

CANADIAN ENVIRONMENTAL ASSESSMENT AGENCY

IN THE MATTER OF an application by the Vancouver Fraser Port Authority pursuant to the *Canadian Environmental Assessment Act, 2012*, SC, c 19, s 52 to build the Roberts Banks Terminal 2 Project.

**CLOSING REMARKS OF
DAVID SUZUKI FOUNDATION, GEORGIA STRAIT ALLIANCE,
RAINCOAST CONSERVATION FOUNDATION & WILDERNESS COMMITTEE**

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I. Overview

1. The Vancouver Fraser Port Authority (the “Proponent” or “VFPA”), is proposing to build a new container shipping terminal at Roberts Bank in Delta, British Columbia.¹² The proposed Roberts Bank Terminal 2 Project (the “Project”) would involve a three-berth container terminal providing an additional 2.4 million twenty-foot equivalents (“TEUs”) of container capacity per year. The Project includes construction and operation of the new terminal, widening of an existing causeway, expansion of an existing tug basin, and vessel traffic to and from the terminal.³
2. The Project is being assessed by an independent panel (the “Review Panel”) under the *Canadian Environmental Assessment Act, 2012*, SC 2012, c 19, s 52 (“CEAA 2012”). As the Project is likely to adversely affect federally protected species at risk, additional mandatory requirements of the *Species at Risk Act*, (“SARA”) apply to the Review Panel’s assessment.⁴ At this stage in its assessment the Review Panel is charged with evaluating whether the Project - which includes the vessel traffic associated with the Project (“Project Related Shipping”)-is likely to result in adverse environmental effects and if so whether those effects should be considered “significant”.⁵ The Review Panel must also identify all adverse effects on all federally protected species at risk and if the Project proceeds ensure that there are measures to avoid or lessen those effects and to monitor them.⁶
3. The public hearing conducted from May 14 to June 24, 2019 (the “Hearing”), along with written submissions, provided the Review Panel with the opportunity to gather and test

¹ Document #181, “Environmental Impact Statement” [EIS] (27 March 2015), Volume 1, Sections 1.0-7.0 [here](#), PDF page 1.

² A note on footnotes: Where footnotes indicate “PDF p”, the pinpoints refer to the page number of the indicated PDF. Where footnotes indicate only “p”, the pinpoint refers to the page number belonging to the referred-to document itself, usually found at the bottom right-hand corner of the document pages.

³ Document #181, EIS, Volume 1, Sections 1.0-7.0 [here](#), PDF pp 53-68, 94-97; Document #1532, “From the Review Panel to the Minister of Environment and Climate Change re: Response to letter regarding Proposed Amendments to the Terms of Reference and Environmental Impact Statement Guidelines”, [here](#) [*Letter from Panel re: Proposed Amendments*]; Document #1530, “Letter from the Minister of the Environment and Climate Change to the Review Panel re: Proposed Amendments to the Review Panel Terms of Reference and Environmental Impact Statement Guidelines (Note: Updated March 12, 2019)”, [here](#) [*Letter to Panel re: Proposed Amendments*].

⁴ *Species at Risk Act*, SC 2002, c 29 [SARA], s. 79.

⁵ Canadian Environmental Assessment Act, SC 2012, c 19, s 52 [CEAA 2012], s. 43, 19. See also Document #1605, Written Submissions of David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation & Wilderness Committee [*Conservation Coalition*] [*Written Submissions*], in Conservation Coalition Record [CCR] Vol. 1, [here](#), at para 29-35

⁶ SARA s. 79; see also Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras 48-59.

relevant information to enable its review of the potential environmental effects of the Project and Project Related Shipping.⁷ It is clear from this record that the Review Panel can only conclude that the Project is likely to have significant adverse environmental effects. Further, it is clear from the record that it will not be possible to fully mitigate or avoid all of these impacts, including impacts on federally protected species at risk. Consequently, recommending approval of the Project would be inconsistent with *SARA*.

4. The David Suzuki Foundation, Georgia Strait Alliance, Raincoast Conservation Foundation and Wilderness Committee (the “Conservation Coalition”) have a number of concerns about the Project. The Conservation Coalition maintains that the Project is likely to result in significant adverse environmental effects on salmon and salmon habitat and on marine species at risk including the endangered Southern Resident killer whales (the “Southern Residents”). The Conservation Coalition is also aware that the scope of the Project’s significant adverse effects go well beyond effects on salmon and killer whales.
5. In these closing remarks, the Conservation Coalition summarizes its final position with respect to the Project’s adverse effects, mitigation, and the conclusions and recommendations that the Review Panel should make. In doing so, the Conservation Coalition adopts and relies on its written submission filed April 15, 2019 (the “Written Submission”)⁸ and the attached expert reports,⁹ and its oral submissions made during the Hearing.¹⁰ These closing remarks address the new evidence that has been placed on the record since the Conservation Coalition filed its Written Submission, including the June 21, 2019 supplemental report of Dr. Scott Veirs (“Supplemental Veirs Report”),¹¹ which the Conservation Coalition has not previously addressed in its submissions to the Review Panel.

⁷ Document #1476, “Public Hearing Procedures” (1 March 2019), [here](#) [*Procedure Guide*].

⁸ Document #1605, Written Submissions of the Conservation Coalition, CCR Volume 1, [here](#).

⁹ Document #1605, Expert Reports of Dr. Scott Veirs [*Veirs Report*], David Scott [*Scott Report*] and Dr. Chris Kennedy, Misty MacDuffee [*MacDuffee Report*] and Dr. Robert Lacy et al [*The PVA*], CCR Volume 2 Tabs A-E, O and S, [here](#)

¹⁰ Document #1798, Hearing Transcript: May 23, 2019, [here](#), at pages 2009-2103.

¹¹ Document # 1965, Conservation Coalition Review of VRPA response to Undertaking #20 – Underwater noise, [here](#) [*Supplemental Veirs Report*].

6. To summarize, the Conservation Coalition's position is that, based on the record before the Review Panel:
- a) The Project's effects on salmon are significant adverse environmental effects.
 - b) Project Related Shipping will contribute to cumulative effects on the Southern Residents due to the following facts:
 - i. The speculative nature of the 2035 vessel call forecast, which represents the most optimistic scenario;
 - ii. The lack of clarity concerning vessel calls in the lead up to 2035, and for the indefinite lifespan of the Project after 2035;
 - iii. Larger ships will have larger impacts, despite the Proponent's suggestion to the contrary;
 - iv. With the Project, more ships will call at Roberts Bank, with is within Southern Resident critical habitat, instead of other locations;
 - v. The Proponent concedes that the Southern Residents will lose foraging time (1.4 hours per whale per year in the Project area) even in the most optimistic scenario; and
 - vi. The addition of the Project to the Vancouver ports means that a transition to larger ships which might otherwise result in a reduction in overall vessel numbers will instead mean vessel trips remain at least as high as they currently are.
 - c) The Project's effects on the Southern Residents, including both the effects of reduced salmon availability due to destruction of salmon habitat, and lost foraging time due to vessel traffic, are significant adverse environmental effects.
 - d) The Project's effects on the Southern Residents will jeopardize survival and recovery by reducing salmon prey and reducing foraging time. The

Southern Residents cannot afford a reduction in prey availability and cannot afford to lose any amount of foraging time.

- e) The Project's effects on the Southern Residents amount to critical habitat destruction.
- f) The Project's effects on salmon, and the resulting effects on the Southern Residents, will not be adequately mitigated.
- g) The Project Related Shipping's effects on the Southern Residents will not be mitigated at all.

II. The Review Panel's conclusions and recommendations

7. The Review Panel is tasked with conducting an environmental assessment of the Project in accordance with the requirements of *CEAA 2012* and the Terms of Reference. As the Project is likely to affect federally listed wildlife species and their critical habitat, the additional mandatory provisions of s. 79 of *SARA* are engaged.
8. As set out in more detail in paragraphs 29-47 of the Conservation Coalition's Written Submission, *CEAA 2012* requires the Review Panel to take into account the environmental effects of the designated project, their significance, and any measures available to mitigate adverse environmental effects. As set out in paragraphs 48-53 of the Written Submission, *SARA* requires the Review Panel to identify all adverse effects of the Project on *SARA*-listed species and to ensure measures to avoid or lessen all of those effects (s. 79(2)).
9. As set out in paragraphs 54-58 of the Written Submission, *SARA* also requires that no permits be issued for activities that will harm species at risk where those activities will jeopardize survival and recovery of that species (ss. 73-74).
10. The Review Panel's assessment and recommendations must conform to the mandatory legal provisions of *CEAA 2012* and *SARA*, as explained in paragraphs 28-59 of the Written Submission.¹² Further, subsection 4(2) of *CEAA 2012* expressly requires the Review Panel

¹² *Tsleil-Waututh Nation v Canada (Attorney General)*, 2018 FCA 153. See also Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras 28-59.

to exercise its powers and fulfill its responsibilities under the Act in a manner that protects the environment and applies the precautionary principle.¹³

11. As set out in more detail in paragraphs 60-70 of the Written Submission, the Conservation Coalition further submits that the Review Panel’s interpretation and exercise of its duties must also conform to Canada’s international commitments including under the *United Nations Convention on the Conservation of Biological Diversity* (“*Convention on Biological Diversity*”).¹⁴ The *Convention on Biological Diversity*’s primary objective is the conservation of biological diversity.¹⁵
12. The Review Panel has before it a Project that will affect a species whose survival and recovery is already in jeopardy. The evidence before the Review Panel is clear: existing conditions in the Salish Sea are already too much for the whales to handle. Any further threat or pressure will contribute to and exacerbate an already untenable situation. Thus, any additional adverse effect on Southern Residents will be significant.
13. The Terms of Reference for this Review Panel state that “[t]he Review Panel may receive and take into account information with respect to whether any significant adverse environmental effects may be justified in the circumstances.”¹⁶
14. If the Review Panel concludes that the Project is likely to result in significant adverse environmental effects, it “may include in its report information that it has received with respect to whether those significant adverse environmental effects are justified in the circumstances.”¹⁷
15. Further to paragraphs 46-47 of their Written Submission, the Conservation Coalition submits that it is not legally possible to “justify”, under *CEAA 2012*, significant adverse effects on a federally protected endangered species, in particular where it is clear on the evidence that those effects will further jeopardize survival and recovery of the species, or violate provisions of *SARA*. The purpose and provisions of *SARA* – described in paragraphs

¹³ *CEAA 2012*, s 4(1) and (2).

