could be reduced had considered whether and how the reductions could mitigate impacts to TFN's access to crabbing grounds at Roberts Bank.

The port authority has responded directly to feedback received from TFN and has considered that feedback in the drafting of IR2020-2.1. The port authority explained that, while the reduction of the footprint also reduces effects to Dungeness crab habitat and crab productivity and other mitigation is proposed to address potential effects on crabbing grounds, as described in IR2020-1.2 and IR2020-2.3, the footprint reduction was based on an engineering evaluation of operational constraints and therefore did not directly consider crabbing ground access.

The port authority recognizes that there may be additional benefits from such project footprint reduction to reducing impacts to TFN's access to crabbing grounds at Roberts Bank. The port authority is currently working in collaboration with TFN to identify opportunities to support that access, building on previous measures to reduce effects to TFN crab harvesting access, such as the port authority's removal of the intermediate transfer pit. See, too, the discussion in TFN's subsection within the IR2020-1.1 section of this response regarding the Tsawwassen Marshlands Project.

In providing feedback on IR2020-2.1, TFN did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 7. Tseil-Waututh Nation

Tseil-Waututh Nation (TWN) provided oral feedback to the port authority in consultation meetings and workshops and written feedback on the draft IR2020-2.1 response.

TWN requested that the port authority confirm that, if there is a possible reduction in the terminal footprint, whether the effects of an increase in unimpacted habitat would be included in the respective FUPs. TWN also requested if the port authority would decrease the amount of habitat offsetting required and that a calculation be provided outlining credit calculations for each habitat type. TWN asked about the level of coordination between the port authority and CN Rail given rail was a constraint noted in the footprint reduction assessment.

TWN also requested information on what the port authority would include in the final response regarding the footprint, given the uncertainties regarding requirements for zero emission vehicles. TWN said that while the best-case scenario may be a 14.4 ha reduction in the project footprint, the terminal will be placed over Dungeness crab habitat and in the migration path of juvenile salmon, and that the navigational closure area will interfere with commercial and food, social, and ceremonial (FSC) licenses that TWN holds to harvest salmon and crab.

The port authority has responded directly to feedback received from TWN and has considered that feedback in the drafting of the IR2020-2.1 response. As part of the port authority's response to TWN, the port authority has explained that, in addition to footprint reduction, the port authority proposes to implement measures to avoid, reduce, and offset effects to Dungeness crab habitat, juvenile salmon migration, and reduction in access to crab harvesting, as described in the responses to IR2020-1.1, IR2020-1.2, and IR2020-2.3 (see those sections within this response for more details on how Indigenous group feedback has been considered in the drafting of those responses). The port authority has also explained that the port authority has proposed an expansion to the existing navigational closure area that provides exclusive access to Indigenous domestic and FSC crab harvesting. As noted in TWN's subsection within the IR2020-1.2 section of this response, TWN will be consulted on the FUP elements to verify effects predictions and mitigation effectiveness for fish and fish habitat, as required by the draft project conditions.

The feedback provided by TWN on IR2020-2.1 and the potential impacts regarding the navigational closure area are consistent with feedback previously provided by TWN and has not raised new impacts to the exercise of rights.

## 8. Ts'uubaa-asatx First Nation

Ts'uubaa-asatx First Nation (Ts'uubaa-asatx) provided oral feedback to the port authority in consultation meetings and workshops and written feedback on the draft IR2020-2.1 response.

Ts'uubaa-asatx requested that the port authority reference the nation's advocacy policy on the topic of fish and fish habitat and that the policy be used to inform the areas discussed in IR2020-2.1 specifically regarding fish and fish habitat. Ts'uubaa-asatx asked about the orange sea pen salvage proposed relative to the dredging required for the project footprint, especially in relation to the potential for suspended solids. Ts'uubaa-asatx also raised the issue of sediment spill potentially affecting the Southern Gulf Islands, and a desire to gain a better understanding on this topic.

The port authority has responded directly to feedback received from Ts'uubaa-asatx and considered that feedback in the drafting of the IR2020-2.1 response, including making direct reference to the nation's advocacy policy in the "Background" section of IR2020-2.1.

In providing feedback on IR2020-2.1, Ts'uubaa-asatx did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

### **IR2020-2.2 – Avoidance and mitigation measures for project construction – juvenile salmon**

#### Summary of the request and response

The minister has requested that the port authority provide any additional operational mitigation (e.g., lighting or noise) or terminal and causeway design options (e.g., breaches) that could reduce potential effects on juvenile salmon migration caused by the project.

The port authority evaluated four breach locations, one at the marine terminal and three along the causeway, to allow juvenile salmon to move between the north side of the project and the inter-causeway area, and juvenile salmon refuge habitat on the west side of the marine terminal perimeter. The port authority also evaluated measures for light and noise mitigation.

A culvert at any of the four breach locations evaluated would be technically feasible from an engineering and constructability standpoint. The terminal breach location would maintain the existing juvenile salmon migration corridor alongside the western side of the Westshore Terminals, whereas a breach in the causeway would provide more direct access for juveniles from the north side of the causeway to the inter-causeway area. Juvenile salmon refuge habitat requires further technical analysis to determine feasibility.

Mitigation in the Light Management Plan will be updated, with the objective of reducing light trespass into the marine environment from project infrastructure lighting and thereby reducing potential disruption to juvenile salmon migration. Mitigation measures to further reduce the potential for acoustic effects to SRKW from underwater noise during project operation will be generally beneficial to all marine species, including juvenile salmon.

#### Overview of consultation outcomes

The port authority shared the draft IR2020-2.2 response with all Indigenous groups with a request for feedback and an offer to meet to discuss feedback.

Popkum First Nation advised the port authority that they had no specific feedback to provide in relation to IR2020-2.2. The following Indigenous groups provided oral feedback during consultation meetings and workshops during the development of the IR2020-2.2 draft or formal written feedback on the IR2020-2.2 draft, with a subset advising the port authority that their oral feedback provided in consultation meetings and workshops were to be considered their formal response to the new information provided by the port authority in the IR2020-2.2 draft:

- Halalt First Nation
- Maa-nulth First Nations (via Tsawwassen First Nation)
- Musqueam Indian Band
- Semiahmoo First Nation
- Tsawwassen First Nation
- Tseil-Waututh Nation
- Ts'uubaa-asatx First Nation

### Nature of the feedback

Indigenous group feedback on IR2020-2.2 was generally focused on the nature and effectiveness of a breach at the terminal or along the causeway to address migration effects of the project. Several groups noted a preference for a breach of the causeway and others noted interest in additional information regarding predation risk at any of the breach locations, and the likelihood and effect of tidal channel formation from breach options along the causeway. Indigenous groups also included feedback on the port authority's analysis of the migration effect from the project, indicating support for requiring a breach to address migration effects.

Indigenous group feedback on IR2020-2.2 also included an interest in understanding more about the risks and benefits of proposed habitat complexing along the west side of the terminal, and in understanding light management plans in terms of potential effects on fish and waterfowl. The effects of pile driving on fish was also discussed in meetings, workshops, and within written comments.

### Adjustments to the response made in response to Indigenous group feedback

A key topic of importance in feedback from Indigenous groups was inclusion of a breach to address migration effects of the project, and in particular the feedback indicated strong support for inclusion of a breach along the causeway. A breach at either the causeway or marine terminal location would provide for fish movement and therefore mitigate the potential for juvenile Chinook salmon migration disruption. At this time, the port authority can confirm that subject only to permitting, a terminal breach is technically and economically feasible. A breach of the causeway is feasible based on engineering design and constructability evaluations. However, in contrast to a terminal breach, the port authority does not own the causeway and other parties use the causeway. The interests of those parties will have to be addressed and their agreement to a causeway breach obtained. The port authority has proposed in IR2020-2.2 a draft condition wherein the minister would require a feasibility study be conducted on a causeway breach. The feasibility study would allow the minister to determine whether a causeway breach is feasible and whether it should be constructed instead of a terminal breach (refer to section "Potential marine terminal and causeway breach locations" within IR2020-2.2 for more information, including the purpose of the feasibility study).

Based on feedback from Indigenous groups and DFO, the port authority also updated the IR2020-2.2 response with additional information regarding tidal channel formation, predation risk, fish stranding and breach blockage, habitat suitable for biofilm, and breach effectiveness to address a migration effect. The port authority has also conveyed the intent to develop the light management plan, along with other construction environmental management plans, with Indigenous groups.

### Outstanding issues

The port authority has considered the feedback of Indigenous groups on IR2020-2.2 and has adjusted the response to reflect that feedback. As required by the draft project conditions, the port authority will continue to consult Indigenous groups on mitigation measures for fish and fish habitat and the implementation of FUP elements to verify effect predictions and mitigation effectiveness for fish and fish habitat.

As noted, the port authority has proposed a condition in IR2020-2.2 under which the technical and economic feasibility of a causeway breach would be investigated and the results reported to the minister, putting the minister in a better position to determine whether a causeway breach should be constructed.

### Impact on or intersection with the exercise of rights

The feedback provided by Indigenous groups on IR2020-2.2 (or in response to the minister's questions within IR2020-5 related to effects to Indigenous peoples) did not identify new conduct related to harvesting or cultural use of fish that had not already been considered by the review panel, nor any new impacts to that conduct as a result of the new information provided by the port authority in response to the minister's request. Rather, in general, the feedback focused on questions and comments that reflect concerns with the extent and/or effectiveness of the proposed breach options to mitigate effects to fish and fish habitat that have already been identified, and by extension, on previously identified conduct that depends on those resources.

### Indigenous group-specific consultation outcomes

In the following subsections, the port authority presents the nature of the key feedback received from each group that provided feedback on IR2020-2.2 (as listed at the outset of this section), focusing on key concerns, areas where input led to substantive adjustments to the response, and outstanding issues. The group-specific sections also discuss whether and how any new information or feedback provided by each group in consultation on the responses may indicate the potential for a new impact on, or a new intersection with, the exercise of rights.

#### 1. Halalt First Nation

Halalt First Nation (Halalt) provided written feedback to the port authority on the draft IR2020-2.2 response.

Halalt questioned the port authority's assessment of migration effects of the project and indicated more data is required to provide an accurate reflection of the effect. Halalt noted concern with the amount of offsetting proposed, as well as with time lag of the effects of the project and the implementation of offsetting. Halalt stated an interest in further discussion of the potential predator exclusion measures and in understanding why bridges were not considered feasible given sea level rise and whether culverts would be impacted similarly. Halalt also asked how salmon would be influenced to use the terminal breach.

The port authority has responded directly to feedback received from Halalt and has considered that feedback in the drafting of the IR2020-2.2 response, and specifically to include additional information on predation risk and proposing a draft project condition to advance a causeway breach feasibility study.

In providing feedback on IR2020-2.2, Halalt did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

#### 2. Maa-nulth First Nations (via Tsawwassen First Nation)

Maa-nulth First Nations (Maa-nulth) coordinated their review of the draft IR2020-2.2 response with Tsawwassen First Nation (TFN) and, in a written response, said that they support all of TFN's written comments. Refer to TFN's section below for details.

Maa-nulth additionally noted support for a breach of the causeway subject to further engagement regarding the location of the breach and mitigation of predation risks to juvenile salmon. Maa-nulth also noted the need for further engagement on light and noise related to pile driving mitigation measures for juvenile salmon.

The port authority has responded directly to feedback received from Maa-nulth and has considered that feedback in the drafting of the IR2020-2.2 response, including proposing a draft project condition to advance a causeway breach feasibility study.

In providing feedback on IR2020-2.2, Maa-nulth did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

### 3. Musqueam Indian Band

Musqueam Indian Band (Musqueam) provided oral feedback to the port authority during consultation meetings and workshops on IR2020-2.2 and advised the port authority that their oral feedback was to be considered their formal response to IR2020-2.2.

