

Tailored Impact Statement Guidelines / draft Joint Guidelines – Federal Authority Comment Table

Response requested by: January 7, 2022

<i>Department/Agency:</i>	Environment and Climate Change Canada		
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Comment ID	Section and PDF page number	Issue (rationale and whether comment is project-specific or general)	Suggested Change (original text with suggested edits in Word track changes)	Type of Comment (critical or recommended)
SCOPE OF THE ASSESSMENT				
1	Proposed geographic extent of marine shipping p.21	Project-specific	<p>ECCC recommends the geographic extent of marine shipping include:</p> <ul style="list-style-type: none"> • The spatial extent of the Fraser River to include potential effects of dredging and short-sea shipping activities due to potential pollutant impacts (release of persistent organic pollutants and other contaminants of concern from sediment and pollutants from shipping including scrubber washwater) on Fraser Basin Chinook salmon, which is the primary prey of critically endangered Southern Resident Killer Whale (SRKW). • Include all of SRKW critical habitat including along the marine shipping route to/from the terminal (this includes areas outside of the 12 nautical mile limit of the territorial sea) • Include areas in the scope of the assessment within the Salish Sea that are frequented by SRKW and/or where SRKW forage that may be impacted by components of the Project (e.g., 	Recommended

			marine transportation, dredging and operational activities). In general the area of interest identified in the SRKW management measures as the 400m approach distance zone.	
SECTION 8.0: ASSESSMENT METHODOLOGY				
2	Section 8.8: <i>Cumulative Effects Assessment</i> 8.8, p.64	<p>Project-specific</p> <p>The cumulative effects assessment methodology describes a list of projects to include in the assessment. ECCC would like to point to the following marine shipping related resources that may aid in assessing cumulative effects of marine vessels:</p> <ol style="list-style-type: none"> 1. ECCC's Marine Emissions Inventory Tool (MEIT); and 2. ECCC's Interactive Map of Cumulative Marine Vessel Emissions in the Salish Sea. <p>ECCC highly encourages Proponents of marine shipping related projects to use these two resources in their cumulative effects assessments.</p>	<p>ECCC recommends the following additional bullets:</p> <p>Specific to marine shipping projects on the west coast, Proponents are encouraged to utilize the following tools in their cumulative effects assessment:</p> <ul style="list-style-type: none"> • ECCC's Marine Emissions Inventory Tool (MEIT) The MEIT provides an inventory of shipping activity, energy use, and air pollutants and greenhouse gases emissions from marine vessels. The MEIT displays marine emissions from commercial vessels operating in Canadian waters. The tool allows users the opportunity to: view marine emissions on a map, filter emissions by year, region or other basic conditions, and generate emissions reports. More complex data requests can be directed to ECCC. • ECCC's Interactive Map of Cumulative Marine Vessel Emissions in the Salish Sea This map geographically displays information on existing and proposed marine activity and associated emissions in the Salish Sea. The interactive map pulls data from information gathered from environmental assessments in the Salish Sea (the proposed projects) as well as data compiled from ECCC's Marine Emissions Inventory Tool (MEIT) (the existing projects). The interactive map enables the user to display, filter, and compare marine projects and terminal information to gauge how proposed increases to marine shipping compare to the existing marine activity in the Salish Sea. 	Recommended