¹⁴ *SARA*, preamble.

¹⁵ *United Nations Convention on the Conservation of Biological Diversity*, 5 June 1992, 1760 UNTS 69 (entered into force 29 December 1993), [*Convention on Biological Diversity*], Article 1.

¹⁶ Document #1680, Roberts Bank Terminal 2 Project Amended Review Panel Terms of Reference (April 2019), [here](#) at PDF page 4.

¹⁷ Document #176, *2015 Final Terms of Reference*, s 4.29.

50 and 54-59 of the Written Submission – limit the discretion or power to justify adverse effects under *CEAA 2012*, and adverse effects on listed species must be addressed, not simply deemed “justified”.

16. If the Review Panel finds that there will be significant adverse effects on a listed wildlife species that cannot be avoided or lessened then it must recommend against proceeding with the Project.

III. Significant adverse environmental effects are likely

17. The Conservation Coalition submits that the Project is likely to result in significant adverse environmental effects to many components of the Salish Sea ecosystem. These effects include adverse effects on federally protected species at risk that cannot be fully mitigated. These closing remarks focus on the impacts of the Project and Project Related Shipping on Southern Residents and Chinook salmon. The focus on these issues should not be interpreted as a suggestion that these are the Project’s only adverse effects.
18. As set out in more detail in the Written Submission, the Review Panel must carry out two separate exercises in conducting this review. Generally, the Review Panel must *evaluate* whether the Project is likely to result in adverse environmental effect, and taking into account available mitigation *conclude* whether the adverse effects will be significant.¹⁸ Additionally, in the context of *SARA* listed species, the Review Panel must *identify* all adverse effects on all those species, and *ensure* that if the Project is carried out measures are taken to avoid or lessen those effects and to monitor them.¹⁹
19. As the Review Panel heard in the Hearing, counter to the suggestion of the Proponent, the Project is likely to have significant adverse effects on many components of the Fraser River estuary and broader Salish Sea environments. The Review Panel has heard extensive evidence about the impacts of expanding the terminal and of Project Related Shipping. The Project’s likely significant adverse effects go beyond the effects the Conservation Coalition have focused on, which are effects on Chinook salmon and the Southern Residents.

¹⁸ Document #1605, Written Submission, CCR Vol. 1, [here](#), paras 28-35.

¹⁹ Document #1605, Written Submission, CCR Vol. 1, [here](#) paras 48-59.

20. The expansion of the terminal will physically destroy a large area of the Fraser River estuary. The Fraser River estuary is important habitat for many species of fish, marine mammals and birds, including *SARA* listed species. Operation of the terminal will bring light, noise, air and water pollution of the estuary and may adversely affect sensitive marine habitat features such as biofilm. Marine shipping can affect marine species in several ways, including acoustic and physical disturbance, vessel strikes, and pollution, including through a spill of fuel or dangerous cargo. Marine shipping is also a globally significant source and under-regulated source of green-house gas emissions.
21. As set out in more detail below, the Conservation Coalition submits that the destruction of the large area of estuarine habitat necessary for the development of the Project will be a significant adverse effect. This habitat is important for many at risk fish populations including Chinook salmon, which is itself important prey for the critically endangered Southern Residents. The Conservation Coalition shares the concerns expressed by witnesses²⁰ that the expansion of the terminal will generally degrade the estuary and adversely affect the movement of many endangered but not yet federally protected fish species such as Sturgeon, Eulachon, and salmon. Given the importance of the Fraser River estuary as habitat for fish and marine mammals, and the endangered status of many of these species, the Conservation Coalition considers these adverse effects to be significant. This includes effects on endangered Chinook salmon, and the resulting effects on prey availability for the *SARA* listed Southern Residents, whose survival is already jeopardized by a shortage of prey.
22. The Conservation Coalition also shares the concerns raised about the impacts of the Project on marine birds and the importance of the Fraser River estuary to many bird species.
23. Further, the Review Panel heard extensive evidence from multiple parties about the Project's likely effects on biodiversity in the Fraser River estuary due to potential adverse effects on biofilm. Scientific understanding of the role of biofilm in the ecosystem is

²⁰ Document #1605, Scott Report, CCR Vol, 2, Tab B, section 2.1 and 2.3, [here](#), at pages 84, 91-93, and 98-99 ; Public Hearing Transcript: May 22, 2019 at pp 1576-1642 (DFO) and pp 1643-1696 (Musqueam Nation).

emerging and thus the significance of adverse effects on biofilm must be evaluated in a precautionary way.

24. The Review Panel also heard, both in both written and oral submissions, about the global biodiversity crisis and the role that habitat loss and degradation plays in that crisis.²¹ The Conservation Coalition submits that the Review Panel should evaluate the significance of incremental loss and degradation of habitat and biodiversity associated with the Project in the context of this broader global trend.
25. With respect to the adverse effects of Project Related Shipping, as set out in more detail below, the record is clear that the Project will increase noise and disturbance in the Salish Sea and further limit the foraging time of the critically endangered Southern Residents. The Conservation Coalition submits that given that the survival of the Southern Residents is already jeopardized by existing levels of ship source noise and disturbance in their critical habitat, any increase constitutes a significant adverse effect.
26. Finally, the Conservation Coalition is concerned about the potential significant adverse effects of the Project on marine environmental quality through an accidental spill of hazardous cargo or fuel²² and from ship source emissions of greenhouse gases and other pollutants.²³ During the Hearing, the Review Panel was assured by the Proponent that ship source green-house gasses will be addressed through IMO regulations. As set out in more detail in the Written Submission at paragraphs 13, 15 and 65-70, IMO targets for ship source greenhouse gas emissions do not concord with, and fall short of, the requirements set out by the Intergovernmental Panel on Climate Change to halve global carbon emissions by 2030 and de-carbonize by 2050.²⁴ As ship source pollution will not otherwise be addressed through Canada's climate commitments, the Conservation Coalition considers these emissions to be significant adverse effects of the Project.

²¹ Document #1798, Hearing Transcript: May 23, 2019, [here](#) at pages 2011-214; see also Document #1802, "Summary for Policymakers of the global assessment report on biodiversity and ecosystem services", [here](#).

²² Document #1605, "Oil spills in the critical habitat of Southern Resident Killer Whales", [MacDuffee Report] CCR Vol 2, Tab O, [here](#).

²³ Document #1605, Kennedy Reports CCR, Vol 2, Tabs C, D, and E [here](#).

²⁴ Document #1605, Global warming of 1.5°C An IPCC Special Report on the Impacts of Global Warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty", CCR Vol 2, Tab Q, [here](#).

A. Assessing the significance of adverse environmental effects

27. Significance is not defined in *CEAA 2012*. As set out in more detail in the Written Submission at paragraphs 41-45, several policies guide the Review Panel’s determination of significance. These indicate that the assessment of significance requires a contextual approach that considers the magnitude of the activity’s *impact* rather than the scale or magnitude of the activity itself. With respect to impact on species while population level impacts may be an inappropriately high threshold for harm in some cases, there is consensus that a population level impact would be *prima facie* significant.
28. Canadian Environmental Assessment Agency policy identifies the following aspects of an adverse effect as criteria for assessing its significance: magnitude, geographic extent, timing, frequency, duration and reversibility.²⁵ *SARA* policy adds that, for the purposes of assessing the significance of adverse effects on *SARA*-listed species, “the status of species at risk should be taken into consideration.”²⁶
29. With respect to the significance of the effects on marine species, the Proponent has defined a significant adverse effect as one that affects one or more individuals, or results in a change to critical habitat such that “a feature would not be available when needed for a life function”, if it does either of these things “to the extent which could jeopardize survival or recovery of the species.”²⁷ The Conservation Coalition is concerned that requiring jeopardy of survival or recovery sets the threshold of significant harm unreasonably high. In this case, however, it is clear that the Project would likely jeopardize survival and recovery of some populations of Fraser River Chinook and certainly the Southern Residents.
30. It is clear from the weight of evidence presented to the Review Panel during the Hearing, discussed in more detail below, that the adverse effects of the Project on estuary dependent populations of Fraser River Chinook salmon and Southern Residents will reach the threshold of significant.