Musqueam expressed interest and support for a causeway breach, and asked questions regarding any potential effects to salmon of moving between different salinity levels in the intertidal area and north of the causeway. Musqueam asked about the status of any discussions with the province of B.C. regarding breaches. Musqueam also asked for clarifications regarding sea level rise and breach design, outputs of studies regarding migration effects, and ensuring predation risk is managed through design.

Musqueam noted that habitat can shift over time in subtidal areas due to the force of current and that this should be considered in future evaluation of the proposed habitat complexing. Musqueam asked how habitat complexing would be evaluated in the context of the *Fisheries Act* authorization.

Musqueam said they remain concerned about the effect of lighting on waterfowl movement, indicating that greenhouses in Delta have affected the migratory path of waterfowl, impacting the cultural continuity of certain ceremonies. Musqueam expressed that they would like to better understand any lighting plans for the area to ensure baseline studies will be comprehensive (i.e., not limited to marine environments) to be able to verify that birds are not being drawn from hunting areas by light from the project.

The port authority has responded directly to feedback received from Musqueam and has considered that feedback in the drafting of the IR2020-2.2 response, including proposing a draft project condition to advance a causeway breach feasibility study. The port authority has conveyed it will develop the light management plan with Musqueam and other Indigenous groups.

In providing feedback on IR2020-2.2, Musqueam did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

### 4. Semiahmoo First Nation

Semiahmoo First Nation (Semiahmoo) provided oral feedback to the port authority on IR2020-2.2.

Semiahmoo indicated concern regarding light management plans, including baseline information, monitoring of future light and light management, and the need for more detail on the lighting plans mentioned in the IR2020-2.2 response. Semiahmoo expressed a desire to ensure that light trespass in areas of juvenile salmon movement does not impact the species.

Semiahmoo indicated that more concrete information regarding habitat complexing was required before feedback could be provided, including where the material proposed for use in complexing has been used for this purpose elsewhere and what its potential effects could be on the ecosystem as a whole.

Semiahmoo also expressed concern and had questions regarding how noise effects to fish were being addressed given that the technical work underway for IR2020-2.3 seemed focused on effects to southern resident killer whales (SRKW).

The port authority has responded directly to feedback received from Semiahmoo and considered that feedback in the drafting of the IR2020-2.2 response. The port authority has conveyed it will develop the light management plan with Semiahmoo and other Indigenous groups.

In providing feedback on IR2020-2.2, Semiahmoo did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 5. Tsawwassen First Nation

Tsawwassen First Nation (TFN) provided oral and written feedback to the port authority on IR2020-2.2.

TFN indicated strong support for a causeway breach, stating that they consider a causeway breach to have the most benefit to salmon by connecting near shore rearing habitats, and to be an important mitigating measure. TFN said a causeway breach is an important mitigating measure and encouraged the port authority to work collaboratively with TFN to explore all means to implement it. TFN recommended, and said it was prepared to engage immediately in a full alternatives assessment on a causeway breach in collaboration with the port authority. TFN stated that the benefits of breaching the causeway outweigh any potential adverse effects to existing fish habitat near the breach entrances and that these potential effects could be offset.

TFN made several technical comments relating to breach design, including the differing predation risks between the options, an openness to the potential benefits to salmon of dendritic channel formation, and the desire for more work to be done on lighting measures. TFN also recommended considering other species that may be impacted by pile driving after the summer period when SRKW and salmon are present. TFN said it supports the creation of refuge habitat along the terminal.

The port authority has responded directly to feedback received from TFN and considered that feedback in the drafting of the IR2020-2.2 response, including proposing a draft project condition to advance a causeway breach feasibility study.

In providing feedback on IR2020-2.2, TFN did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 6. Tsleil-Waututh Nation

Tsleil-Waututh Nation (TWN) provided oral and written feedback to the port authority on IR2020-2.2.

TWN noted their tentative support for two breach options (i.e., 3 and 4) as they are wetted for longer and stated that they will require further discussion with the port authority as a breach option is selected and proceeds to detailed design. TWN asked whether a causeway breach would be considered offsetting if constructed, and whether additional offsetting would be offered by the port authority if construction of the breach affected existing offsetting projects in the area (such as Deltaport Third Berth Project offsetting habitat along the causeway). TWN also asked to better understand the construction impact of a causeway breach, and for a timeline of when the preferred breach will be known. TWN noted a desire to ensure any additional lighting would not have unwanted effects.

TWN said that it requires as much detail as possible to determine impacts of a potential project. TWN noted that while a possible breach in the causeway or marine terminal has been proposed, no definitive option has been decided. TWN stated that it recognized the complexity of the breach due to various land tenure holders, but construction of the breach itself and the environmental impacts were not considered. As the impacts due to construction of a breach were not assessed, TWN said that it cannot determine if a breach will contribute to net gain of juvenile salmon migration.

The port authority has responded directly to feedback received from TWN and considered that feedback in the drafting of the IR2020-2.2 response, including proposing a draft project condition to advance a causeway breach feasibility study.

In providing feedback on IR2020-2.2, TWN did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 7. Ts'uubaa-asatx First Nation

Ts'uubaa-asatx First Nation (Ts'uubaa-asatx) provided oral and written feedback to the port authority on IR2020-2.2.

Ts'uubaa-asatx indicated in their written submission that they have long supported a breach of the causeway and continue to believe a causeway breach would be beneficial for fish. Ts'uubaa-asatx asked questions regarding predation risk of proposed breach options. Ts'uubaa-asatx acknowledged concerns about dendritic channels and suggested that the use of shell hash could help to manage these effects as has been done successfully on other Ts'uubaa-asatx initiatives.

Ts'uubaa-asatx expressed support for habitat complexing options that would emulate existing habitat at the base of the existing marine terminal at Roberts Bank. Ts'uubaa-asatx said they continue to be concerned about light trespass and effects of noise on herring.

The port authority has responded directly to feedback received from Ts'uubaa-asatx and considered that feedback in the drafting of the IR2020-2.2 response, including adding information to sections on predation risk and proposing a draft project condition to advance a causeway breach feasibility study. The port authority has also indicated in Section 3.2.1 of IR2020-1.1 the potential for, possible benefits of, and plan to explore shell hash application in the context of the South Causeway Eelgrass Project (formerly known as the Tsawwassen Eelgrass Project). The port authority has revised Section 3.2.1 of IR2020-1.1 to specifically mention Ts'uubaa-asatx as a group that is interested in shell hash application to help manage tidal channel formation (see the Ts'uubaa-asatx subsection within the IR2020-1.1 section of this response).

In providing feedback on IR2020-2.2, Ts'uubaa-asatx did not identify new conduct related to the harvesting or cultural use of fish that was not already considered by the review panel, nor any new impacts to the exercise of rights.

### **IR2020-2.3 – Avoidance and mitigation measures for project construction – underwater noise and southern resident killer whales (SRKW)**

#### **Summary of the request and response**

The minister requested that the port authority provide additional information regarding the methods that will be used to avoid and mitigate underwater noise and effects on southern resident killer whale (SRKW) during project construction. The information to be provided included a plan that times construction activities outside anticipated peak SRKW seasonal use; considers alternatives to impact pile driving and relevant sound dampening technologies; establishes an SRKW exclusion zone with a monitoring buffer; detailed detection methods and stop work procedures; and describes contingency plans should SRKW be present outside of anticipated seasonal use.

The port authority's response describes new work that has been underway since the Federal Review Panel Report to identify additional measures to avoid or reduce potential underwater noise effects to SRKW during construction, including analysis to assess additional measures in the areas listed above. The measures included two construction schedule options (Option 1 and Option 2) to reduce acoustic impacts from the loudest activities (being impact and vibratory pile driving and vibro-densification of mattress rock) for consultation with DFO and Indigenous groups. Option 1 would avoid all piling works and vibro-densification activities within the SRKW peak use period and extend dredging into the early portion of the Dungeness crab fisheries-sensitive window, further reducing SRKW potential lost foraging time over Option 2, which would avoid dredging during the crab window and potential effects to gravid female crab.

While the views of Indigenous groups on the two construction schedule options were mixed (refer to group-specific consultation outcomes below), DFO advised that, to meet the requirements of the *Species at Risk Act*, all feasible measures to reduce effects to SRKW must be taken, meaning that Option 1 would be required. With the implementation of Option 1, along with additional impact pile driving mitigation and multiple measures to detect SRKW and stop or modify in-water works, potential noise effects on SRKW during construction would be reduced. The acoustic effects model predicts that SRKW would accrue an estimate of approximately 2 hours (1.2 h to 7.6 h) of potential lost foraging time per killer whale over the entire six years of in-water construction. Based on feedback from Indigenous groups, additional mitigation measures for potential effects to Dungeness crab as a result of the implementation of Option 1 have been proposed. With these additional measures, continued dredging in the early portion of the Dungeness crab fisheries-sensitive window is unlikely to cause additional effects to Dungeness crab or, by extension, to the Indigenous crab fishery.

## Overview of consultation outcomes

The port authority shared the draft IR2020-2.3 response with all Indigenous groups with a request for feedback and an offer to meet to discuss feedback.

Lyackson First Nation, Pacheedaht First Nation, and Popkum First Nation advised the port authority that they had no specific feedback to provide in relation to IR2020-2.3. The following Indigenous groups provided oral feedback during consultation meetings and workshops during the development of the IR2020-2.3 draft or formal written feedback on the IR2020-2.3 draft, with a subset advising the port authority that their oral feedback provided in consultation meetings and workshops were to be considered their formal response to the new information provided by the port authority in the IR2020-2.3 draft:

- Maa-nulth First Nations (via Tsawwassen First Nation)
- Malahat Nation
- Musqueam Indian Band
- Pauquachin First Nation
- Semiahmoo First Nation
- Tsawwassen First Nation
- Tseycum First Nation
- Tsleil-Waututh Nation
- Ts'uubaa-asatx First Nation

## Nature of the feedback

Generally, Indigenous groups providing feedback on IR2020-2.3 were concerned with the extent and/or effectiveness of mitigation to reduce impacts to SRKW, and provided questions and comments on details of measures, including, for example, the use of vibratory instead of impact pile driving, the size of, and methods for, determining SRKW exclusion zones, and details on the stop work procedures.

Indigenous groups also expressed concern about potential impacts on gravid female Dungeness crab under construction schedule Option 1 because under that option, dredging activities would extend into the early portion of the Dungeness crab fisheries-sensitive window to avoid having the loudest activities occur during the SRKW peak use period. Indigenous groups requested additional mitigation measures for Dungeness crab under the Option 1 scenario and monitoring for potential effects on the Indigenous crab fishery.

## Adjustments to the response made in response to Indigenous group feedback

A topic of importance in feedback from Indigenous groups was the size of SRKW exclusion zones. As reflected in Section 4.1 of the final IR2020-2.3 response, the port authority will continue to consult with Indigenous groups on the size of the exclusion zones and the means and methods to field-verify or model-validate the size of the exclusion zones. The port authority has proposed that the anticipated exclusion zones and the means to validate them be part of the Marine Mammal Management Plan and Underwater Noise Management Plan, respectively. These plans will be developed in consultation with Indigenous groups, as required by the draft project conditions, and will include detailed stop work procedures, monitoring, and contingency plans. The plans will be shared with Indigenous groups and DFO for review a minimum of 90 days prior to the start of construction work to which they apply.