SECTION 9.0: BIOPHYSICAL ENVIRONMENT				
3	Section 9.7: <i>Marine Water, Sediment and Coastal Geomorphology</i> 9.7, p.86	Project-specific The requirements to assess the potential for the Project to affect groundwater sources in the local area (i.e., from saltwater intrusion from the Project) is listed in section 9.7. However, there is no requirement to account for impacts to marine water, and ultimately impacts to marine fish and habitat, should contaminated groundwater be connected and flow to the marine environment.	ECCC recommends that the requirements in section 9.7 be expanded to include the potential for groundwater affected by the Project to be connected to surface water (both freshwater and marine water) in the local area, and the potential impacts that may have on marine fish and habitat.	Recommended
4	9.7, p.82-87	Project-specific ECCC recommends that any rock and fill materials placed on site should be evaluated for potential impacts to marine water, sediments and other elements or Valued Components (VCs). This includes contaminant leaching from the fill (e.g., ARD/ML) and/or possible impacts from the placing of the fill (e.g., increased TSS). This includes, but is not limited to, the risk from ARD/ML. The exposure of rock to air and water through Project activities may result in the oxidation of sulphide minerals, the release of acidic drainage into the environment, or the leaching of metals or other contaminants into the environment.	ECCC recommends that section 9.7.4 include a requirement to describe the potential for impacts from placing rock and fill materials, including contaminant leaching. This includes, but is not limited to ARD/ML from rock and fill materials placed on site, such as rock infill materials utilized during Project construction and how these may impact marine water and sediments.	Recommended

5	Section 9.10: <i>Marine Mammals</i> 9.10.4, p.96	Project-specific	ECCC recommends that all pollutants potentially impacting water quality (including those from air emissions from marine, road, and rail transport, dredging, and scrubbers) are included in the assessment of potential effects.	Recommended
6	9.10.5, p.97	Project-specific	ECCC recommends that measures to mitigate effects of pollutants from marine or short-sea shipping and potential releases of pollutants from sediments are included (e.g., during dredging and operational activities). ECCC also recommends that mitigation measures take into account the Environmental Quality Guidelines developed for the protection of SRKW and Chinook salmon.	Recommended
7	Section 9.11: <i>Marine Vegetation and Wetlands</i> 9.11.1, p.99	General ECCC recommends the addition of the Operational Framework for the Use of Conservation Allowances in the list of relevant federal and provincial statutes, policies and frameworks relevant to marine vegetation and wetlands.	ECCC recommends the addition of the following bullet to section 9.11.1: Federal and provincial statutes, policies and frameworks that may be relevant to marine vegetation and wetlands include: <ul style="list-style-type: none"> • Species at Risk Act; • Fisheries Act; • Canadian Environmental Protection Act, 1999; • Federal Policy on Wetland Conservation; • Operational Framework for the Use of Conservation Allowances; and • Ramsar Convention. 	Recommended
8	9.11.3, p.100	Project-specific ECCC suggests revisions to the recommended period of baseline study, allowing for the use of existing data to be supplemented with new data collections, to assess biofilm quantity and quality.	ECCC recommends the following revision to section 9.11.3 pertaining to biofilm quantity and quality: <ul style="list-style-type: none"> • provide information on biofilm quantity and quality (e.g. fatty acid content and diatom community composition) between the causeways and on Roberts Bank (control). Sampling should be conducted monthly for a sufficient period of time so as to capture inter-annual, inter-seasonal and spatial variability, 	Critical

		ECCC recommends new data is collected in order to capture inter-annual and inter-seasonal variability. Data should also be collected to inform spatial variability in biofilm quantity and quality as potential changes to the upper intertidal area could potentially occur as a result of the Project (in the inter-causeway area).	with an increase in monitoring frequency during the April/May shorebird migration period. At least three years of baseline data is required; which can include a minimum of two years of new data collection to fill gaps that can be supplemented with existing data, if available for the study area ;	
9	9.11.3, p.100	Project-specific ECCC recommends several revisions to section 9.11.3 for clarification of the requirements for describing the existing conditions for wetlands.	ECCC recommends the following revision to the section 9.11.3 pertaining to wetlands: Regarding wetlands, the Impact Statement must: <ul style="list-style-type: none"> • quantify, describe and map wetlands (marshes, eelgrass beds, mudflats and intertidal wetlands, etc.) within the local and regional assessment area potentially affected by the project, in the context of: <ul style="list-style-type: none"> ○ wetland habitat that provides important functions for migratory birds and species at risk; • take into consideration that the wetlands in the region are within a geographic area of Canada where wetland loss and degradation has reached critical levels, and are considered ecologically or socially or economically important to the region • identify and map wetlands on federal lands potentially affected by the project and within the scope of federal permits, authorizations, or other approvals. 	Recommended
10	9.11.5, p.102-103	General ECCC recommends the requirement for a wetland function compensation plan be moved from PDF p. 103 under	ECCC recommends the following sub-bullet in section 9.11.5 be moved from the requirements to describe reclamation plans to the requirements concerning wetlands: <ul style="list-style-type: none"> ○ a wetland function compensation plan for impacts of the project on wetlands. 	Recommended