²⁵ Document #1605, Written Submission, CCR Vol. 1, [here](#) at para 41.

²⁶ Environment Canada and Parks Canada, “Addressing Species at Risk Act Considerations under the Canadian Environmental Assessment Act for Species under the Responsibility of the Minister Responsible for Environment Canada and Parks Canada”, (Ottawa: Government of Canada, 2010) [*SARA Policy*], see Document #1605, CCR Volume 2, Appendix F, PDF page 293, [here](#).

²⁷ Document #316, *Marine Shipping Addendum*, Sections 1-8, [here](#), PDF page 260.

B. The Project’s significant adverse effects on Chinook and Chum salmon

31. The Project would be constructed and operate in the Fraser River estuary. As set out in detail in the Conservation Coalition’s Written Submission at paragraphs 201-211, the Fraser River is globally significant for salmon, and the Fraser River estuary is of critical importance for many populations of Fraser River salmon but in particular Chinook and chum salmon. During the Hearing, the Review Panel heard that the Project would result in:
- a) large-scale destruction of fish habitat;²⁸
 - b) impacts to at risk populations of Chinook salmon and chum salmon in habitat that is important for them;²⁹
 - c) corresponding impacts to the primary prey of the endangered Southern Residents;³⁰ and
 - d) contribution to the cumulative loss of estuary habitat in an area threatened by global climate change and sea level rise.³¹
32. As Fisheries and Oceans Canada (“DFO”) stated during the Hearing, the Project would “introduce[e] an additional stressor” for Chinook and chum salmon, which are “already stressed fish”.³²
33. Despite assurances in the Environmental Impact Statement (“EIS”) that salmon populations are resilient, the evidence on the status of Fraser River Chinook salmon is stark. As set out in more detail in the Conservation Coalition’s Written Submission, of the 13 populations of Fraser River Chinook recently assessed by the Committee on the Status of Wildlife in Canada (“COSEWIC”) 11 were determined to be threatened or endangered.³³ Final decisions on the listing of these species by the federal Cabinet are pending. Recent

²⁸ Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at page 1590.

²⁹ Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at pages 1579-1580.

³⁰ Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at page 1596.

³¹ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#) at page 2020-21; see also Document #1605, Scott Report, CCR Vol. 2, Tab B, [here](#) at pages 82-83.

³² Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at page 1596.

³³ Document #1605, Written Submission, CCR Vol. 1, [here](#) at para 212; see also Document 1605, Summary of COSEWIC Wildlife Species Assessments, November 2018, CCR Vol 2, Tab B, Attachment 2, [here](#) at PDF 131-132.

efforts aimed at improving Chinook abundance by restricting commercial and recreational fisheries³⁴ have not yielded significant results.

34. The Project's adverse effects on already vulnerable Fraser River Chinook include: large scale destruction of estuarine habitat through terminal expansion, further alteration and fragmentation of salmon habitat in the estuary, and obstruction of migration of salmon transitioning through estuary habitat.³⁵ It is also likely that the estuary will be further contaminated by the routine operation of the terminal. An accidental release of fuel or hazardous cargo in the estuary could contaminate both salmon and their habitat.³⁶
35. During the Hearing, DFO witnesses were critical of the rigour of the Proponent's assessment of salmon impacts noting in their submissions on May 21 that: "model results are presented as the ratio of ecosystem productivity before and after the Project, however, the base models, and their uncertainties, are not rigorously evaluated."³⁷ Further, on May 22, DFO witnesses told the Review Panel that "given the dependence of all salmon species on estuary habitat, the Proponent may have underestimated the significance of effects on fish and fish habitat, specifically effects on Chinook Salmon."³⁸
36. During the Hearing, several witnesses including those from DFO, questioned the Proponent's assertion that it was possible to avoid or offset all impacts on Chinook and chum salmon. For example, on May 22, DFO told the Review Panel that, "due to the large-scale destruction of fish habitat, the high degree of uncertainty in predictions of incidental benefits and the small-scale of proposed offset concepts, DFO's view is that ongoing productivity of fisheries will not be achieved through creation of the proposed offsetting without additional offsetting or a reduction in Project impacts."³⁹ Indeed, to successfully mitigate all residual impacts as suggested by the Proponent, the Proponent would need to

³⁴ Document #1605, Scott Report, 2019 Fraser River Chinook Conservation Measures, CCR Vol, 2, Tab B, Attachment 4, [here](#) at pages 143-159.

³⁵ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#) at pages 2015-2022; see also Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras. 213-218, see also Document #1605 Scott Report, CCR Vol. 2, Tab B [here](#) at page 91.

³⁶ Document #1605, MacDuffee Report, CCR Vol. 2, Tab O, [here](#) PDF pages 379-383

³⁷ Document #1784, Public Hearing Transcript: May 21, 2019, [here](#) at page 1381.

³⁸ Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at pages 1579-1580.

³⁹ Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at page 1590. Witnesses from Musqueam Nation, Dr. Otto Langer and Eric Balke from FLROD all expressed concern about the ability of the Port to effectively compensate for habitat loss and fragmentation.

be able to rely on offsets to make up for habitat loss during construction and development of onsite habitat, and successfully develop new fish habitat in a part of the estuary where that type of habitat was never found before.

37. As explained in the Scott Report, the Proponent’s experience with habitat compensation projects illustrate many of the concerns and cautions raised by witnesses about the limitations of habitat restoration to offset the loss of fish habitat.⁴⁰ As confirmed during the Hearing, while the Proponent has demonstrated its ability to physically grow plants and physically create marsh like environments they have not yet studied the biological function of these recreated environments to confirm whether they actually function as fish habitat.⁴¹
38. Given the concern about the scale and importance of Chinook and chum salmon habitat loss, lack of data on the biological functionality of past habitat restoration projects, and Fraser River Chinook’s conservation status, the Conservation Coalition submits that the effects of the Project on Fraser River Chinook and chum salmon are likely to be adverse and significant.
39. Further, the Conservation Coalition submits that the anticipated impacts of global climate change and sea level rise on the Fraser estuary⁴² make Project related loss of estuarine habitat all the more significant.
40. Finally, as discussed below, the importance of Fraser River Chinook as the primary prey of the critically endangered and the nutritionally stressed Southern Residents further indicates the significance of the adverse effects of the Project on Chinook salmon.

C. The Project’s significant adverse effects on the Southern Residents

41. The condition of the endangered Southern Residents has deteriorated to the point where the federal Ministers responsible for them under *SARA* have determined that they face “imminent threats” to their survival and recovery (the “Imminent Threat Assessment”).⁴³

⁴⁰ Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras. 229-231; *Scott Report*, CCR Volume 2, Appendix B, pp. 95-98.

⁴¹ Document 1797, Public Hearing Transcript: May 22, 2019, [here](#) at pages 1507-1510; see also Document 1807, Public Hearing Transcript: May 24, 2019, [here](#) at pages 2190-2192

⁴² Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras 219-220.

⁴³ Document # 1605, Government of Canada, “Southern Resident Killer Whale: Imminent Threat Assessment” (May 2018) [*Imminent Threat Assessment*], see Document #1605, CCR, Volume Vol. 2, Tab R, [here](#) at PDF 464-500.

42. As confirmed by DFO and independent experts such as Dr. Scott Veirs this means that Southern Residents face imminent threats to their survival and recovery under current conditions in the Salish Sea.⁴⁴ They cannot tolerate increased threats; they require an improvement over status quo conditions if they are to recover from current endangered status or even to persist over the long term.⁴⁵ Any additional impacts on prey availability, or additional noise or disturbance, will exacerbate the existing untenable conditions in the Salish Sea and will therefore be a significant adverse effect.
43. A full discussion of the Project potential adverse effects on Southern Residents is set out in the Written Submission in paragraphs 81-148. As the Review Panel heard during the Hearing, if the Project proceeds:
- a) The Robert's Bank terminal, which is within Southern Resident critical habitat, will be entrenched as core commercial infrastructure operating indefinitely, with more vessels calling at this location as opposed to other locations that are not in critical habitat;
 - b) a transition to larger ships which might otherwise result in a reduction in overall traffic will instead mean vessel trips remain at least as high;
 - c) larger ships will have greater impacts per ship on the Southern Residents;
 - d) important estuarine habitat for the Southern Resident's most important prey, Chinook salmon, will be lost; and
 - e) under any modeled scenario there will be an increase in lost foraging time for a nutritionally stressed population of at least 1.4 hours per whale per year in the Project area.
44. As the Conservation Coalition explained during the Hearing, due to the small size and social complexity of the Southern Residents, the loss of an individual Southern Resident can have population level impacts.⁴⁶ Potential adverse effects of the Project and Project Related Shipping on Southern Residents include vessel strikes and physical disturbance and displacement of whales, underwater noise, pollution of critical habitat and impacts on

⁴⁴ *Imminent Threat Assessment*, see Document #1605, CCR Volume 2, Appendix R, [here](#); Document #1605; Expert Report of Dr. Scott Veirs [Veirs Report], CCR Volume 2 Tab A, [here](#) at pages 6-9 (PDF pages 10-13); Document #1798, Hearing Transcript: May 23, 2019, [here](#) at pages 1873-1874.