To respond to Indigenous group concerns with construction schedule Option 1 and its potential implications for crab and crab harvesting, the port authority adjusted Section 3 of the final IR2020-2.3 response to reflect the following considerations:

- The port authority had proposed measures to mitigate project effects to Dungeness crabs, including crab salvages of the dredge basin prior to the start of dredging in each year (commitment #51, CIAR Document #2001) and habitat offsetting to create high suitability habitat for juvenile crabs.
- Through consultation with Indigenous groups, the port authority is proposing the following additional measures to further mitigate potential effects to gravid crabs:
  - Conducting additional crab salvage activities prior to the Dungeness crab fisheries-sensitive window, including using baited closed-traps to lure Dungeness crabs away from the dredge area, including gravid crabs seeking to bury
  - Developing a stewardship initiative in partnership with Indigenous groups 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, in response to input from Indigenous groups.
- With the above-noted mitigation, continued dredging in the early portion of the Dungeness crab fisheries-sensitive window is unlikely to cause additional effects to Dungeness crab and is not anticipated to impact the Indigenous crab fishery at Roberts Bank but will enable the avoidance or reduction of effects to SRKW
- The port authority had committed to a FUP element for the current use of lands and resources for traditional purposes (Current Use FUP element, commitment #81, Table C1, CIAR Document #2001), and the port authority proposes that this FUP element would include monitoring of changes to the Indigenous crab fishery, as requested by Indigenous groups when providing feedback on the draft IR2020-2.3 response

All other requests from Indigenous groups for clarification and/or additional information related to technical analysis have been included in the final IR2020-2.3 response.

### Outstanding issues

As described above and below, the port authority has considered the feedback of Indigenous groups on IR2020-2.3 and has made adjustments to the response to reflect that feedback. The port authority notes that some of the key feedback will require ongoing Indigenous group input subsequent to a decision, should the project be approved. As noted, the port authority has proposed to utilize the development of the Marine Mammal Management Plan, Underwater Noise Management Plan, Dredging and Sediment Discharge Plan, and the Current Use FUP element, which will be subject to consultation with Indigenous groups required by the draft project conditions, to develop and refine measures to mitigate potential noise effects on SRKW (and potentially the cultural use of SRKW) and mitigation measures for Dungeness crab (and potentially the availability of crab for harvesting) under construction schedule Option 1.

### Impact on or intersection with the exercise of rights

The feedback provided by Indigenous groups on IR2020-2.3 (or in response to the minister's questions within IR2020-5 related to effects to Indigenous peoples) did not identify new conduct related to cultural use of SRKW that had not already been considered by the review panel, nor any new impacts to that conduct as a result of the new information provided by the port authority in response to the minister's request. Rather, in general, the feedback focused on questions and comments that reflect concerns with the extent and/or effectiveness of additional mitigation necessary to avoid or reduce impacts that have already been identified on SRKW, and by extension, on previously identified conduct that depends on SRKW.

The feedback provided by Indigenous groups on IR2020-2.3 (or in response to the minister's questions within IR2020-5 related to effects to Indigenous peoples) did not identify new conduct related to Dungeness crab that had not already been considered by the review panel. While construction schedule Option 1 would potentially increase project-related impacts on crab as a result of the effects of measures to protect SRKW and, by extension, the exercise of any right to fish for Dungeness crab in the project area held by Indigenous groups (see the response to Part 3 of IR2020-5 for information that may assist the minister in this regard), the additional measures proposed by the port authority in relation to crab, as laid out in Appendix IR2020-2.3-D of the response, will mitigate the potential to interfere with these harvesting activities at Roberts Bank.

## Indigenous group-specific consultation outcomes

In the following subsections, the port authority presents the nature of the key feedback received from each group that provided feedback on IR2020-2.3 (as listed at the outset of this section), focusing on key concerns, areas where input led to substantive adjustments to the response, and outstanding issues. The group-specific sections also discuss whether and how any new information or feedback provided by each group in consultation on the responses may indicate the potential for a new impact on, or a new intersection with, the exercise of rights.

### 1. Maa-nulth First Nations

Maa-nulth First Nations (Maa-nulth) coordinated their review of the draft IR2020-2.3 response with Tsawwassen First Nation (TFN) and, in a written response, said that they support all of TFN's written comments. Refer to TFN's section below for details.

The port authority has responded to Maa-nulth's feedback and considered that feedback in the drafting of the IR2020-2.3 response.

In providing feedback on IR2020-2.3, Maa-nulth did not identify new conduct related to cultural use of SRKW or crab harvesting not already considered by the review panel, nor any new impacts to the exercise of rights.

### 2. Malahat Nation

Malahat Nation (Malahat) provided oral feedback to the port authority during a consultation workshop, wherein an overview of the draft response to IR2020-2.3 was presented in advance of the issuance of the draft IR2020-2.3 response for formal comment, as well as in a one-on-one follow up meeting. Malahat provided oral feedback on the draft IR2020-2.3 response.

Malahat expressed an interest in understanding the what are the loudest frequencies generated by construction activities, such as vibro-densification and dredging, and how these frequencies overlap with SRKW hearing frequencies. Malahat also expressed interest in the length of time a stop work order would be in place if there were a SRKW sighting in the exclusion zone, who would make the decision to resume work, and what standards would apply in making that decision.

Appendix C of IR2020-2.3 and the main response clarified that sound frequencies from dredging and vibro-densification overlap with the hearing range of SRKW and their echolocation band. The activity-specific exclusion zones and estimates of potential lost foraging time accounted for the overlap in frequencies. The peak noise emissions of vibro-densification and dredging, which are at frequencies well below the peak hearing sensitivity of SRKW. As a result of Malahat's feedback, the port authority updated Appendix IR2020-2.3-C to clarify the frequencies that are important to SRKW.

Malahat was referred to Section 4.1 of the IR2020-2.3 response that describes how the exclusion zones would be developed based on modelled data and monitored along with the monitoring buffer daily in real time to confirm the presence of SRKW and when and how work should be stopped.

The port authority explained that details regarding the establishment of exclusions zones and associated monitoring buffer, stop-work procedures, and corrective actions will be developed in consultation with Indigenous groups and then set out in the Marine Mammal Management Plan or Underwater Noise Management Plan. Consistent with draft project conditions, Indigenous groups, including Malahat, will be consulted on those details.

In providing feedback on the IR2020-2.3, Malahat did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

### 3. Musqueam Indian Band

Musqueam Indian Band (Musqueam) provided oral and written feedback to the port authority on the draft IR2020-2.3 response during one-on-one meetings.

Musqueam wished to confirm that monitoring for SRKW would be year-round and that other fisheries-sensitive windows besides for Dungeness crab would not be impacted by construction schedule Option 1. The port authority provided confirmation on both these points.

Musqueam expressed an interest in understanding the difference in potential lost foraging time between construction schedule Option 1 and construction schedule Option 2, when SRKW mitigation measures are considered.

In response, the port authority evaluated the difference in potential lost foraging time of both schedule options with mitigation, presented in Appendix IR2020-2.3-E of the response. Results from the assessment confirmed that continuing to dredge into the early portion of the Dungeness crab fisheries-sensitive window, per Option 1, is likely to further reduce potential lost foraging time for SRKW even when considering other mitigation measures.

Given that Option 1 would potentially increase project-related impacts on Dungeness crab and that the project area is a primary crab harvesting area for Musqueam (per information previously provided by Musqueam; refer to Part 3 of the IR2020-5 response), the port authority has undertaken a focused and collaborative consultation with Musqueam regarding additional measures to mitigate the potential effects on crab and Musqueam's crab harvesting as a result of measures to protect SRKW, as presented above.

In the course of that consultation, Musqueam asked about the effectiveness of the proposed additional crab salvage and bottom trawl of the dredge area to address impacts to gravid Dungeness crab. In addition to sharing technical information to support the potential benefits of these measures, the port authority, in response, committed to confirming the effectiveness of the crab baiting away salvage technique through the pilot study to be conducted in collaboration with Indigenous groups in advance of construction. Musqueam also suggested the inclusion of a measure 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. The port authority has updated Section 3 of the final IR2020-2.3 response to include this proposed Indigenous stewardship measure. Musqueam did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel.

The port authority has incorporated Musqueam's feedback on IR2020-2.3 and is continuing to consult closely with Musqueam on the additional mitigation measures for impacts to Dungeness crab and crab harvesting that are proposed by the port authority in Section 3 of IR2020-2.3. With the additional mitigation measures for crab in place, it is likely that the potential to further interfere with Musqueam's crab harvesting activities at Roberts Bank will be avoided. As noted above, the port authority has committed to a Current Use FUP element, which would include the monitoring of potential changes to the Indigenous crab fishery that may be caused by the implementation of the measures for SRKW. Consistent with draft project conditions, Musqueam will be consulted on this FUP element.

#### 4. Pauquachin First Nation

Pauquachin First Nation (Pauquachin) provided oral feedback to the port authority during a consultation workshop, wherein an overview of the draft response to IR2020-2.3 was presented in advance of the issuance of the draft IR2020-2.3 response for formal comment. Pauquachin did not provide formal comment on the draft IR2020-2.3 itself.

Pauquachin sought clarification on information presented by the port authority during the workshop. Pauquachin inquired about sound-dampening technologies, the amount of time SRKW are feeding at Roberts Bank, whether there had been consideration of transient killer whales, and how the monitoring of construction work would be carried out.

The port authority has responded directly to feedback received from Pauquachin and considered that feedback during the drafting of IR2020-2.3.

In providing feedback on IR2020-2.3, Pauquachin did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 5. Semiahmoo First Nation

Semiahmoo First Nation (Semiahmoo) provided oral feedback to the port authority during a consultation workshop, wherein an overview of the draft response to IR2020-2.3 was presented in advance of the issuance of the IR2020-2.3 draft response for formal comment. Semiahmoo did not provide written comments on the draft IR2020-2.3 itself.

Semiahmoo sought clarification on information presented by the port authority during the workshop. Semiahmoo inquired about the different construction schedule options, the amount of overlap of the acoustic impacts of construction noise with where SRKW are transiting, how SRKW would be detected and stop work procedures implemented, and whether other whales besides SRKW have been considered. Semiahmoo also reiterated their concern, already on record, that construction activities will impact Semiahmoo because the flow from the Fraser River brings water and sediment from the project area into the bay and the foreshore in front of their community, affecting migrating animals, including whales, feeding in the area, as well as other species (e.g., herring).

The port authority has responded directly to feedback received from Semiahmoo and considered that feedback during the drafting of IR2020-2.3.

In providing feedback on IR2020-2.3, Semiahmoo did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 6. Tsawwassen First Nation

Tsawwassen First Nation (TFN) provided oral and written feedback to the port authority on the draft response to IR2020-2.3.

TFN expressed that they were pleased to see that the port authority is committed to reducing sound levels by selecting a wharf design with the fewest number of piles and mostly employing vibratory instead of impact pile driving. TFN also noted that most of the noisiest activities will occur outside of the SRKW peak use period.

TFN provided several comments on the draft IR2020-2.3 response requesting further analysis, clarification, recommendations, and additional detail that have been addressed and/or clarified across several sections of the final IR2020-2.3 response and through follow-up meetings.

TFN noted a preference for all vibratory piling to occur outside of the SRKW peak use period and for noisier activities, such as pile-driving and vibro-densification, to not occur at night. Based on this feedback and information provided from DFO regarding the high likelihood of SRKW presence at Roberts Bank in September, the port authority has proposed to extend the SRKW peak use period to September 30 and to avoid all piling works within the SRKW peak use period and to limit pile installation to daytime. Section 3 and Appendix IR2020-2.3-D of the final IR2020-2.3 response has been updated with this new measure.

TFN expressed a preference for construction schedule Option 2, which would avoid the Dungeness crab fisheries-sensitive window and potential effects to gravid female crab. TFN noted that there appears to be only a modest difference in SRKW disturbance periods between the two options and a somewhat arbitrary designation of peak-use periods, with adjacent non-peak periods having notable use. TFN stated that Option 2 may prove to be the optimal balance among environmental constraints. TFN said that Indigenous groups and DFO must be consulted with respect to the Dungeness crab fishery before choosing an option.