		reclamation, to PDF p. 102 under the description of wetlands.		
11	Section 9.12: <i>Birds and their Habitat</i> 9.12, p.103	General ECCC recommends section 9.12 not include the assessment of bird species at risk, since those are also covered in section 9.13. Alternatively, if species at risk are to be assessed in both sections of the guidelines, then ECCC recommends that species at risk definitions and protocols be similarly defined in detail in section 9.12.	ECCC recommends the following revision to section 9.12: Section 9.12 states that the proponent must, at a minimum, assess the potential effects of the project on the following sub-components and species: <ul style="list-style-type: none"> • waterfowl; • aquatic birds and seabirds (other than waterfowl); • land birds, including songbirds; • birds of prey; • shorebirds; and; • 	Recommended
12	9.12.3, p.103-104	Project-specific ECCC recommends specifying the geographic scope of where bird-vehicle collisions should be assessed. The assessment should extend to include the major roadways where increases of Project-related vehicle traffic are anticipated to affect migratory birds, wildlife, and species at risk (notably barn owl). This would be consistent with the assessment of marine shipping (i.e., incidental activities), as well as other VCs where effects extend to areas outside the proponent's jurisdiction (e.g., air quality).	ECCC recommends the following revision to section 9.12.3: <ul style="list-style-type: none"> • provide estimates of existing bird-vehicle collisions and identify existing areas along roads with high collision rates within the regional assessment area, and if required, the cumulative effects assessment area 	Recommended
13	9.12.3, p.105	General	ECCC recommends the following requirements be included for the general assessment of birds, not specifically avian species at risk in section 9.12.3:	Recommended

		ECCC notes that information requirements described in section 9.12.3 for avian species at risk, are general requirements for the assessment of birds. These requirements do not appear to be listed elsewhere in section 9.12.3.	<p>For avian species at risk, in addition to the requirements found in section 9.13.3, the Impact Statement must:</p> <ul style="list-style-type: none"> • locate on an appropriately scaled map the potential habitats, survey locations, records of the species, residences and critical habitat, except where locations and record are considered sensitive information; <ul style="list-style-type: none"> ○ identify any sites that are likely to be sensitive locations and habitat for birds or environmentally significant areas. These include National Parks, Areas of Natural or Scientific Interest, Migratory Bird Sanctuaries, Important Bird Areas, RAMSAR Sites or other priority areas or sanctuaries for birds, National Wildlife Areas or World Biosphere Reserves, offshore Marine Protected Areas and Ecologically and Biologically Significant Marine Areas; and ○ provide a list of Wildlife Habitat Areas, Wildlife Management Areas, Bird Conservation Regions, or sanctuaries and the extent to which these overlap with the wildlife VC spatial boundaries. 	
14	9.12.4, p.106	<p>Project-specific</p> <p>ECCC recommends expanding on the requirement to include changes to water quality that may result from the disruption of sediment. The resuspension of sediment has the potential to result in increased exposure to contaminants by birds and other wildlife.</p>	<p>ECCC recommends the following revisions to section 9.12.4:</p> <ul style="list-style-type: none"> • describe the interaction between the project and birds and their habitat, for all phases, including from: <ul style="list-style-type: none"> ○ deposit of harmful substances in waters that are frequented by birds and changes to water quality, including from the resuspension of contaminants to the water column through the disturbance of sediment by dredging, drilling, and other activities; 	Recommended
15	9.12.4, p.106-107	<p>Project-specific</p> <p>ECCC recommends expanding on the requirements for assessing the</p>	<p>ECCC recommends the following revisions to section 9.12.4:</p> <ul style="list-style-type: none"> • describe the potential effects of the project on birds, their nest and eggs, including, but not limited to, from: 	Recommended