⁴⁵ Document #1798, Hearing Transcript: May 23, 2019, [here](#), at page 1874; Document #1605, Veirs Report, CCR Volume 2 Tab A, [here](#) at page 8 (PDF page 13); *Imminent Threat Assessment*, see Document #1605, CCR Volume 2, Appendix R, [here](#).

⁴⁶ Document #1798, Hearing Transcript: May 23, 2019, [here](#), at pages 2043-2044.

the whales' primary prey, Chinook salmon. These adverse effects could all result in the death of one or more individual whales, with population level impacts.

45. The population viability assessment cited by Dr. Veirs in this expert report as projecting that the Southern Resident population will not recover under current conditions has since been updated by DFO, whose analysis confirms the projection of population decline under current conditions.⁴⁷

1. Project impacts on Southern Resident prey availability

46. As described above, the expansion of the terminal will result in large scale destruction of important habitat for at risk populations of Fraser River Chinook salmon. This will have adverse effects on Chinook salmon and by extension negatively impact prey availability for the Southern Residents. Regardless of the number of vessels that eventually call at the terminal, expanding the terminal facility itself is likely to cause significant adverse effects on the Southern Residents.
47. The Recovery Strategy for Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada (the "Recovery Strategy") identifies Chinook as a key prey of Southern Residents a lack of prey availability as one of the main threats facing the Southern Residents.⁴⁸ The Imminent Threat Assessment confirms that declining availability of Chinook salmon prey is one of the key threats that has led to the recent determination that the Southern Residents face an imminent threat to their survival and recovery.⁴⁹ Thus, as the Project will adversely affect estuary dependant Chinook salmon, the Project is a threat to the Southern Residents' survival and recovery.

⁴⁷ Fisheries and Oceans Canada, Pacific Region, Canadian Sciences Advisory Secretariat Science Advisory Report 2019/030, "Cumulative Effects Assessment for Northern and Southern Resident Killer Whale (*Orcinus orca*) Populations in the Northeast Pacific" (July 2019), https://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2019/2019_030-eng.pdf; Fisheries and Oceans Canada, Pacific Region, Cathryn Clarke Murray et al, Canadian Science Advisory Secretariat Research Document 2019/056, "Cumulative Effects Assessment for Northern and Southern Resident Killer Whale Populations in the Northeast Pacific" (July 2019), http://www.dfo-mpo.gc.ca/csas-sccs/Publications/ResDocs-DocRech/2019/2019_056-eng.pdf.

⁴⁸ Document #1374, "From Fisheries and Oceans Canada to the Review Panel re: Recovery Strategy for the Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada" (12 December 2018) [2018 Recovery Strategy], [here](#), PDF pages 34-36.

⁴⁹ Document #1605, *Imminent Threat Assessment, CCR*, Volume 2, Appendix R, [here](#).

48. The Project is located within Southern Resident critical habitat, and prey availability is identified in the Recovery Strategy as an attribute of critical habitat for the Southern Residents.⁵⁰ Therefore, reductions in prey availability due to adverse impacts of the Project on Chinook may also destroy critical habitat, contrary to s. 58 of *SARA*.
49. This concern is shared by DFO, whose expert stated during the Hearing that “the project will result in destruction of critical habitat due to construction-related activities” which will “result in loss of fish and fish habitat” for Chinook and chum salmon.⁵¹ DFO’s representative stated that “if we are impacting on Chinook habitat, then from our point of view there is going to be the destruction of critical habitat.”⁵² Citing policy, DFO defined critical habitat destruction as:
- The degradation of part of the critical habitat, either permanently or temporarily, such that it would not serve its function when needed by the species, resulting from a single or multiple activities at one point in time or from the cumulative effects of one or more activities over time.
50. This is consistent with the definition used by the Conservation Coalition. DFO stated that, based on this definition, “DFO is confident that [...] the project will likely result in destruction of [Southern Resident] critical habitat”.⁵³
51. The Review Panel also heard the concern from DFO that due to the Project’s impacts on Southern Resident prey availability they may not lawfully be able to issue *SARA* compliant permits under the *Fisheries Act*, for terminal construction. As explained by DFO terminal construction will require authorization under s. 35 of the *Fisheries Act* for serious harm to fish. The potential for destruction of critical habitat would also trigger the permitting provisions of *SARA* in ss. 73-74. DFO said in its written submissions and in the Hearing that it is “uncertain” that the preconditions in the *SARA* permitting provisions can be met for this Project.⁵⁴ This is because *SARA* s. 74 prevents the Minister from permitting fish

⁵⁰ Document #1374, *2018 Recovery Strategy*, [here](#) at pages 50-52.

⁵¹ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at page 1883.

⁵² Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at page 1593.

⁵³ Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at page 1593.

⁵⁴ Document #1630, “Fisheries and Oceans Canada’s response to the Roberts Bank Terminal 2 Project Review Panel’s March 5, 2019 letter” [*DFO Written Submission*], [here](#) in section 6.3.1 at page 55; Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at 1595.

habitat destruction under the *Fisheries Act* that, in the Minister's opinion, could jeopardize survival and recovery of a listed wildlife species.

52. Thus, DFO and the Conservation Coalition both take the position that the development of the Project, even without changes in vessel traffic, would jeopardize survival and recovery of the Southern Residents. Such an effect would be significant. Further the Conservation Coalition takes the position that it would be unreasonable for the Review Panel to recommend approving or justifying significant adverse effects that DFO believes it could not lawfully permit.
53. Additionally, the Project will be constructed and operate in the Southern Residents' critical habitat. DFO confirmed in the Hearing submissions that the Project would destroy Southern Resident critical habitat due to construction-related activities.⁵⁵

2. Project Related Shipping impacts on Southern Residents and their critical habitat

54. The Recovery Strategy identifies physical and acoustic disturbance as an activity likely to destroy Southern Resident critical habitat.⁵⁶ The Conservation Coalition explained in the Written Submission at paragraphs 99-114 how physical and acoustic disturbance from Project Related Shipping would destroy critical habitat, and DFO confirmed in the Hearing that the Project would destroy Southern Resident critical habitat due to vessel noise.⁵⁷
55. As stated above, due to the current imperiled status of the Southern Residents, any additional noise or disturbance due to vessels would constitute a significant adverse effect. The National Energy Board recently concluded in its reconsideration report on the Trans Mountain Expansion Project that "the Southern resident killer whale population has crossed a threshold where any additional adverse environmental effects would be considered significant."⁵⁸

⁵⁵ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at pages 1883, 1887-1888.

⁵⁶ Document #1374, *Recovery Strategy*, [here](#) at page 54-55

⁵⁷ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at pages 1920-1921.

⁵⁸ National Energy Board, National Energy Board Report, Application for the Trans Mountain Expansion Project, National Energy Board reconsideration of aspects of its OH-001-2014 Report as directed by Order in Council P.C. 2018-1177, MH-052-2018 (February 2019), online at <https://apps.neb-one.gc.ca/REGDOCS/Item/Filing/A98021>, at 419.

56. The Proponent concedes that there will be some increase in lost foraging time, in any scenario where the Project proceeds – and the Conservation Coalition submits that in light of the imminent threats to survival of the Southern Residents, any increase is too great an increase, and is a significant adverse effect. While the amount of lost foraging time is uncertain in light of the varying projections of the number of vessels calling at the expanded terminal, as discussed in more detail below in part III, all models show some increase in lost foraging time in the Project area. Furthermore, there will be either an increase in the number or size of vessels calling at the expanded facility, or both. Either additional or larger vessels will contribute to the already untenable problem vessel generated ocean noise in the Salish Sea.
57. DFO has stated that the loss of foraging is an impact on the population, as it impacts individuals within this nutritionally stressed population, and with the population at such a low number, this likely leads to population-level impacts.⁵⁹
58. The Proponent states in the Marine Shipping Addendum that the Project would result in 20.1 hours of lost foraging time in the local assessment area per year per individual whale.⁶⁰ Under the revised May 2019 assessment based on a new projection of vessel traffic (discussed further below), the Project would result in 1.4 hours per whale per year of lost foraging time in the Project area.⁶¹
59. Thus, the Project under any model, results in an increase of lost foraging time, and the worsening of an already untenable situation. Given that the experts agree that existing conditions in the Salish Sea are already too loud, from the Southern Residents’ perspective it is of limited comfort that under this revised scenario the increase in noise is smaller than previously forecast.
60. Further, the Proponent’s new assessment may understate impacts. The Conservation Coalition shares the concerns expressed by DFO about the Proponent’s approach to modelling effects on the Southern Residents and the resulting uncertainty of the

⁵⁹ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at page 1925.

⁶⁰ Marine Shipping Addendum, Sections 1-8, [here](#), at PDF page 250.

⁶¹ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at pages 1865.