Discussions with TFN reviewed DFO's advice, as explained at the outset of this section on IR2020-2.3, that to meet the requirements of the *Species at Risk Act*, all feasible measures to reduce effects to SRKW must be taken, meaning that Option 1 would be required. Given that the implementation of Option 1 would potentially increase project-related impacts on crab and that the project area is a primary crab harvesting area for TFN (refer to Part 3 of the IR2020-5 response), the port authority has undertaken a focused and collaborative consultation with TFN regarding additional measures to mitigate for the potential effects on crab and TFN's crab harvesting as a result of measures to protect SRKW, specifically (as described in Section 3 and Appendix IR2020-2.3-D of the IR2020-2.3 response):

- Conducting additional crab salvage activities prior to the Dungeness crab fisheries-sensitive window including using baited closed-traps to lure Dungeness crabs away from the dredge area, including gravid crabs seeking to bury
- Developing a stewardship initiative in partnership with Indigenous groups 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, in response to input from Indigenous groups

In the course of consultation on IR2020-2.3, TFN did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel.

The port authority has incorporated TFN's feedback on IR2020-2.3 and is continuing to consult closely with TFN on the additional mitigation measures for impacts to crab and crab harvesting that are proposed by the port authority in Section 3 of IR2020-2.3. With the additional mitigation measures for crab in place, it is likely that the potential to further interfere with TFN's crab harvesting activities at Roberts Bank will be avoided. As noted above, the port authority has committed to a Current Use FUP element, which would include the monitoring of potential changes to the Indigenous crab fishery that may be caused by the implementation of the measures for SRKW. Consistent with draft project conditions, TFN will be consulted on this FUP element.

## 7. Tseycum First Nation

Tseycum First Nation (Tseycum) provided oral feedback to the port authority during a consultation workshop, wherein an overview of the draft response to IR2020-2.3 was presented in advance of the issuance of the draft IR2020-2.3 response for formal comment. Tseycum did not provide written comments on the draft IR2020-2.3 response itself.

Tseycum sought clarification on information presented by the port authority during the workshop. Tseycum inquired about compliance with stop work procedures, how construction works will be monitored, and whether monitoring would include Indigenous groups.

The port authority has responded directly to feedback received from Tseycum and considered that feedback during the drafting of IR2020-2.3.

In providing feedback on IR2020-2.3, Tseycum did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 8. Tsleil-Waututh Nation

Tsleil-Waututh Nation (TWN) provided oral and written feedback to the port authority on the draft response to IR2020-2.3.

TWN expressed concern that uncertainty remains whether any of the proposed additional measures for SRKW will prevent significant increases to underwater noise during construction. TWN said that the effectiveness of sound-dampening technologies, exclusion zones, and impact thresholds cannot be determined prior to construction. TWN requested a testing stage, prior to in-water construction, to ensure thresholds and exclusion zones are effective. TWN said that this would ensure a period for contractors to adjust thresholds and apply additional measures to prevent underwater noise that may injure SRKW during construction. TWN also expressed their expectation that they be consulted on details regarding the size of exclusion zones and stop work procedures.

Based on feedback provided by TWN, the port authority has updated Section 4.1 and Appendix IR2020-2.3-D of IR2020-2.3 to clarify the approach to verifying the extent of exclusion zones. The port authority proposes to verify or validate the size of the exclusion zones once the specific construction equipment is selected and the construction activities that would occur simultaneously are confirmed. This will offer a testing stage, as recommended by TWN, where noise levels from the selected construction equipment, and the effectiveness of the selected sound-dampening technology for impact piling, will be verified to confirm or adjust the size of the required exclusion zones. Details regarding the establishment of underwater noise thresholds, validation of

exclusion zones, stop-work procedures, and commissioning of SRKW detection methods will be developed and then set out in the Marine Mammal Management Plan or Underwater Noise Management Plan. Consistent with draft project conditions, Indigenous groups, including TWN, will be consulted on those details.

TWN also expressed concern with whether the construction schedule under either Option 1 or Option 2 could avoid in-water activities within the SRKW peak use period and that, because a contingency plan had not been proposed, a delay in immediate action to address exceedances of underwater noise may occur (e.g., as a result of noise from vessels or equipment that cannot stop work for safety reasons). As such, TWN said it does not support either option.

While the port authority has determined that it is not feasible to avoid all in-water activities during the SRKW peak use period, based on information provided from DFO regarding the high likelihood of SRKW presence at Roberts Bank in September, the port authority has proposed to extend the SRKW peak use period to September 30 and to avoid all piling and vibro-densification works and within the SRKW peak use period. Section 3 and Appendix IR2020-2.3-D of the final IR2020-2.3 response has been updated with this new measure.

TWN also provided several comments on the draft IR2020-2.3 response requesting further analysis, clarification, recommendations, and additional detail that have been tracked and responded to directly by the port authority.

In providing feedback on IR2020-2.3, TWN did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 9. Ts'uubaa-asatx First Nation

Ts'uubaa-asatx First Nation (Ts'uubaa-asatx) provided oral and written feedback to the port authority on the draft response to IR2020-2.3.

Ts'uubaa-asatx requested greater explanation and clarity regarding technical content to be included within the body of the IR2020-2.3 response rather than in associated appendices. These comments have been tracked and addressed directly within the final IR2020-2.3 response or directly with Ts'uubaa-asatx during consultation meetings on the draft IR2020-2.3 response.

Ts'uubaa-asatx expressed concern that construction schedule Option 1, which would extend construction into the Dungeness crab fisheries-sensitive window, may result in effects to the crab fishery, by delaying the return of crab to, or otherwise reducing the availability of crab at, Roberts Bank. Ts'uubaa-asatx requested that the draft IR2020-2.3 be updated to include information related to potential effects to the Indigenous crab fishery and for the fishery to be monitored for potential changes.

Based on feedback provided by Ts'uubaa-asatx, the port authority updated Section 3 of the final IR2020-2.3 response to include information related to potential effects to the Indigenous crab fishery and the means by which any potential changes to that fishery will be monitored, which would be through the Current Use FUP element.

As indicated in the response to IR2020-5, an effect on Indigenous groups using the vicinity of the project area to harvest crab had been identified by the review panel, but the review panel said it was not completely clear how many Indigenous groups, besides TFN and Musqueam, currently use the project area for crab harvesting activities and to what extent. Ts'uubaa-asatx indicated in their response to IR2020-5 (see Part 3 of that response) that Roberts Bank was one of their only areas to acquire crab and other marine resources, reiterating information described by the port authority about Ts'uubaa-asatx in Section 32.2.4.6 of the EIS.

The port authority has incorporated Ts'uubaa-asatx's feedback on IR2020-2.3 and is continuing to consult with Indigenous groups, including Ts'uubaa-asatx, on the additional measures for crab proposed by the port authority in Section 3 and Appendix IR2020-2.3-D of IR2020-2.3. With the additional measures for Dungeness crab in place, it is likely that the potential to interfere with Ts'uubaa-asatx's crab harvesting activities at Roberts Bank as a result of the implementation of construction schedule Option 1 will be avoided. As noted above, the port authority has committed to a Current Use FUP element, which would include the monitoring of potential changes to the Indigenous crab fishery that may be caused by the implementation of the measures for SRKW. Indigenous

groups with interests overlapping the marine terminal, including Ts'uubaa-asatx, will be consulted on this FUP element.

## **IR2020-3 – Avoidance and mitigation measures for project operation and marine shipping incidental to the project**

### Summary of the request and response

The minister requested that the port authority provide additional information related to underwater noise effects on and vessel strike risk to southern resident killer whales (SRKW) from the proposed RBT2 Project operation and marine shipping incidental to the project.

The response provides new and additional information to confirm the container vessel traffic projections associated with the project and provide projections beyond 2035. It sets out additional mitigation measures in order to further reduce both the potential for impacts to SRKW from underwater noise and the risk of vessel strikes to SRKW from project operation and marine shipping incidental to the project beyond those considered by the review panel in its Federal Review Panel Report. These measures include the following:

- Delayed unberthing and departure during daytime hours when SRKW are present
- Evaluation of effective technologies to reduce underwater noise from tugs to be implemented once feasible during project operation
- Provision of shore power connections for container vessels
- Contractual requirement on 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)
- That the port authority continue to manage the ECHO Program and its initiatives and sign 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.

The port authority also proposes developing and implementing a marine shipping FUP element to verify predictions of container vessels calling at the Port of Vancouver with the project and associated potential acoustic effects on SRKW, in collaboration with Indigenous groups, Transport Canada, DFO, and other applicable federal authorities. As noted in the response to IR2020-3, while not forming part of the direct response to the minister's request, the port authority has also included within the proposed marine shipping FUP consideration of associated potential effects on the current use of lands and resources for traditional purposes (current use) by Indigenous peoples (refer to Part 1 of the IR2020-5 response for information provided by Indigenous groups in response to the minister's question regarding current use in the marine shipping area).

The additional mitigation measures identified by the port authority will further reduce the potential for acoustic and physical disturbance effects to SRKW from project operation and marine shipping incidental to the project and are in addition to the measures considered by the review panel.

### Overview of consultation outcomes

The port authority shared the draft IR2020-3 response with all Indigenous groups with a request for feedback and an offer to meet to discuss feedback.

Popkum First Nation advised the port authority that they had no specific feedback to provide in relation to IR2020-3. The following Indigenous groups provided oral feedback during consultation meetings and workshops during the development of the IR2020-3 draft or formal written feedback on the IR2020-3 draft, with a subset advising the port authority that their oral feedback provided in consultation meetings and workshops were to be considered their formal response to the new information provided by the port authority in the IR2020-3 draft:

- Halalt First Nation

- Lyackson First Nation
- Maa-nulth First Nations
- Malahat Nation
- Musqueam Indian Band
- Pacheedaht First Nation
- Pauquachin First Nation
- Semiahmoo First Nation
- Tsawout First Nation
- Tsawwassen First Nation
- Tseycum First Nation
- Tseil-Waututh Nation
- Ts'uubaa-asatx First Nation

### Nature of the feedback

In general, Indigenous group feedback on IR2020-3 was related to technical analysis of the effects of larger vessels, vessel speeds, and vessel projections, and the effectiveness of proposed mitigation measures to address those effects, such as the ECHO program given participation in the program is voluntary. Indigenous groups raised questions regarding the updated vessel projections developed in response to the minister's request by the port authority in the analysis and development of mitigation measures. More information was requested on the effect of larger vessels on the potential for vessel strikes. Some groups expressed interest in the status or advancement of quiet tug technology and/or electric tugs. An interest to see detailed monitoring proposals to ensure the effectiveness of the measures proposed was also communicated.

### Adjustments to the response made in response to Indigenous group feedback

Indigenous groups expressed concerns with the projection that the number of container vessels that call the Port of Vancouver in the future would be the same with or without the RBT2 Project (the most-realistic vessel traffic scenario). In response to feedback from agencies, the port authority conducted additional analyses to assess the potential effects on SRKW from project operation and marine shipping incidental to the project under a less-likely high-case container vessel traffic scenario and evaluated future contingency mitigation options. The less-likely high-case scenario directly addresses the concerns expressed by Indigenous groups regarding uncertainty in the vessel projections. The assessments, studies, and mitigation developed to support the response are based on the vessel traffic projections using both the most-realistic and less-likely high-case vessel scenarios. The main response (Sections 3 to 6) and appendices (Appendix IR2020-3-B, Appendix IR2020-3-C, Appendix IR2020-3-D, Appendix IR2020-3-E, and Appendix IR2020-3-F) have been updated to include the less-likely high-case vessel scenario.