		potential effects to birds, to include lighting, collisions, accidents and malfunctions; and to expand upon the requirements for the assessment of contaminants and bioaccumulation of contaminants in birds.	<ul style="list-style-type: none"> ○ increased disturbance (e.g. sound, artificial light, presence of workers) considering critical periods for the birds, including but not limited to breeding, migration and overwintering periods <ul style="list-style-type: none"> - describe the activities likely to result in disturbance, injury or take of birds (migratory and non-migratory), their nests and eggs, including, but not limited to, vegetation clearing, increased noise from industrial machinery, lighting, collisions with infrastructure, accidents and malfunctions, and whether or not those activities would be permanent or non-permanent in the environment; ○ contaminants of concern, including but not limited to, metals and organic compounds, including hydrocarbons, polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), dioxins, furans and pesticides; and their ability to bioaccumulate in birds, including species that may be consumed by Indigenous peoples; 	
16	Section 9.13: <i>Species at Risk</i> 9.13.1, p.108	General ECCC recommends the addition of the Migratory Birds Convention Act and regulations and the B.C. Conservation Framework to the list of federal and provincial statues, policies and frameworks that may be relevant to species at risk.	ECCC recommends the addition of the following to section 9.13.1: <ul style="list-style-type: none"> • B.C. Wildlife Act and General Regulation • Species at Risk Act • Migratory Birds Convention Act and regulations • B.C. Conservation Framework 	Recommended
17	9.13.3, p.109	General ECCC recommends revisions to section 9.13.3 to reflect that a minimum of two years be applied to baseline studies conducted for species at risk.	ECCC recommends the following revision to section 9.13.3: <ul style="list-style-type: none"> • describe the source of the species at risk data, including survey design and data collection methods, sampling protocols and data handling, and provide a rationale for any modelling approaches chosen. The baseline data must be based on at 	Recommended

			least two years of field data, supplemented with existing sources where possible, as outlined in Appendix 6.	
SECTION 15: ACCIDENTS AND MALFUNCTIONS				
18	Section 15.1: <i>Risk Assessment</i> 15.1, p.192	General ECCC recommends the following revision for clarity as it is currently unclear that the assessment of accidents and malfunctions in section 15 is applicable to the marine shipping assessment in section 16.	ECCC recommends the following revision to section 15.1: <ul style="list-style-type: none"> identify hazards for each project phase and component that could lead to accidents and malfunctions related to the project, describe the circumstances under which the accident and malfunction could occur and provide an explanation of how these events were identified 	Recommended
19	Section 15.3: <i>Emergency Management</i> 15.3, p.194 16.5, p.200	General ECCC recommends Section 15 and 16 include requirements to describe applicable legislation, policies, and standards relevant to the preparation for, and response to, accidents and malfunctions.	ECCC recommends that reference to applicable legislation, policies and standards relevant to the preparation for, and response to, accidents and malfunctions, is included in section 15.3 and 16.5. ECCC also recommends that section 15.3 include requirements to develop notification procedures for federal and provincial agencies as part of emergency planning and management.	Recommended
SECTION 16: MARINE SHIPPING				
20	Section 16.5: <i>Accidents and Malfunctions</i> 16.5, p.200 15.1, p.192	Project-specific Environmental sensitivity mapping, as outlined in section 16.5 for incidental activities, is also a relevant requirement for accidents and malfunctions directly linked to project activities. Environmental sensitivity mapping is also relevant for the fish, bird, and species at risk sections of the guidelines. Environmental sensitivity mapping will provide more	ECCC recommends the following revisions to section 16.5, and also recommends this bullet be added to section 15.1: <ul style="list-style-type: none"> provide environmental sensitivity mapping that identifies site-specific conditions and sensitive receptors adjacent to project activities, including shores, streams, estuaries and wetlands frequented by fish and / or migratory birds, including critical habitat for species at risk, and likely routes to them. Shoreline classification surveys and mapping must be conducted along major waterways where large spills are possible. The characterization criteria established by Environment and Climate Change Canada contained in <i>A Field Guide to Oil Spill</i> 	Recommended