Proponent's conclusions.⁶² As explained in more detail below, several witnesses, including Dr. Scott Veirs, are of the opinion that the Proponent's new assessment understates the potential effects of the Project and leaves many important questions unanswered.

61. Further, the Conservation Coalition shares DFO's opinion that ship strike risk should be considered a threat to the viability of the Southern Resident population.⁶³

3. *The Project's cumulative effects on the Southern Residents are significant*

62. Cumulative effects as defined in s. 19(1)(a) of *CEAA 2012* include the effects of the Project "in combination with other physical activities that have been or will be carried out". The Review Panel must assess the cumulative effects of this Project on the Southern Residents, as opposed to each effect in isolation. This ensures that the real-world impact of these effects, which act synergistically to impact the Southern Residents, is addressed. The Review Panel must further assess the cumulative effects of this Project in combination with other activities in the region. This ensures that the cumulative effect of incremental increases caused by multiple projects is addressed.
63. As explained in more detail in DFO's and the Conservation Coalitions submissions during the Hearing⁶⁴, the threats to Southern Resident survival and recovery act together in a sometimes synergistic fashion. The Proponent has still not looked at the combined effect of the Project's effects on the Southern Residents, including the synergistic nature of threats, raised by the Conservation Coalition and by DFO.
64. As explained above, the record before the Review Panel shows that the Project's cumulative effects would further diminish prey availability in critical habitat, further destroy the acoustic quality of critical habitat and increase the risk of harm to individual whales. While each threat on its own is in the submission of the Conservation Coalition significant, the combined effect of these effects is surely very significant.

⁶² Document #1630, DFO Written Submission, [here](#) at pages 41-44, 56; Document #1798, Hearing Transcript: May 23, 2019, [here](#), at pages 1872-1875.

⁶³ Document #1630, DFO Written Submission, [here](#), at pages 50-51; Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras 129-134.

⁶⁴ Document #1798, Hearing Transcript: May 23, 2019, [here](#), at pages 1890-1892, 2056.

IV. Reconciling shifting evidence on Project Related Shipping impacts

65. During the Hearing the Proponent filed a new assessment of the likely adverse effects of Project Related Shipping on the Southern Residents and their critical habitat (“Underwater Noise Documents”).⁶⁵ This new assessment was based on a reforecast of anticipated vessel calls for the Project predicted in the November 2018 Robert’s Bank Terminal 2 Container Vessel Call Forecast Study report by Mercator (the “Mercator Report”).⁶⁶
66. DFO expressed concerns during the Hearing that the Proponent is underrepresenting the impact of Project Related Shipping.⁶⁷ The Conservation Coalition submits that the record is clear that even under this new scenario the Project would result in decreased foraging time for the Southern Residents. Consequently, due to the fact that the Southern Residents face an imminent threat to survival for the very reason that they are nutritionally stressed, any decrease in foraging time constitutes a significant adverse effect.
67. Even if the increase in noise attributable to the Project will be a “small fraction”⁶⁸ of the total noise in the Salish Sea, as the Proponent insists, it is nevertheless an adverse effect that contributes to a significant cumulative problem for the Southern Residents’ survival, is therefore significant, and requires full mitigation under *SARA*. In the context of an endangered species facing imminent threats to its very survival, any increased threat is intolerable for the species. Finally, the Conservation Coalition submits that there are several reasons to view the Proponent’s new assessment with caution. Indeed, during the Hearing the Review Panel heard that:
- a) the 2035 vessel call forecast is questionable;
 - b) larger ships may have larger impacts despite what the Proponent says;
 - c) with the Project, even if the Mercator Report projections are correct and there is a redistribution of vessels between Vancouver-area terminal as

⁶⁵ Document #1800, “Undertaking #20: From the Vancouver Fraser Port Authority – Underwater Noise Documents” (May 23, 2019), [here](#).

⁶⁶ Document #1362, Roberts Bank Terminal 2 Container Vessel Call Forecast Study [Mercator Report], (1 November 2018), [here](#).

⁶⁷ Document #1798, Hearing Transcript: May 23, 2019, [here](#), at pages 1871-1875.

⁶⁸ See, for example, Document #1798, Hearing Transcript: May 23, 2019, [here](#), at pages 1835, 1858.

opposed to an overall increase, more ships will call at Roberts Bank, which is within Southern Resident critical habitat;

- d) the Proponent concedes that the Southern Residents will lose foraging time (1.4 hours per whale per year in the Project area) due to Project Related Shipping; and
- e) adding the Project means that a transition to larger ships, which might otherwise result in a reduction in overall traffic, will instead mean vessel trips remain at least as high.

68. The Mercator Report describes a global trend towards larger vessels necessitating fewer calls at the Port of Vancouver in order to deliver the increased volume of goods the port is being expanded to accommodate.⁶⁹ Under this new post-Mercator Report scenario the VFPA estimates there would be 9 vessels per week calling at the terminal, and, that this represents no increase in vessel traffic to Vancouver-area terminals but rather a redistribution among the Vancouver-area terminals.⁷⁰ Further, the Proponent takes the position that ship size will increase whether or not the Project is built.⁷¹ Finally the Proponent claims that “[w]ithin each class, newer ships generally have smaller main engines”, which are “associated with slower maximum design speeds”.⁷²
69. Thus, the Proponent’s new position with respect to the adverse effects of Project Related Shipping is that “since there are no additional vessels transiting through the marine shipping area in the future and the project will not drive the introduction of larger vessel classes to the Port of Vancouver, this effectively eliminates any effects.”⁷³
70. In the recently filed Underwater Noise Documents, and post-Hearing evidence concerning vessel classes expected to call at Roberts Bank in 2035 (the “Vessel Class Descriptions”),⁷⁴

⁶⁹ Document #1362, Mercator Report, [here](#).

⁷⁰ Document #1362, Mercator Report, [here](#) at PDF page 106.

⁷¹ Document #1900, “Undertaking #36: From the Vancouver Fraser Port Authority – Vessel Class Descriptions” (June 11, 2019), [here](#).

⁷² Document #1900, “Undertaking #36: From the Vancouver Fraser Port Authority – Vessel Class Descriptions” (June 11, 2019), [here](#).

⁷³ Document #1821, Hearing Transcript: May 28, 2019, [here](#) at page 2908.

⁷⁴ Document #1900, “Undertaking #36: From the Vancouver Fraser Port Authority – Vessel Class Descriptions” (June 11, 2019), [here](#).

the Proponent provides new evidence on the potential effects of larger vessels. This information was not available to Conservation Coalition before they appeared at the Hearing on May 23, 2019. In response in June the Conservation Coalition filed the Supplemental Veirs Report that assesses and responds to the Proponent's updated information. The Supplemental Veirs Report also raises questions and concerns about the Proponent's assumptions that cannot be resolved due to the Proponent's late introduction of new evidence during the hearing and consequent lack of time to analyze the new information or opportunity ask the Proponent questions about the new information. The Conservation Coalition adopts and relies upon the Supplemental Veirs Report, and submits that the Proponent's new evidence in Underwater Noise Documents misleadingly understates the Project's real likely impacts.

71. The Supplemental Veirs Report states that the Proponent "may now underestimate the acoustic and cumulative impacts on the project" on the Southern Residents.⁷⁵ Dr. Veirs observes that the Proponent's evidence that the effects of vessels on the Southern Residents will be smaller than the Proponent initially suggested is based on the Proponent making increasingly less conservative assumptions, including assumptions about ship size and resulting underwater noise, which results in an underestimate of noise levels and resulting impacts on the Southern Residents.⁷⁶
72. The Supplemental Veirs Report concludes that the Project will increase underwater noise significantly, when the Southern Residents already cannot tolerate any additional impacts and any increase is too great.⁷⁷ The Proponent concedes in the Underwater Noise Documents that noise will increase at Roberts Bank, and confirmed during the Hearing and in the Underwater Noise Documents that the Project would result in increased hours of noise and lost foraging time for Southern Residents.
73. Dr. Veirs further questioned the Proponent's assertions with respect to notion that the new larger vessels would be quieter than today's vessels despite being larger. The Proponents statements are based on with limited examples of specific vessels. In response, Dr. Veirs

⁷⁵ Document #1965, Supplemental Veirs Report, [here](#), at PDF page 4.

⁷⁶ Document #1965, Supplemental Veirs Report, [here](#), at PDF pages 4-5, 11-13, 16.

⁷⁷ Document #1965, Supplemental Veirs Report, [here](#), at PDF page 12.

noted in oral remarks, that his review of data from thousands of vessel transits, instead of single ships within classes, indicates that there is “variability across all classes and within classes, that suggests that there are quiet ships and louder ships in each class.”⁷⁸ Thus, the Conservation Coalition submits that any general conclusion based on small sample size should be viewed with caution.