Based on Indigenous group feedback, several sections of IR2020-3 were redrafted to respond to that feedback, including but not limited to adding more information to Section 6 of the response regarding proposed mitigation measures and their effectiveness, larger vessels and strike risk, quieter tugs, and the ECHO Program.

### Outstanding issues

Indigenous groups identified in their feedback the need for ongoing consultation and involvement in the development of the proposed mitigation measures and the monitoring requirements to ensure their effectiveness.

Consistent with the draft project conditions, the port authority will consult with Indigenous groups with interests overlapping the marine shipping area on the development and implementation of a marine shipping FUP, as described in Section 6 and Appendix IR2020-3-I of the IR2020-3 response, to verify predictions of container

vessels calling at the Port of Vancouver with the project, associated potential acoustic effects on SRKW, and associated potential effects on current use by Indigenous peoples in the marine shipping area.

### Impact on or intersection with the exercise of rights

The feedback provided by Indigenous groups on IR2020-3 (or in response to the minister's questions within IR2020-5 related to effects to Indigenous peoples) did not identify new conduct related to cultural use of SRKW that had not already been considered by the review panel, nor any new impacts to that conduct as a result of the new information provided by the port authority in response to the minister's request. Rather, in general, the feedback focused on questions and comments that reflect concerns with the extent and/or effectiveness of additional mitigation measures necessary to avoid or reduce impacts that have already been identified on SRKW, and by extension, on previously identified conduct that depends on SRKW.

### Indigenous group-specific consultation outcomes

In the following subsections, the port authority presents the nature of the key feedback received from each group that provided feedback on IR2020-3 (as listed at the outset of this section), focusing on key concerns, areas where input led to substantive adjustments to the response, and outstanding issues. The group-specific sections also discuss whether and how any new information or feedback provided by each group in consultation on the responses may indicate the potential for a new impact on, or a new intersection with, the exercise of rights.

#### 1. Halalt First Nation

Halalt First Nation (Halalt) provided written feedback to the port authority on the draft IR 2020-3 response.

Halalt expressed that while the future initiatives proposed by the port authority are appreciated, they are concerned that the assumption that new vessel designs will reduce underwater noise emissions during the life of the project are unrealistic and should not be used as a mitigation measure. Halalt requested that the port authority provide more explicit commitments with respect to available technology and clarify the commitment to quieter tug technology. Halalt requested clarity on what procedures would be put in place to notify vessel crews and terminal operators when SRKW are present, how foreign vessels would be educated about working around SRKW, how long they will be required to wait before recommencing vessel movement, what the boundaries of the "vicinity" of the terminal are, what early detection sources will be used, and what is meant by the 'other options' identified. Halalt wished to understand how a marine mammal observer would be hired for this role. Halalt also asked if all port-bound vessel traffic will be delayed when SRKW are in the area.

To increase their confidence in proposed mitigation, Halalt asked for more information on the ECHO Program and regarding the Conservation Agreement including what other parties would need to agree to sign it, what limitations there may be to the agreement, and how likely the parties are to sign on again. Halalt asked why effects on Chinook salmon were not included in the assessment and for an opportunity to review the FUP information. Halalt also asked about the effects from contaminant dispersion during dredging activities.

The port authority has responded directly to feedback received from Halalt and considered that feedback during the drafting of the IR2020-3 response.

The port authority has clarified for Halalt that the assumption of vessels being quieter in the future is not being used as a mitigation measure. Although underwater noise emissions from container vessels could decrease in the future (as noted in Section 3.1 of the IR2020-3 response), the assessment is conservative and did not account for the potential for quieter container vessels or tugs in the analyses to evaluate mitigation effectiveness. In response to Halalt's feedback, the port authority clarified in Section 6 of the IR2020-3 response the commitment to adopting quiet tug technology once feasible and effective for project operation. The port authority has also indicated that it will continue to monitor advancements in quiet tug technology (e.g., electric, hybrid, and liquefied natural gas (LNG) tugs), including work undertaken through Transport Canada's Quiet Vessel Initiative.

Halalt's feedback also resulted in an update to Section 6.1 of the IR2020-3 response updated to remove 'other options' and clarify what visual and acoustic detection data sources could be available to detect SRKW early. Section 6.1 also references that the Operational Marine Mammal Management Plan will outline the policies and

procedures for SRKW detection and notification, which will be developed in consultation with the Coast Guard, DFO, IAAC, Transport Canada, Pacific Pilotage Authority, and Indigenous groups. While there are several potential means of communication with terminal operator, pilots, and tugs that could be used to notify them of the presence of SRKW, the precise means is best determined in consultation with those entities. The port authority has provided additional information to Halalt on the ECHO Program and Conservation Agreement and regarding dredging activities and contaminants.

In providing feedback on IR2020-2.3, Halalt did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 2. Lyackson First Nation

Lyackson First Nation (Lyackson) provided oral feedback to the port authority during a multi-nation workshop on IR2020-3.

Lyackson expressed concern about the vessel projections for the project, indicating that, should larger vessels not be available, there could be an increase in the use of smaller vessels with the project. Lyackson also asked if, when considering lost foraging time, the effects are considered discreetly or cumulatively, and when night-time observations were made for the data cited from 2012 and 2013.

The port authority has responded directly to feedback received from Lyackson and has considered that feedback in the drafting of the IR2020-3 response.

In providing feedback on IR2020-3, Lyackson did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 3. Maa-nulth First Nations

Maa-nulth First Nations (Maa-nulth) provided written feedback to the port authority on IR2020-3 in coordination with TFN.

Maa-nulth asked if sound exposure from a vessel at berth was considered in the modelling and what timeframe a vessel may be at berth generating sound. Maa-nulth stated that Indigenous involvement in marine mammal monitoring should be sought and that they would encourage operators to find ways to reduce the sound generated if it is not possible to eliminate it by turning some devices off. Maa-nulth said that they are interested in seeing slow-downs implemented in La Perouse Bank because the area is likely used by SRKW based on acoustic data collected there. Maa-nulth asked how monitoring and mitigation measures will be adapted to consider new data that becomes available during the course of the project and what measures will be used to detect SRKW before unberthing.

Maa-nulth suggested two additional mitigations for consideration:

- Have dedicated marine mammal observers onboard vessels as they travel between J Buoy and Roberts Bank to look out for SRKW to reduce the risk of vessel strikes.
- Establish a (confidential) communications protocol with ecotour operators who are able to provide real-time data on the occurrence of cetaceans in the shipping lanes. The use of AIS data in a machine-learning environment could provide an automated means of signaling the presence of whales. Such data could then be used to modify vessel movements and speed to avoid whales.

The port authority has responded directly to feedback received from Maa-nulth and considered that feedback in the drafting of the IR2020-3 response.

The port authority conducted additional analysis to evaluate the noise contribution and potential acoustic effects, including echolocation masking, on SRKW from vessels while at berth and updated Appendix IR2020-3-C, and Appendix IR2020-3-D of the IR2020-3 response to include this additional analysis. There is no non-essential on-board equipment that the port authority is aware of that could be turned off or turned down while at berth to

reduce underwater noise from berthed vessels and potential effects on SRKW. The port authority has informed Maa-nulth that it will provide shore power connections for vessels so that vessels with shore power capability will not need to use auxiliary engines while at berth, which would reduce underwater noise near the terminal as well as air emissions.

SRKW detection methods will include early detection sources, which includes both visual and acoustic detection data sources, and marine mammal observers. The methods to be employed will be determined as part of the Operational Marine Mammal Management Plan, which will be developed in consultation with Indigenous groups. Section 6.1 of IR2020-3 has been updated with additional information on SRKW detection.

The port authority considered the mitigation suggestions put forward by Maa-nulth. Requiring additional marine mammal observers is not feasible for safety reasons and because its implementation falls outside the care and control of the port authority. The port authority, however, in the context of the ECHO Program, has and continues to develop marine mammal educational materials and engage with regional mariners and has previously committed to distributing marine mammal awareness materials (commitment #56). These educational materials will help mariners identify risks to marine mammals and make appropriate vessel navigation alterations to reduce strike risk and other effects on marine mammal species.

In providing feedback on IR2020-3, Maa-nulth did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

#### 4. Malahat Nation

Malahat Nation (Malahat) provided oral feedback to the port authority in meetings and workshops on IR2020-3.

Malahat expressed that, in the context of the marine shipping FUP, it would be prudent have third parties and Indigenous groups involved in the determination of whether additional impacts occur to SRKW and how to mitigate them. Early implementation of thresholds in consultation with Indigenous groups would be important, with measurable targets and contingency plans in case the targets are exceeded. Malahat indicated that setting these targets early should be discussed as part of the consultation process.

The port authority has responded directly to feedback received from Malahat and considered that feedback in the drafting of the IR2020-3 response. The port authority has updated Section 6.4 to include contingency mitigation measures as potential options that could be implemented through the port authority's marine shipping FUP element if underwater noise is higher than predicted in the marine shipping area.

In providing feedback on IR2020-3, Malahat did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

#### 5. Musqueam Indian Band

Musqueam Indian Band (Musqueam) provided oral feedback to the port authority on IR2020-3 in consultation meetings and workshops.

In the course of this consultation, Musqueam asked for clarification on night detection of whales and whether there would be any difference in terms of whale behaviour to the effects of noise levels, frequency, and how sensitive their systems are to noise effects. Musqueam asked for more depth of information on these effects and highlighted the risks of unintended consequences of some quieter technologies on fish and SRKW (e.g., dredging technology in the Fraser River, which dispersed fish so effectively it sent confusing signals to SRKW regarding prey location and availability).

Musqueam asked questions regarding vessel movement associated with larger vessels and whether there will be increased tug movements as a result, as well as what causes the decrease in vessel movements after 2040 in the vessel projections. Musqueam also sought clarification regarding whether lost foraging hours reflects all potential impact pathways.

The port authority has responded directly to feedback received from Musqueam and has considered that feedback in the drafting of the IR2020-3 response.

In providing feedback on IR2020-3, Musqueam did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 6. Pacheedaht First Nation

Pacheedaht First Nation (Pacheedaht) provided written feedback to the port authority on IR2020-3.

Pacheedaht noted concern with the port authority's commitment to participate in regional initiatives as a mitigation measure as the commitments are not new and are too generic to offer immediate and concrete action to protect SRKW and their critical habitat. Pacheedaht requested additional information on how these initiatives reduce the specific impacts identified by the review panel. Pacheedaht noted support for the ECHO program but concern with its voluntary nature and questioned its ability to address the transboundary nature of the threats currently facing SRKW. Pacheedaht indicated a desire to further discuss these transboundary matters, including opportunities to work with the International Maritime Organization (IMO) in relation to the commitments and mitigation measures identified by the port authority in Table IR2020-3-5 of the response to reduce effects on SRKW.

Pacheedaht reiterated concern with the port authority's vessel projections and indicated that proposed mitigation for SRKW should be based on the impacts as stated by the review panel and based on the number of vessel transits that were predicted in the EIS and the marine shipping addendum.

Pacheedaht noted concern about the potential for increased risks to SRKW and other marine mammals, in particular humpback and grey whales, from vessel strikes associated with larger vessels. Pacheedaht said there is the potential for increased vessel strike risk though the development of quieter vessels, and that this needs to be taken into consideration in the planning of any government initiatives as a potential negative consequence of positive actions.

Pacheedaht expressed the need for strong commitments related to tugs given the high level of noise contribution that comes from their operation and said a reduction in the effects of tugboat noise should be prioritized. Pacheedaht also expressed concern with the proposed mitigation of delaying daytime unberthing as this may increase levels of vessel traffic at night when there is less known about SRKW behaviours, habitat use, and spatial distributions.

As previously noted by Pacheedaht, its marine territory, including hereditarily managed fishing grounds at Swiftsure Bank, is transected by international shipping lanes. Pacheedaht reiterated that additional vessel traffic that transits through Juan de Fuca Strait passes through this territory, adding to the cumulative effects already impacting Pacheedaht rights and title and the species they rely on. Pacheedaht also reiterated their concern that some measures that are now being taken to protect SRKW are having an impact on the exercise of Pacheedaht's rights.

The port authority has responded directly to feedback received from Pacheedaht and considered that feedback in the drafting of the IR2020-3 response.

The port authority acknowledges Pacheedaht's comment that the commitment to participate in regional initiatives related to SRKW was made prior to the public hearing (project commitment #55 and marine shipping commitment #3, CIAR Document #2001) and have updated Section 6.2 of the IR2020-3 response to reflect this distinction. The port authority notes that the effects of marine shipping on SRKW is a regional issue, and the intent of this commitment, which has been reflected in the draft project conditions, is to acknowledge that and indicate the port authority's ongoing willingness to participate and support concrete regional initiatives that benefit SRKW.

Regarding the outcomes of these regional initiatives and their effectiveness at addressing the specific potential impacts identified by the review panel, the port authority has updated Section 6.2 of the IR2020-3 response with additional information on the initiatives and their effectiveness.

In response to feedback received from Indigenous groups, including Pacheedaht, on vessel projections, Mercator International was asked to expand on the scope of their original assessment, specify the factors that might vary, and determine the likelihood that the number of vessels incidental to the project could differ from their original prediction. Analyses were then conducted to assess the potential effects on SRKW from project operation and marine shipping incidental to the project under less likely high-case container vessel traffic scenarios and contingency mitigation options were evaluated. The additional analysis responds to and addresses the concern expressed by Pacheedaht with respect to the uncertainty of predicting future container vessel traffic, providing a range of scenarios, the potential effects in each of the scenarios, and the measures available to mitigate those effects. Sections 3 to 6 of the main IR2020-3 response and several appendices (i.e., Appendix IR2020-3-C, Appendix IR2020-3-D, Appendix IR2020-3-E, and Appendix IR2020-3-F) have been updated with the results from the analyses of the high-case scenarios.

With regards to Pacheedaht's concern regarding the risk of vessel strikes with quieter vessels, the port authority notes that main factors influencing strike risk to whales are vessel numbers and speed (see IR2020-3 for cited references), not noise. The transit of container vessels associated with the project through the marine shipping area is unlikely to increase strike risk because the number and speed of container vessels transiting the marine shipping area are not predicted to change with the project. Section 6 of the response to IR2020-3 has been updated to include this clarification and how proposed mitigation measures, such as contractually requiring the terminal operator to require RBT2-bound container vessels to participate in applicable initiatives of the ECHO Program (or equivalent), will reduce potential increases in vessel strike risk with larger vessels.

As reflected in Section 6 of the IR2020-3 response, the port authority has committed to adopting quiet tug technology once feasible and effective for project operation and has indicated it will continue to monitor advancements in quiet tug technology (e.g., electric, hybrid, and liquefied natural gas (LNG) tugs), including work undertaken through Transport Canada's Quiet Vessel Initiative.

In providing feedback on IR2020-3, Pacheedaht reiterated that their rights are being impacted by the international shipping lanes that transect Pacheedaht fishing grounds at Swiftsure Bank and by some measures that are now being taken to protect SRKW, but Pacheedaht did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights as a result of the additional measures proposed by the port authority in IR2020-3 (and described above). The port authority recognizes that Pacheedaht are concerned that existing measures to protect SRKW impact the exercise of their rights. The additional measures for SRKW that the port authority has proposed will not exacerbate those impacts.

## 7. Pauquachin First Nation

Pauquachin First Nation (Pauquachin) provided oral feedback in multi-nation workshops regarding IR2020-3.

Pauquachin questioned the vessel projections in relation to the need for the project and asked for more information on the larger vessels projected to come to RBT2 and on the vessel speed limit given the potential for the presence of SRKW.

The port authority has responded directly to feedback received from Pauquachin regarding vessel projections and larger vessels in post-workshop follow-up material, which included an updated information sheet on vessel projections based on the new study conducted for the IR2020-3 response. A more detailed explanation of vessel projections was included in Section 1 of the IR2020-3 response in response to Pauquachin's feedback, while vessel slowdowns are discussed within Section 6 of the IR2020-3 response.

In providing feedback on IR2020-3, Pauquachin did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 8. Semiahmoo First Nation

Semiahmoo First Nation (Semiahmoo) provided oral feedback to the port authority in consultation meetings and workshops regarding IR2020-3.

Semiahmoo asked for more information regarding larger vessels and the impact on port operations of loading and unloading larger vessels, noise increases, potential delays, and greater spill risks. Semiahmoo asked if the increase in containers will increase short sea shipping on the Fraser River. Semiahmoo asked how Indigenous groups will be involved in marine mammal detection and monitoring and stated support for imposing measurable restrictions or penalties should noise projections be exceeded. Semiahmoo indicated that Semiahmoo Bay should be included in the map of critical habitat and considered due to the presence of whales at this location. Semiahmoo stated that given the interconnectedness of many initiatives in the same area, there should be better coordination of efforts between the port authority, BC Ferries, Transport Canada and DFO.

The port authority has responded directly to feedback received from Semiahmoo and updated Section 3 and 6 of the IR2020-3 response to include additional information regarding larger vessels, noise, and the ECHO Program. Based on Semiahmoo's feedback, the port authority also updated the IR2020-2.3 response regarding project construction noise to include clarifying information regarding marine mammal detection and monitoring (see the IR2020-2.3 section of this response).

In providing feedback on IR2020-3, Semiahmoo did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 9. Tsawout First Nation

Tsawout First Nation (Tsawout) provided oral feedback to the port authority in a multi-nation workshop regarding IR2020-3.

Tsawout indicated that, given Tsawout's location in the path of the projected larger vessels coming in future, Tsawout would like to see more information on impacts of the larger vessels. The port authority has continued to share IR2020-3-related information with Tsawout, including the effects associated with larger vessels and the mitigation proposed to reduce effects of the project on SRKW.

The port authority has responded directly to feedback received from Tsawout and considered that feedback in the drafting of the IR2020-3 response.

In providing feedback on IR2020-3, Tsawout did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 10. Tsawwassen First Nation

Tsawwassen First Nation (TFN) provided written feedback to the port authority on IR 2020-3 in coordination with Maa-nulth.

TFN asked if there were any verified readings using a hydrophone for any of the modelling estimates. TFN also asked if more information could be provided on the tradeoff between slower tugs and the duration of time for SRKW interaction.

The port authority has clarified that analysis conducted to support the IR2020-3 response includes estimates and field data from hydrophones collected by the ECHO Program and is publicly available. These measurements informed analysis presented in Appendix IR2020-3-C, Appendix IR2020-3-D, Appendix IR2020-3-E, and Appendix IR2020-3-F. The port authority also updated Section 6.1 of the IR2020-3 response to include a discussion of the tradeoff between slowing tugs and potential increases in lost foraging time for SRKW.

In providing feedback on IR2020-3, TFN did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 11. Tseycum First Nation

Tseycum First Nation (Tseycum) provided oral feedback to the port authority in a multi-nation workshop regarding IR2020-3.

Tseycum asked about a realistic timeframe for implementation of electric tugs. Tseycum expressed concern at the length of proposed monitoring relative to the lifetime of the terminal. Tseycum also expressed concern about the increases in vessel traffic over time, including incident management, safety issues for crab fishers, and who is ultimately responsible.

The port authority has responded directly to feedback received from Tseycum and considered that feedback in the drafting of the IR2020-3 response.

In providing feedback on IR2020-3, Tseycum did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 12. Tsleil-Waututh Nation

Tsleil-Waututh Nation (TWN) provided oral feedback in meetings, and written feedback to the port authority on IR2020-3.

TWN requested that the port authority include a description on how RBT2 will influence spatial trends of vessel traffic outside and within SRKW critical habitat, and to assess the impact this will have on the species. TWN expressed their concern regarding cumulative effects and commented that while the assessment may be conservative when addressing the project alone, they do not consider them to be conservative when considered cumulatively. TWN requested the acoustic effects of the project be compared to projections of future underwater noise for the IR2020-3 response. TWN asked whether the implications of larger vessels have been assessed on the likelihood of vessel strikes or other stressors to SRKW. TWN said they would appreciate an update on the effectiveness of the Conservation Agreement and how involved parties are addressing the recovery of SRKW.

The port authority has responded to TWN's comments and requests directly and considered the feedback in the drafting of the IR2020-3 response, including making reference in Section 6 to how the port authority is working to address cumulative effects and the potential for vessel strikes through the ECHO Program and other proposed project-related mitigation. The port authority added Section 3.2.2.2 to the IR2020-3 response to provide sound source level estimates in the marine shipping area with the project considering other vessel traffic, since a regional context is required to evaluate the project's potential contribution to underwater noise in the marine shipping area.

In providing feedback on IR2020-3, TWN did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 13. Ts'uubaa-asatx First Nation

Ts'uubaa-asatx First Nation (Ts'uubaa-asatx) provided oral and written feedback to the port authority on IR2020-3.

Ts'uubaa-asatx noted that the response to Section 3A of the response was adequate. Ts'uubaa-asatx had questions regarding how echolocation will work for SRKWs in relation to the quieter vessels. Ts'uubaa-asatx asked how much time vessels would be on their own power, compared to be when they are towed.

Ts'uubaa-asatx asked for additional information to be added to the response to clarify additive noise, more information regarding background noise, why the port authority would expect vessels to redistribute from the existing Deltaport terminal, more detail regarding the demographic factors and feasibility of incorporating the key recommendations from the Gomez et al. report, and on recreational vessels and impacts to echolocation. Ts'uubaa-asatx also made several editorial suggestions but indicated that the IR2020-3 response was well laid out with section headings to assist the reader.

The port authority has responded directly to feedback received from Ts'uubaa-asatx's and incorporated their editorial feedback into the IR2020-3 response. The port authority has also considered Ts'uubaa-asatx's questions of clarification in the updating of the IR2020-3 response relating to the Gomez et al. report, background noise, and recreational vessels.

In providing feedback on IR2020-3, Ts'uubaa-asatx did not identify new conduct related to cultural use of SRKW that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## **IR2020-4 – Biofilm and effects to migratory birds (RBT2 geomorphological assessments of alternate on-site design options)**

### Summary of the request and response

The minister requested additional modelling of coastal geomorphology and salinity changes that may affect biofilm and migratory birds from any design changes evaluated as part of other responses. It was requested that the modelling be conducted using the same approach as the EIS. The port authority conducted the modelling as requested and provided an account of the results in terms of their relationship to the assessment of biofilm in the EIS.

The port authority evaluated the on-site design changes described in IR2020-2.1, a reduction in project footprint along the terminal and widened causeway, and IR2020-2.2, a breach to facilitate fish movement at the terminal or along the existing causeway, in terms of potential changes to geomorphological conditions and salinity. These results were then considered in terms of potential effects on biofilm compared with the assessment in the EIS.

The EIS conclusion that salinity changes resulting from the project will not adversely affect biofilm and migratory birds, including shorebirds, remains unchanged and continues to be supported by evidence showing that biofilm at Roberts Bank thrives and is abundant under variable salinity conditions. Modeling conducted for the IR2020-4 response predicted very subtle to no change in geomorphological conditions from the project footprint reduction and potential breach locations. Model results, compared to EIS results, indicated no change in ocean currents and no change in salinity from footprint reduction, though a slight change in salinity may occur with flow through from a breach. The port authority remains committed to implementing three FUP elements related to verifying effect predictions with the project in place for salinity, geomorphic features and sediment erosion and deposition, and western sandpiper prey (including biofilm).