74. DFO submitted that larger ships have larger source level in terms of noise.⁷⁹ They travel at higher speeds, which results in higher noise and higher strike risk.⁸⁰ This is consistent with the Supplemental Veirs Report.⁸¹ Dr. Veirs also notes that the larger Mega-Max class ship requires three tugs and a line boat, compared to only three tugs for smaller classes.⁸²
75. The Proponent claims that larger ships will not have larger impacts, on the basis that “[w]ithin each class, newer ships generally have smaller main engines”, which are “associated with slower maximum design speeds”.⁸³ The Proponent bases this claim on only limited examples of specific vessels, with a maximum of one specific example of a vessel per class. Dr. Veirs pointed out in the Hearing that the Proponent has modelled source levels that are slower than the mean speed and based on only 9 measurements of 13,000 TEU ships moving at less than 15 knots.⁸⁴ Dr. Veirs also flagged that the Proponent, in each update, has modelled a smaller representative vessel, while insisting that ship size will increase; this, in addition to other assumptions, means that the Proponent’s assumptions have become less conservative over time, moving from what Dr. Veirs calls “precautionary” to “less than conservative”.⁸⁵

⁷⁸ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at page 2098.

⁷⁹ Document #959, “From Fisheries and Oceans Canada to the Review Panel re: Response to Information Requests issued by the Review Panel on April 5, 2017” (26 April 2017), [here](#), PDF pages 5-6.

⁸⁰ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at page 1879.

⁸¹ Document #1965, Supplemental Veirs Report, [here](#), at PDF pages 13-15.

⁸² Document #1965, Supplemental Veirs Report, [here](#), at PDF page 16.

⁸³ Document #1900, “Undertaking #36: From the Vancouver Fraser Port Authority – Vessel Class Descriptions” (June 11, 2019), [here](#) at page 2.

⁸⁴ Document #1821, Public Hearing Transcript: May 28, 2019, [here](#) at pages 2953-2954.

⁸⁵ Document #1965, Supplemental Veirs Report, [here](#) at PDF page 4.

76. DFO flagged that it wanted to see vessel speeds for the larger vessels, and stated that there are few measured source levels available for the larger vessel class and that it “would like to see the uncertainties associated with that.”⁸⁶
77. Several witnesses, including Environment and Climate Change Canada (“ECCC”), questioned the accuracy and reliability of the Proponent’s revised projections of vessel calls. In the context of commenting on emissions from marine shipping, ECCC expressed doubt as to the Proponent’s projections of vessel calls, and therefore the adverse effects of vessels. ECCC “questions whether the incremental number of ship calls and size of ships to Roberts Bank with the Project in 2035 would be greater than” the number in the Mercator Report.⁸⁷ This leads to the Proponent underestimating the effects of vessels.
78. The Conservation Coalition emphasizes that the Proponent’s new projects are speculative, and that the new scenario represents the most optimistic scenario, which Dr. Veirs finds to be “less than conservative”.⁸⁸
79. To summarize, the Conservation Coalition submits that it is clear that with the Project there will be more ships at Roberts Bank even if the total at the Port of Vancouver is the same. This means an increase in ships calling at a terminal within Southern Resident critical habitat. The Project also locks in, and expands for the foreseeable future, a terminal at Robert’s Bank which will act to maintain as opposed to alleviate the unsustainable status quo conditions for Southern Residents in the Salish Sea. An industry-wide transition to larger ships that might have resulted in an overall decrease in vessel numbers will instead mean that vessel trips remain at least as high as the currently are while vessel size also increases. They further submit that the Proponent has not demonstrated that larger ships will not have larger impacts.
80. Further, it is clear that, regardless of changing vessel projections, the Project will result in an increase in lost foraging time for the Southern Residents. The Proponent’s witness Dr. Tollit told the Review Panel that, based on the new Mercator modelling, the Southern

⁸⁶ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at page 1904.

⁸⁷ Document #1970, “Undertaking #42: From Environment and Climate Change Canada – Marine Shipping Emissions” (June 24, 2019), [here](#), at PDF page 3.

⁸⁸ Document #1965, Supplemental Veirs Report, [here](#) at PDF page 4.

Residents will lose 1.4 hours of foraging per whale per year in the Project area.⁸⁹ This finding means that the Project is exacerbating an already untenable problem for the whales. It is contributing to a problem that currently threatens the whales' very survival and is a barrier to their recovery. This is a significant adverse effect.

81. Finally, even if it is a "small fraction" of the total problem of vessel noise in the Salish Sea, as the Proponent repeatedly insists,⁹⁰ Project Related Shipping will nevertheless have adverse effects that will contribute to the cumulative threats to the Southern Residents' survival and recovery. As explained above, they cannot withstand additional adverse effects. As described in more detail below, based on the information presented to the Review Panel, it is not possible at this time to ensure that this adverse effect will be fully mitigated to the standard required by s. 79 of *SARA*.

V. Adverse effects on Southern Residents will not be mitigated to the standard required by *SARA*

A. *SARA* requires concrete, enforceable mitigation measures

82. As set out in detail in paragraphs 29-59 of the Conservation Coalition's Written Submission, *CEAA 2012* and *SARA* contain requirements related to mitigation of adverse effects. *CEAA 2012* requires the Review Panel to take mitigation measures into account in its environmental assessment. Section 79 of *SARA* requires that the Review Panel ensure that there are measures in place before the Project proceeds to lessen or avoid all adverse effects on listed species – not only ones deemed "significant". The Southern Residents are a *SARA*-listed species, and, as the Written Submission explain, many other *SARA*-listed marine species will also be affected by the Project.⁹¹
83. Measures are not defined in s. 79 of *SARA*, beyond the stipulation that they avoid or lessen adverse effects and that the person conducting the environmental assessment must ensure they are in place. Mitigation measures are defined in s. 2 of *CEAA 2012* as "measures for the elimination, reduction or control of adverse environmental effects, and includes

⁸⁹ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at page 1865.

⁹⁰ See, for example, Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at pages 1835, 1858.

⁹¹ Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras 175-177, 181-183.

restitution for any damage to the environment caused by those effects through replacement, restoration, compensation or any other means”.⁹²

84. As the Conservation Coalition argued in the Written Submission, mitigation measures are intended to be actual, identifiable measures which will eliminate, reduce, or control adverse effects of a project⁹³. Courts have been clear that “vague hopes for future technology” to address effects do not constitute mitigation measures.⁹⁴ Assurances of adaptive management, further study, and conceptual and unproven ideas do not constitute mitigation measures.⁹⁵
85. When assessing whether something rises to the level of a mitigation measure, the Conservation Coalition submits that the Review Panel should consider the reliability, feasibility and effectiveness of the measure to reduce the identified impact on the particular species. This approach was recently confirmed by the National Energy Board in its assessment of impacts of tanker traffic associated with the Trans Mountain Expansion Project on Southern Residents.⁹⁶ In the context of the duty to avoid or lessen impacts on endangered species, the Conservation Coalition submits that these criteria are critical given that species at risk lack the resilience of healthy populations to absorb losses and thus cannot afford for mitigation to fail.
86. The Proponent incorrectly argued during the Hearing that “measures” for the purposes of s. 79(2) of *SARA* are “not limited to mitigation measures” and include “all kinds of measures” such as the voluntary ECHO trials, the conservation agreement signed in May

⁹² *CEAA 2012*, at s.2.

⁹³ Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras. 38 and 39, 184-186.

⁹⁴ *Pembina Institute for Appropriate Development v Canada (Attorney General)*, 2008 FC 302 at para 25. See also Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras 39, 184.

⁹⁵ *Taseko Mines Limited v Canada (Environment)*. 2017 FC 1099 [*Taseko*] at paras 101, 122-124. This decision is currently under appeal. See also Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras 39, 184.

⁹⁶ National Energy Board, National Energy Board Report, Application for the Trans Mountain Expansion Project, National Energy Board reconsideration of aspects of its OH-001-2014 Report as directed by Order in Council P.C. 2018-1177, MH-052-2018 (February 2019), online at <https://apps.neb-one.gc.ca/REGDOCS/Item/Filing/A98021>, at page 379.

2019 by the VFPA and the Government of Canada concerning underwater noise (the “Conservation Agreement”),⁹⁷ and the Oceans Protection Plan.⁹⁸

87. There is nothing in the language of s. 79(2) of *SARA* or in the jurisprudence to indicate that it requires something less than concrete mitigation measures. On the contrary, s. 79(2) requires the Review Panel to identify all possible measures to avoid or lessen the Project’s effects, so that the ultimate decision-maker can “ensure” that they are in place.⁹⁹ Furthermore, the Federal Court of Appeal has clarified that, in a case such as this, Cabinet cannot approve the Project until all measures within the authority of the federal government to avoid or lessen the Project’s effects are in place.¹⁰⁰
88. The Proponent distinguishes *SARA* s. 79(2) measures from *CEAA 2012* mitigation measures for the wrong reason. The relevant difference is that *CEAA 2012* s. 19(1)(d) requires the Review Panel to “take into account” mitigation measures in its environmental assessment, whereas *SARA* s. 79(2) requires the Review Panel and the ultimate decision-maker to “ensure” that measures are actually in place. *SARA* imposes a more onerous requirement, commensurate with the context of species that are already at risk and require protection from additional impacts.

B. There will be unmitigated adverse effects on *SARA* listed species

89. Several *SARA*-listed marine species are likely to be affected by the Project, and in particular by Project Related Shipping.¹⁰¹ The Conservation Coalition has focussed on the Southern Residents, but the affected species include North Pacific Humpback Whale (“Humpback Whale”), harbour porpoise and Stellar Sea Lion.
90. As stated above the Project will clearly result in adverse effects on the Southern Residents. As set out in more detail below, adverse effects on the Southern Residents will not be fully mitigated. To survive and recover, the Southern Residents require existing conditions in

⁹⁷ The Conservation Coalition addressed the Conservation Agreement in their oral submissions, Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at pages 2080-2082.

⁹⁸ Document #1798, Public Hearing Transcript: May 23, 2019, [here](#), at page 2108-2109.

⁹⁹ *SARA*, s. 79(2). See also Document #1605, Written Submissions, CCR Vol. 1, [here](#) at para 52.

¹⁰⁰ *Tsleil-Waututh Nation v Canada (Attorney General)*, 2018 FCA 153 at para 456; see also Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras 52-53.

¹⁰¹ Document #51, “From the Canadian Environmental Assessment Agency to Department of Fisheries and Oceans re: Project notification letter pursuant to Subsection 79(1) of the Species at Risk Act” (6 December 2013), [here](#) [*SARA Project Notification*].

the Salish Sea to improve. This means more Chinook and quieter seas. There is no evidence that the measures discussed during the review of the Project can or will adequately address existing conditions, let alone account for increased stress from additional boats, or address the impacts to the Southern Residents that even temporary reductions in Chinook availability would cause.

91. With respect to mitigation for Project Related Shipping, the Proponent proposes no mitigation measures for the effects of Project Related Shipping on the Southern Residents.¹⁰² The Proponent concedes that the regional initiatives being undertaken by the federal government with respect to marine shipping generally are “not ‘mitigation measures’ as that term is defined under [CEAA 2012]”.¹⁰³
92. The likely effects of the Project on *SARA*-listed species other than the Southern Residents goes beyond the scope of these closing remarks. A broader discussion of the Projects adverse effects on other *SARA*-listed species is set out in paragraphs 149-183 of the Written Submission. As set out in more detail in its Written Submission at paragraphs 187-199, the Conservation Coalition is concerned that the Proponent has no plan to mitigate the likely adverse effects of the Project and Project Related Shipping on other *SARA* listed marine species.
93. Section. 79(2) of *SARA* requires measures to avoid or lessen adverse effects regardless of whether effects are deemed “significant”. Based on the information before the Review Panel at this time, it is clear that the Project’s effects on *SARA* listed species will not be fully mitigated as required by s. 79(2) of *SARA*.

C. Adverse effects on availability of Southern Resident Chinook salmon prey will not be fully mitigated

94. There is no evidence on the record that the Proponent can or will avoid or lessen the Project’s adverse effects on the availability Chinook salmon prey in critical habitat for Southern Residents.

¹⁰² Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at page 9.

¹⁰³ Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at page 9.

95. As discussed above the Project will result in the direct loss of large-scale destruction of important habitat for Fraser River Chinook populations that are both at risk and in decline.¹⁰⁴ As confirmed by the Recovery Strategy, reduced availability of Chinook salmon prey is one of the key threats pushing the Southern Residents towards extinction.¹⁰⁵ As DFO told the Review Panel in the Hearing, the Project’s impacts on Chinook salmon would constitute destruction of a legally protected biological feature of critical habitat.¹⁰⁶
96. In the EIS, and during its presentation to the Review Panel at the Hearing, the Proponent repeatedly stated its plan to address adverse effects on Chinook salmon through habitat offsets on site and off site. They plan to replace the habitat they are destroying by creating new habitat along the perimeter Recap on offsetting plan for Chinook salmon. As stated above, the Conservation Coalition shares DFO’s concern that it will not be possible to seamlessly offset the loss of so much important Chinook habitat.¹⁰⁷ These concerns are set out in more detail in the Written Submission and the Scott Report.¹⁰⁸
97. In its new filing setting out updated Project commitments, the Proponent improperly goes beyond updating its commitments to make unsupported and vague claims with respect to the potential to offset impacts on Chinook, such as claims that the Proponent is “aware of many [...] opportunities” for offsetting.¹⁰⁹ The Board should not rely on unsupported claims about the potential contents of the not-yet-finalized Offsetting Plan the Proponent refers to.
98. In the same document, the Proponent states that it “will undertake ongoing monitoring and adaptive management to ensure that offsetting projects are successful over the long-term,

¹⁰⁴ Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at page 1590; for evidence on declining Chinook see also Document #1605, Written Submissions, CCR Vol. 2, Tab B, Exhibit 2, Summary of COSEWIC Wildlife Species Assessments (November 2018), [here](#).

¹⁰⁵ Document #1374, *Recovery Strategy*, [here](#), at PDF page 28.

¹⁰⁶ Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at page 1593.

¹⁰⁷ Document #1797, Public Hearing Transcript: May 22, 2019, [here](#) at page 1584-1590; Document # 1798, Public Hearing Transcript: May 23, 2019, [here](#) at pages 2024-2029

¹⁰⁸ Document #1605, Written Submission Vol 1 para 228-230; Document #1605, Scott Report, Vol 2, Tab 2, [here](#), page 95-98.

¹⁰⁹ Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at pages 7-9.

and that ecosystem and species productivity goals are met.”¹¹⁰ As stated above the Federal Court has cautioned that it is not reasonable to rely on vague commitment to adaptive management.¹¹¹ This commitment is so vague as to be meaningless.

D. The adverse effects of Project Related Shipping on Southern Residents will not be fully mitigated

99. DFO stated during the Hearing that the Proponent has not proposed mitigation for the impacts of Project Related Shipping and that mitigation is needed for underwater noise, as well as vessel strikes.¹¹² The Conservation Coalition shares these concerns.
100. As stated above, the Proponent proposes no measures to mitigate Project Related Shipping’s impacts on Southern Residents.¹¹³ Instead it suggests that regional measures, intended to address existing conditions in the Salish Sea as opposed to increased harm from the Project, will indirectly mitigate the Project’s impacts.
101. In its commitments tables, submitted after the Hearing, the Proponent now labels the following as “Updated Applicable Mitigation Measures” with respect to marine mammals:
 - a) distributing marine mammal awareness pamphlets to marine pilots working within the VFPA jurisdiction;
 - b) “continu[ing] to explore opportunities to contribute to, support, and/or participate in regional and/or multi-stakeholder initiatives that will inform effective management and recovery of the endangered southern resident killer whale population, including Government of Canada initiatives under the Ocean Protections Plan (OPP), the Whale Initiative, and the VFPA-led Enhancing Cetacean Habitat and Observation (ECHO) Program”; and
 - c) “continu[ing] to engage in regional programs” with respect to the Southern Residents “and will support/collaborate with the Government of Canada to

¹¹⁰ Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at page 9.

¹¹¹ *Taseko* at paras 101, 122-124. See also Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras 39, 184.

¹¹² Document #1821, Hearing Transcript: May 28, 2019, [here](#) at pages 1875-1876, 1878-1879, 1925.

¹¹³ Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at page 9.

meet recovery objectives in its federal Action Plan” for the Southern Residents.¹¹⁴

102. The Proponent further lists, among other things, the following items as “Regional Initiatives and Programs with Potential to Reduce Adverse Effects of Marine Shipping in General” (the “Regional Initiatives”):¹¹⁵

- a) elements of the Oceans Protection Program;
- b) the 2017 Action Plan for the Northern and Southern Resident Killer Whale (*Orcinus orca*) in Canada;
- c) the May 27, 2019 interim order made by the Minister of Transport under the *Canada Shipping Act* (the “Interim Order”);
- d) the Green Marine voluntary certification program;
- e) the Whales Initiative¹¹⁶; and
- f) the ECHO program.

103. As explained at the Hearing¹¹⁷, while the Conservation Coalition acknowledges that Regional Initiatives may be important, they do not, as the Proponent concedes¹¹⁸, constitute mitigation under *CEAA 2012*. As explained below, the Regional Initiatives are a mix of prospective or voluntary measures the effectiveness of which to actually help the Southern Residents has yet to be tested or confirmed. Indeed, even the heading of the Regional Initiatives list signals these are not necessarily expected to actually reduce effects.

104. Further, the Regional Initiatives – in contrast to Project specific mitigation – are not tied to the Project and for that reason may or may not operation in the relevant location for the

¹¹⁴ Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at page 9, Appendix B, page 1, Table B1.

¹¹⁵ Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at page 9, Appendix B, page 2, Table B2.

¹¹⁶ As described in Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#); this includes research initiatives, fisheries management measures, an Indigenous and Multi-Stakeholder Advisory Group, and technical working groups.

¹¹⁷ Document #1798, Hearing Transcript: May 23, 2019, [here](#), at page 2080.

¹¹⁸ Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at page 10.

relevant duration necessary to offset the Project’s adverse effects. Some initiatives are clearly not applicable to the effects of Project Related Shipping at all. This includes the Interim Order¹¹⁹, which explicitly exempts vessels in transit from its prohibition on approaching killer whales within 400m (s. 2(a)). This also includes fisheries management measures (cited by the Proponent as part of the Whales Initiative)¹²⁰.

105. For these reasons it is not possible to rely on such measures to discharge the duty in SARA to ensure measures to avoid or lessen the adverse effects of the Project on Southern Residents.