### Overview of consultation outcomes

Consultation on the geomorphological and salinity data requested in IR2020-4 was conducted in conjunction with other biofilm-related topics, such as the Biofilm Habitat Creation Guidance Manual, a commitment made during the public hearing by the port authority, the Biofilm Creation Project, and the Biofilm Remote Sensing Technology Trial (in support of the development of the Western Sandpiper Prey Effects Prediction FUP) currently underway to map biofilm density and abundance. Some of the feedback provided by Indigenous groups on the manual, creation project, and/or technology trial that were related to potential effects of the RBT2 Project on biofilm, but not specifically related to the project design changes discussed within the IR2020-4 draft response itself, have been included below in the group-specific sections for the minister's information.

Lyackson First Nation, Maa-nulth First Nations, and Popkum First Nation advised the port authority that they had no specific feedback to provide in relation to IR2020-4. The following Indigenous groups provided oral feedback during consultation meetings and workshops during the development of the IR2020-4 draft and/or formal written feedback on the IR2020-4 draft, with a subset advising the port authority that their oral feedback provided in consultation meetings and workshops were to be considered their formal response to the new information provided by the port authority in the IR2020-4 draft:

- Malahat Nation
- Musqueam Indian Band
- Semiahmoo First Nation
- Tsawwassen First Nation
- Tseycum First Nation
- Tseil-Waututh Nation

- Ts'uubaa-asatx First Nation

### Nature of the feedback

Indigenous groups generally supported the footprint design changes and breach option assessed in IR2020-4, which are predicted to result in either no change or very subtle to no change in the environmental conditions analyzed. In general, Indigenous group feedback related to IR2020-4 focused on a holistic environmental approach to the proposed design changes (i.e., one that considers potential adverse effects and benefits not only to biofilm and migratory birds but also to fish, fish habitat, and other environmental components as appropriate), while noting support for, and/or seeking clarifications regarding, the conclusions of the IR2020-4 response of no effects on biofilm and migratory birds of the options assessed.

### Adjustments to the response made in response to Indigenous group feedback

Feedback from Indigenous groups on biofilm generally and the IR2020-4 response specifically has been considered in the final IR2020-4 response. The port authority also considered the feedback on the footprint reduction and breach assessed in IR2020-4 in revisions to related responses (i.e., IR2020-2.1 and IR2020-2.2).

### Outstanding issues

As described above and below, the port authority has considered the feedback of Indigenous groups on biofilm in the drafting of IR2020-4. The port authority remains committed to implementing three FUP elements related to verifying effect predictions with the project in place for salinity, geomorphic features and sediment erosion and deposition, and western sandpiper prey (including biofilm). Indigenous groups will be consulted on these FUP elements, as required by the draft project conditions.

### Impact on or intersection with the exercise of rights

The feedback provided by Indigenous groups on IR2020-4 (or in response to the minister's questions within IR2020-5 related to effects to Indigenous peoples) did not identify new conduct related to the harvesting or cultural use of resources that depend on biofilm, such as migratory birds, that was not already considered by the review panel, nor any new impacts to that conduct as a result of the new information provided by the port authority in response to the minister's request. Rather, as described above, the feedback generally focused on support for, and/or seeking clarifications regarding, the conclusions of no effects on biofilm and migratory birds presented in IR2020-4 for the footprint reduction and breach locations which were assessed. For feedback received specifically with respect to the footprint reduction and breach in relation to fish and fish habitat and fishing, see the IR2020-2.1 and IR2020-2.2 sections of this response.

### Indigenous group-specific consultation outcomes

In the following subsections, the port authority presents the nature of the key feedback received from each group that provided feedback on biofilm more generally and/or specifically in relation to the project design changes discussed in IR2020-4 (as listed at the outset of this section), focusing on key concerns, areas where input led to substantive adjustments to the response, and outstanding issues. The group-specific sections also discuss whether and how any new information or feedback provided by each group in consultation on the responses may indicate the potential for a new impact on, or a new intersection with, the exercise of rights.

#### 1. Malahat Nation

Malahat Nation (Malahat) provided oral feedback to the port authority during a workshop on the Biofilm Habitat Creation Guidance Manual, Biofilm Creation Project, and Biofilm Remote Sensing Technology Trial.

Malahat asked if biofilm at Roberts Bank was sensitive to the effects of eutrophication (i.e., excessive nutrients), causing degradation over time, and whether tidal flushing of the Fraser River, which would reduce the potential for eutrophication, will change with the project.

Malahat suggested that if the Biofilm Remote Sensing Technology Trial results in powerful datasets that will help identify changes to biofilm over time, then there could be an opportunity to identify thresholds for any loss of

biofilm abundance over the life span of the project, which could be linked to mitigation to ensure there will be no impact to biofilm over time.

The port authority has responded directly to feedback received from Malahat and considered that feedback during the drafting of IR2020-4.

In providing feedback on IR2020-4, Malahat did not identify new conduct related to the harvesting or cultural use of resources that depend on biofilm, such as migratory birds, that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 2. Musqueam Indian Band

Musqueam Indian Band (Musqueam) provided oral feedback to the port authority during consultation meetings and a workshop on the Biofilm Habitat Creation Guidance Manual, Biofilm Creation Project, and Biofilm Remote Sensing Technology Trial. Musqueam did not provide written feedback on the draft IR2020-4 response but requested that the oral feedback during meetings be treated as its formal response.

Musqueam asked questions of clarification and expressed continued interest in ensuring the project does not result in changes to biofilm affecting migratory birds, emphasizing the connectivity between all efforts, such as the manual, creation project, and technology trial, to ensure the health of biofilm and shorebirds. In providing feedback on the manual, Musqueam noted the need to consider linkages between the biofilm-related FUP elements and any follow-up monitoring of biofilm projects created based on the manual.

The port authority has responded directly to feedback received from Musqueam and considered that feedback during the drafting of IR2020-4.

In providing feedback on IR2020-4, Musqueam did not identify new conduct related to the harvesting or cultural use of resources that depend on biofilm, such as migratory birds, that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 3. Semiahmoo First Nation

Semiahmoo First Nation (Semiahmoo) provided oral feedback to the port authority during multigroup workshops on biofilm, including one that discussed the IR2020-4 response in advance of the issuance of the IR2020-4 draft response for formal comment. Semiahmoo did not provide formal comment on the draft IR2020-4 itself.

Semiahmoo asked whether biofilm communities adjacent to the biofilm along the causeway would be affected during construction of additional mitigation, such as a causeway breach, through sediment discharge and wave attenuation, beyond what is affected by project footprint construction.

The port authority has responded directly to feedback received from Semiahmoo and considered that feedback during the drafting of IR2020-4.

In providing feedback on IR2020-4, Semiahmoo did not identify new conduct related to the harvesting or cultural use of resources that depend on biofilm, such as migratory birds, that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 4. Tsawwassen First Nation

Tsawwassen First Nation (TFN) provided oral feedback during consultation meetings and workshops on biofilm generally, including in relation to the Biofilm Habitat Creation Guidance Manual, Biofilm Creation Project, and Biofilm Remote Sensing Technology Trial, and oral and written feedback to the port authority on the draft response to IR2020-4.

TFN noted that they were not surprised that modifications to the terminal and causeway footprint are not predicted to affect biofilm productivity in a meaningful way, nor, by extension, shorebird foraging ecology. TFN said this

outcome was encouraging, as it provides assurances that a causeway breach to benefit salmon would not come at a cost of harm to the biofilm-shorebird system.

TFN also noted that two of the three causeway breach location options were not modelled and that an understanding as to whether either of those two locations would result in adverse effects to the biofilm-shorebird system would be important if they were deemed preferable for fish-habitat offsetting.

The port authority has responded directly to feedback received from TFN and considered that feedback during the drafting of IR2020-4.

In providing feedback on IR2020-4, TFN did not identify new conduct related to the harvesting or cultural use of resources that depend on biofilm, such as migratory birds, that was not already considered by the review panel, nor any new impacts to the exercise of rights. However, TFN reiterated that it has a treaty right to harvest salmon for domestic purposes and that it is working collaboratively with the port authority on the Tsawwassen Marshlands Project, an offsetting initiative whose preliminary design considerations rely on the ability of migrating salmon smolts to access the Tsawwassen marsh (refer to IR2020-1.1 for further details on the Tsawwassen Marshlands Project). TFN said that if a breach improves access to the Tsawwassen marsh for salmon translates into improved growth and survival of salmon, this translates into improved opportunities to exercise the treaty right to harvest salmon. From this perspective, TFN said it is pleased to see that a causeway breach is not expected to have notable consequences for biofilm and shorebirds.

## 5. Tseycum First Nation

Tseycum First Nation (Tseycum) provided oral feedback to the port authority during a multigroup workshop on the Biofilm Habitat Creation Guidance Manual, Biofilm Creation Project, and Biofilm Remote Sensing Technology Trial. Tseycum did not provide feedback on the draft IR2020-4 response itself.

Tseycum inquired about whether an increase in vessel traffic with the project would lead to disruptions to the tidal flushing that occurs, resulting in effects to biofilm in the intertidal zone.

The port authority has responded directly to feedback received from Tseycum and considered that feedback during the drafting of IR2020-4.

In providing feedback on IR2020-4, Tseycum did not identify new conduct related to the harvesting or cultural use of resources that depend on biofilm, such as migratory birds, that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## 6. Tseil-Waututh Nation

Tseil-Waututh Nation (TWN) provided oral feedback during consultation meetings and workshops on biofilm generally, including in relation to the Biofilm Habitat Creation Guidance Manual, Biofilm Creation Project, and Biofilm Remote Sensing Technology Trial, and oral and written feedback to the port authority on the draft response to IR2020-4.

TWN expressed an interest in the potential effect of climate change variability, sea level rise, and water temperature on modeling results and how far into the future the modelling results would apply. TWN commented that it views the raw data provided as outdated and requested that the data be updated and parameters added to effectively assess and protect stopover feeding site habitats for migrating birds. TWN also requested to understand if the port authority's response to IR2020-4 has taken into consideration methodological considerations raised by others during the review panel hearings with respect to the relevance of fatty acids to biofilm location, quality, and seasonality. TWN noted continued interest in factors that could potentially affect the health of biofilm, such as agricultural runoff from upstream farms.

TWN said that formation of tidal channels is positive given that they are essential to the proper functioning of a breach designed to move salmon and that there were no effects noted to biofilm and shorebirds as a result of

these channels. TWN noted that channel formation would bolster the effectiveness of the Tsawwassen Marshlands Project (refer to IR2020-1.1 for a description of this offsetting project).

The port authority has responded directly to feedback received from TWN and considered that feedback during the drafting of IR2020-4.

In providing feedback on IR2020-4, TWN did not identify new conduct related to the harvesting or cultural use of resources that depend on biofilm, such as migratory birds, that was not already considered by the review panel, nor any new impacts to the exercise of rights. In TWN's feedback to the port authority on IR2020-4, TWN reiterated concerns expressed to the review panel that, as an Indigenous nation, it is and will continue to be disproportionately affected by the impacts of climate change.

## 7. Ts'uubaa-asatx First Nation

Ts'uubaa-asatx First Nation (Ts'uubaa-asatx) provided oral feedback during consultation meetings and workshops on biofilm generally, including in relation to the Biofilm Habitat Creation Guidance Manual, Biofilm Creation Project, and Biofilm Remote Sensing Technology Trial, and oral and written feedback to the port authority on the draft response to IR2020-4.