1. Future plans do not discharge the duty in s. 79 of SARA

106. As recently confirmed by the Court of Appeal, future or “inchoate” plans and commitments to address shipping noise such as those found in the Oceans Protection Plan do not constitute mitigation of adverse effect.

107. Some of the regional initiatives identified by the Proponent such as the Oceans Protection Plan, Whales Initiative (which includes research programs and advisory groups) and Action Plan are effectively plans to make plans that might address risks associated with marine shipping. They have not identified specific feasible mitigation measures that could be used to adequately reduce impacts of Project Related Shipping on Southern Residents. Because they are plans to make a plan – as opposed to tangible measures that can be deployed to mitigate Project Related Shipping’s effects – it is not possible to assess their effectiveness or feasibility to lessen or avoid impacts. Thus, the Proponent’s commitment to “explore opportunities” to participate in future regional measures, while laudable, cannot be considered a reliable measure that will effectively avoid or lessen the Project’s adverse effects.

108. Similarly, research programs, while important, do not constitute mitigation.

¹¹⁹ Interim Order for the Protection of Killer Whales (*Orcinus orca*) in the Waters of Southern British Columbia (27 May 2019), <https://www.tc.gc.ca/eng/mediaroom/interim-order-protection-killer-whales-waters-southern-british-columbia.html>.

¹²⁰ Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at page 9, Appendix B, page 4, Table B2.

2. Voluntary initiatives do not discharge the duty in s. 79 of SARA

109. Insofar as the Proponent suggests that voluntary measures will suffice to meet the requirements of s. 79 of *SARA*, the duty to “ensure” that measures are in place undermines this interpretation. One cannot ensure an outcome through an entirely voluntary commitment. Ensuring implies some degree of oversight, control, and enforceability.
110. Voluntary initiatives therefore cannot be relied upon to mitigate adverse effects. This includes the ECHO program, the Conservation Agreement, and the Green Marine program.
111. For example, in response to DFO’s recommendation in its April 15, 2019 written submission that the Proponent should evaluate mitigation options such as vessel slowdowns,¹²¹ the Proponent both asserts that the Project will not increase underwater noise, which the record shows is incorrect, and cites the ECHO program and its Conservation Agreement with the Government of Canada. As explained at the Hearing, and confirmed by the Conservation Agreement, ECHO is an entirely voluntary program. The parties to the agreement are not bound to participate and their participation is premised on ongoing funding. No one can “ensure” that it will run next year, let alone through the indefinite lifetime of the terminal.

3. Awareness pamphlets do not discharge the duty in s. 79 of SARA

112. For similar reasons to the above discussion of voluntary initiatives, and as explained in the Hearing,¹²² awareness-raising initiatives cannot be considered mitigation.
113. In new written filings, the Proponent additionally claims that awareness and education measures are mitigation. The Proponent relies upon the words “reduction” and “control” in the *CEAA 2012* definition of mitigation measures, and claims that awareness and education “reduce” strike risk, and “control” adverse effects. This is based on an unstated, and unfounded, assumption about effectiveness: that simply providing information will cause actors to change their behavior or will translate directly into actual mitigation. Possible reduction that could result from awareness is not actual “reduction”, and education

¹²¹ Document #1630, “From Fisheries and Oceans Canada to the Review Panel re: Written Submission for the Roberts Bank Terminal 2 Public Hearing” (April 15, 2019), [here](#), at page 38; as summarized in Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at page 9 Appendix D page 6.

¹²² Document 1798, Transcripts of Public Hearing: May 23, 2019, [here](#) at pages 2077-2079

about effects is not equivalent to “control” over effects if it is not paired with enforceable requirements.

114. The marine mammal awareness pamphlet therefore does not meet the standard set by s. 79. The Conservation Coalition submits that the Review Panel cannot ensure through a pamphlet that any action will be taken by mariners, in particular in the absence of monitoring and follow-up programs.

4. *Temporary initiatives do not discharge the duty in s. 79 of SARA*

115. As explained in the Veirs Report, many of the initiatives being considered regionally – such as the voluntary slow down through ECHO – are of limited impact due to their temporary duration or limited geographic coverage.
116. The vessel slow down, as explained above, is a voluntary trial that is of limited duration. Based on our limited experience of the trials, which began in 2018, a decision is made each year about whether the trial will continue. There is no guarantee that it will be repeated in future years, let alone that it will continue for lifetime of the Project.
117. In addition to being voluntary, the Conservation Agreement, which addresses support for ECHO, is limited to 5 years, with no requirement or even commitment to continue the program. From a practical perspective, the Project will not even be operating at full capacity before the voluntary Conservation Agreement expires. For this additional reason, ECHO and the Conservation Agreement cannot be relied upon to avoid or lessen the impacts of Project Related Shipping.

5. *Untested initiatives do not discharge the duty in s. 79*

118. It is difficult to assess the effectiveness or feasibility of novel or untested measures, and thus they cannot be relied upon to avoid or lessen the impacts of the Project. As discussed in the Hearing, neither DFO nor the VFPA have confirmed that the results of the voluntary slow down have had positive effects for the Southern Residents. No one appears to be evaluating whether the resulting reduction in noise in Haro Strait, for example, is enough to ensure that the whales can find dwindling prey efficiently. Until this critical question is answered, it is not possible to claim that the slow down trial is effective at reducing the adverse effects of shipping noise.

6. *Proponent cannot rely on recommendations in Trans Mountain to mitigate Project impacts*

119. In addition to the Regional Initiatives, the Proponent suggests that existing conditions in the Salish Sea will be addressed through recommendations related to the Trans Mountain Expansion Project (“Trans Mountain”). In new written filings, the Proponent refers to the Governor in Council’s recent Order in Council P.C. 2018-820 with respect to the Trans Mountain Expansion Project, and the National Energy Board’s 16 recommendations which the Governor in Council adopted in that document. The Proponent states that these “will be implemented by the Government of Canada”.¹²³ The Proponent also lists the 16 recommendations in its commitments tables under “Current Federal Recommendations and Accommodations with Potential to Reduce Adverse Effects of Marine Shipping in General”.¹²⁴
120. The Conservation Coalition submits that the Review Panel should not rely on the Trans Mountain recommendations to address the impacts of this Project for several reasons, including the following:
- a) the recommendations have no bearing on this Project – for example, Recommendation 5 to “offset” the effects of increased oil tankers associated with Trans Mountain would not require offsetting the effects of this Project;
 - b) most recommendations are for the Governor in Council to investigate or consider actions, as opposed to taking actions;
 - c) the commitments are not time bound – measures need not be implemented by any particular time, nor must they be kept in place for any specified amount of time if implemented; and
 - d) while the Governor in Council states in the Order in Council that it “undertakes” to carry out the recommendations, the explanation for each

¹²³ Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at page 10.

¹²⁴ Document #2001, “From the Vancouver Fraser Port Authority to the Review Panel re: Updated Project Commitments” (July 5, 2019), [here](#) at Appendix B, page 5-6, Table B3.

recommendation in the Explanatory Note then hedges on this undertaking in a manner that indicates that the Governor in Council may not, in fact, carry out each recommendation in full.¹²⁵

VI. The Proponent has failed to propose a follow-up program to track the effects of Project Related Shipping

121. As explained in the Written Submission at paragraphs 196-199, the Proponent has proposed no follow-up program to verify the accuracy of the environmental assessment and determines the effectiveness of mitigation¹²⁶ for the effects of Project Related Shipping or impacts on prey availability for Southern Residents. This prevents the Review Panel from taking it into account in its environmental assessment, contrary to the requirements of s. 19(1)(e) of *CEAA 2012*.
122. As stated above and in the Written Submission, vague commitment to adaptive management does not constitute mitigation,¹²⁷ nor does it constitute or make up for the failure to have a follow up program.

VII. Conservation Coalition's Conclusion

123. It is clear based on the record that the Project is likely to cause significant adverse environmental effects. These include significant adverse effects on the Fraser River estuary and estuary dependent species such as Chinook and Chum salmon. The Project will also have significant adverse effects on the endangered Southern Residents. The significant adverse effects on Southern Residents include: further depleting availability of key prey Chinook salmon, increasing physical and acoustic disturbance in critical habitat, further decreasing Southern Resident foraging time, and increasing risk of ship strike. Significant adverse effects on federally protected endangered species cannot be justified under *CEAA 2012*.

¹²⁵ Canada Gazette, Part I, Volume 153, Number 25, Order in Council P.C. 2019-820 (18 June 2019), <http://www.gazette.gc.ca/rp-pr/p1/2019/2019-06-22/pdf/g1-15325.pdf> PDF pp 21-66, with discussion of the recommendations at PDF pp 53-63.

¹²⁶ *CEAA 2012*, s. 2(1), definition of “follow up program”.

¹²⁷ Document #1605, Written Submissions, CCR Vol. 1, [here](#) at paras 39, 184.

124. It is clear from the record that the adverse effects on Southern Residents cannot be effectively mitigated. Based on the mitigation options proposed during the review the Review Panel cannot, as required by s. 79 of *SARA*, ensure that all adverse effects on Southern Residents will be avoided or lessened.

All of which is respectfully submitted.

August 26, 2019



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Dyna Tuytel

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