Ts'uubaa-asatx expressed an interest that natural freshwater supply be restored between the Roberts Bank causeways and raised the concern that the causeway breach evaluated did not produce enough changes in salinity to produce biofilm to benefit migratory birds and suggested multiple breaches of the causeway be considered. Ts'uubaa-asatx noted a desire for the breach options ultimately considered by the minister to be aligned with the development of the Tsawwassen Marshlands Project, which is being developed as part of the offsetting plan for the RBT2 Project (refer to IR2020-1.1 for a description of this offsetting project). Ts'uubaa-asatx said that the breach option chosen should address environmental matters holistically and consider fish, fish habitat, biofilm and migratory birds, and other environmental components as necessary. Ts'uubaa-asatx provided input on the potential for the use of shellfish shells to assist in stabilizing erosion, addressing any concerns regarding the formation of tidal channels as a result of a breach.

Ts'uubaa-asatx also raised the concern that there are no stormwater management regimes on the causeway, and that DFO does not consider the installation of stormwater management regimes to be an appropriate offsetting measure for the project. Ts'uubaa-asatx note that "the failure of the Crown to not recognize stormwater management on pre-offsetting regulated infrastructure as an appropriate offsetting measure is a Crown-Indigenous matter and the proponent is not in a position of authority to address this issue."

The port authority has responded directly to feedback received from Ts'uubaa-asatx and considered that feedback during the drafting of IR2020-4.

In providing feedback on IR2020-4, Ts'uubaa-asatx did not identify new conduct related to the harvesting or cultural use of resources that depend on biofilm, such as migratory birds, that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## IR2020-5 – Effects to Indigenous peoples

The minister requested that the port authority provide any additional information from ongoing consultation led by the port authority with Indigenous groups, or consultation that has occurred since the public hearing concluded, on the effects to current use of lands and resources for traditional purposes (current use) and human health identified in the Federal Review Panel Report. Specifically:

- Are there additional details regarding the extent of current use of Indigenous groups who traverse the shipping lanes to practice traditional activities?
- How would health effects documented in Section 21 of the Federal Review Panel Report affect vulnerable sub-groups of each Indigenous group?

- For Indigenous groups that have indicated they harvest crab for the purpose of consumption, how will project effects, including loss of abundance and loss of access, affect food security?
- For nearby residents, including members of the Tsawwassen First Nation, how may the contributions of the project's additional stress and annoyance affect individuals?

The minister further requested that any new information, if available, be presented specific to each Indigenous group, and that the information consider, where appropriate, socio-economic and gender differences within individual communities.

In order to respond to IR2020-5, the port authority sought the new information requested by the minister from Indigenous groups. The consultation summary and detailed outcomes of that consultation are presented in the IR2020-5 response.

As described in the response to IR2020-5, the information provided by Indigenous groups in response to the minister's questions, as outlined in Part 1 through Part 4 of that response, was already available to the review panel and did not change the conclusions of the review panel. The information provided by Indigenous groups in the IR2020-5 response has been considered in applicable sections of this response in terms of how that information has resulted in adjustments to the final responses for IR2020-1 through IR2020-4 and IR2020-7. The feedback provided by Indigenous groups in response to IR2020-5 did not identify new conduct not already considered by the review panel, nor any new impacts to the exercise of rights.

## **IR2020-7 – Economic benefits of RBT2**

### Summary of the request and response

The minister indicated that, should the port authority wish to do so, additional information can be provided such as updated analysis of the economic benefits of the project including employment, labour income, gross domestic product, economic output, government revenue, and the volumes, origins and destinations of container traffic, considering the economic impacts of the global pandemic, local construction and transportation sector employment trends, and automation in port operations. In response, the port authority has conducted an updated economic impact analysis.

The updated economic analysis demonstrates that there remains a growing need and strong business case for the project. While cargo origins and destinations are expected to remain consistent, volume is anticipated to steadily increase. The strong rebound in container volumes through the Port of Vancouver during the pandemic demonstrates the need for additional capacity on the west coast of Canada and the potential for congestion in the gateway and foregone economic benefits if more container terminal capacity is not available to meet long term growth.

During six years of construction, the project will generate 18,050 person years of direct, indirect, and induced employment, \$1.6 billion in labour income, \$5.5 billion in economic output, \$519 million in tax revenue and \$2.3 billion in GDP, contributing to local, provincial, and national economic recovery. An annual average of 17,317 person-years of direct, indirect, and induced employment would be generated from on-terminal and off-terminal activities during operation, generating an annual average of \$1.7 billion in labour income. An annual average of \$5.2 billion in economic output, \$631 million in tax revenue, and \$3 billion in GDP would be generated from on-terminal and off-terminal activities during operation.

Benefits to Indigenous groups include mutual benefit agreements, funding to support participation in consultation, Indigenous training, employment and procurement, Indigenous monitoring, and an Indigenous Legacy Benefit Fund of \$5.5 million. A local community investment fund will be implemented in the City of Delta during project construction, including community grants, and an education fund.

### Overview of consultation outcomes

The port authority shared the draft IR2020-7 response with all Indigenous groups with a request for feedback and an offer to meet to discuss feedback.

Lyackson First Nation, Maa-nulth First Nations, and Tsawwassen First Nation advised the port authority that they had no specific feedback to provide in relation to IR2020-7. The following Indigenous groups provided written feedback to the port authority on the draft response to IR2020-7:

- Tsleil-Waututh Nation
- Ts'uubaa-asatx First Nation

### Nature of the feedback

The feedback received from Indigenous groups on IR2020-7 ranged from satisfaction with the data presented to concern that project-related economic benefits will not be directed to local and/or Indigenous communities. Several questions were also asked regarding the effects of continued growth in container trade on costs and competitiveness, land use and socioeconomic effects, supply chain technologies, and the Indigenous Legacy Benefit Fund.

### Adjustments to the response made in response to Indigenous group feedback

The port authority has responded to the feedback provided by Indigenous groups on IR2020-7 and considered that feedback during the drafting of the response.

### Outstanding issues

As described above and below, the port authority has identified several project-related benefits to Indigenous groups in IR2020-7, including mutual benefit agreements, funding to support participation in consultation, Indigenous training, employment and procurement, Indigenous monitoring, and an Indigenous Legacy Benefit Fund of \$5.5 million. The port authority notes that some of the feedback received, particularly from Tsleil-Waututh Nation, is regarding impacts to use of lands and resources in the project area for economic purposes, and where identified the port authority will continue to consult with respect to this. Mechanisms for sharing project-related benefits with Indigenous groups are described in IR2020-7.

### Impact on or intersection with the exercise of rights

The feedback provided by Indigenous groups on IR2020-7 and in response to the minister's questions within IR2020-5 related to effects to Indigenous peoples did not identify new conduct related to the updated economic impact analysis or the use of land or resources for economic purposes in the project area that was not already considered by the review panel, nor any new impacts as a result of the new information provided by the port authority in response to the minister's request. Rather, as described above, the feedback generally focused on support for, and/or questions regarding, the data presented in IR2020-7.

### Indigenous group-specific consultation outcomes

In the following subsections, the port authority presents the nature of the key feedback received from each group that provided feedback on IR2020-7 (as listed at the outset of this section), focusing on key concerns, areas where input led to substantive adjustments to the response, and outstanding issues. The group-specific sections also discuss whether and how any new information or feedback provided by each group in consultation on the responses may indicate the potential for a new impact on, or a new intersection with, the exercise of rights.

#### 1. Tsleil-Waututh Nation

Tsleil-Waututh Nation (TWN) provided written feedback to the port authority on the draft response to IR2020-7.

TWN reiterated that if the project is approved, it will affect TWN's rights, title, and interests and expressed concern that economic benefits will not be directed to local and/or Indigenous communities.

TWN asked several questions regarding the effects of continued growth in container trade on costs and competitiveness, land use and socioeconomic effects, and supply chain technologies. An interest was expressed in understanding how the tax revenues from trade activities that benefit the Canadian economy would translate directly to benefits for Indigenous peoples, such as through support for Indigenous health, youth, and language

programs and other social and environmental priorities expressed by Indigenous groups. TWN also requested an update on the status of engagement activities regarding the port authority's Indigenous Legacy Benefit Fund for Indigenous groups.

TWN said that the project area is currently used for economic purposes by Indigenous groups (i.e., for commercial and FSC fishing) and that the construction and operation of the project could result in adverse effects on opportunities to exercise TWN fishing rights. TWN also said the project could reduce TWN economic development aspirations for access to land and resources that continue to be limited by developments in TWN territory.

The port authority has responded directly to feedback received from TWN and considered that feedback during the drafting of IR2020-7.

The feedback provided by TWN on IR2020-7 and the potential impacts regarding TWN's fishing rights are consistent with feedback previously provided by TWN and has not raised new impacts to the exercise of rights.

## 2. Ts'uubaa-asatx First Nation

Ts'uubaa-asatx First Nation (Ts'uubaa-asatx) provided written feedback to the port authority on the draft response to IR2020-7.

Ts'uubaa-asatx indicated that they were satisfied with the data relayed in the updated economic benefits response. Ts'uubaa-asatx also noted that the consultation on the Indigenous Legacy Benefit Fund, which is mentioned in the IR2020-7 response, is still ongoing with Indigenous groups, including the term of the fund (one-time or ongoing).

The port authority has responded directly to feedback received from Ts'uubaa-asatx and considered that feedback during the drafting of IR2020-7.

In providing feedback on IR2020-7, Ts'uubaa-asatx did not identify new conduct related to the updated economic analysis that was not already considered by the review panel, nor any new impacts to the exercise of rights.

## Conclusion

At the minister's request, the port authority invited feedback from Indigenous groups on the draft responses and whether the new information contained in those responses might impact or intersect with the exercise of rights by Indigenous peoples. All feedback from Indigenous groups was considered in the development and revision of the responses. Follow-up was provided in oral form during meetings and multi-group workshops, in written form through meeting action summaries and comment response tables, and in the updated responses as described in the response above.

The port authority invited all 46 Indigenous groups identified by IAAC for consultation on RBT2 to provide feedback on the minister's request and continued extensive consultation to support opportunities for input into and feedback on the responses. While not all Indigenous groups provided feedback, comments were provided by several groups in oral form through meetings, multi-group workshops, and/or in writing. The port authority is appreciative of the time and effort taken by Indigenous groups to contribute feedback to the draft responses and for their ongoing and active participation in the consultation process.

Feedback during consultation was largely related to questions, comments, and requests for additional information that reflect areas of key interest and concern to Indigenous groups. Through discussions and in written form, these questions, comments, and requests were addressed, and the responses updated to include the requested clarifications and information.

The feedback provided has been helpful in shaping the final response and has led to adjustments in the responses to address the issues of concern or interest to Indigenous groups, in dialogue with those groups. Through this process, additional detail has been added regarding the offsetting projects and plan, and around

avoidance and reduction measures for fish and fish habitat, such as a condition to conduct a feasibility study of the causeway breach due to strong interest from Indigenous groups. New measures for potential effects to crab resulting from SRKW mitigation during construction have been included. In response to feedback from Indigenous groups and agencies, the response also includes high and low vessel projection scenarios and related mitigation measures for SRKW during operation and in the marine shipping area for the minister's consideration.

While Indigenous groups provided feedback that was integrated into the specific responses and led to adjustments in the responses, the feedback provided by Indigenous groups did not identify new conduct that had not already been considered by the review panel. As noted in the IR2020-2.3 section of this response, Musqueam, Tsawwassen, and Ts'uubaa-asatx reiterated their interest in harvesting crab at Roberts Bank and the need for additional measures to mitigate effects on Dungeness crab in relation to that interest. With the exception of IR2020-2.3 (as discussed above within the IR2020-2.3 section of this response), the feedback provided by Indigenous groups did not identify new impacts to or intersections with the exercise of rights as a result of the new information provided by the port authority in response to the minister's request.