		information to decision makers with respect to emergency preparedness.	<i>Response on Marine Shorelines</i> constitutes a useful guide in this regard.	
21	16.5, p.200	General	<p>ECCC recommends the following revision to section 16.5:</p> <ul style="list-style-type: none"> describe and evaluate the potential effects on the environment of accidents and malfunctions arising from these three physical activities including geographic, temporal/seasonal, and species-specific sensitivities using supporting information from section 9.12, including impacts on social, economic or cultural elements of the environment and human health of people in close proximity of spilled contaminants; 	Recommended
SECTION 17: ROAD AND RAIL ACTIVITIES				
22	Section 17.1: <i>Road Transportation</i> 17.1.2, p.202	<p>General</p> <p>The spatial boundaries of effects resulting from accidents and malfunctions tend to be larger than the spatial boundaries of effects resulting from project activities. The distinction between effects from project activities and from accidents and malfunctions was considered in section 15 (accidents and malfunctions) and 16 (marine shipping). For consistency, ECCC recommends this distinction also be considered with respect to the Project's road activities.</p>	<p>ECCC recommends the following revision to section 17.1.2:</p> <p>The Impact Statement must describe the spatial boundaries of the various effects resulting from road traffic, including accidents and malfunctions, based on the approach described in section 8.3.1.</p>	Recommended
23	17.1.4, p.203	<p>Project-specific</p> <p>The draft Joint Guidelines do not include a requirement for the Proponent to provide information</p>	<p>ECCC recommends the following addition to section 17.1.4:</p> <p>The Impact Statement must describe the potential for accidents and malfunctions due to road transportation, <i>within the</i></p>	Critical

		with respect to emergency management for road incidental activities.	<p><i>geographic extent to be set by the Agency and EAO in the final Joint Guidelines.</i></p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> • describe and evaluate the potential effects on the environment of accidents and malfunctions arising from road activities incidental to the proposed project, including impacts on social, economic or cultural elements of the environment and human health of people in close proximity of spilled contaminants; and • describe the existing emergency response mechanisms and arrangements with response organizations within the spatial extent of these activities, and describe what role they would play in the event of a spill, collision, rollover, container loss or other accident or malfunction at or adjacent to the road infrastructure, including any emergency spill response training and exercise regimes. 	
24	Section 17.2: <i>Rail Transportation</i> 17.2.2, p.205	<p>General</p> <p>The spatial boundaries of effects resulting from accidents and malfunctions tend to be larger than those resulting from project activities. The distinction between effects from project activities and from accidents and malfunctions was considered in section 15 (accidents and malfunctions) and 16 (marine shipping). For consistency, ECCC recommends this distinction also be considered with respect to the Project's rail activities.</p>	<p>ECCC recommends the following revision to section 17.2.2:</p> <p>The Impact Statement must describe the spatial boundaries of the various effects resulting from rail transportation, including accidents and malfunctions, based on the approach described in section 8.3.1 and in consideration of the geographic extent of rail transportation to be set by the Agency and EAO.</p>	Recommended
25	17.2.4, p.205	Project-specific	ECCC recommends the following addition to section 17.2.4:	Critical

		<p>The draft Joint Guidelines do not include a requirement for the Proponent to provide information with respect to emergency management for rail incidental activities.</p>	<p>The Impact Statement must describe the potential for accidents and malfunctions due to rail transportation incidental to the project within the geographic extent to be set by the Agency and EAO.</p> <p>The Impact Statement must:</p> <ul style="list-style-type: none"> describe and evaluate the potential effects on the environment of accidents and malfunctions arising from rail activities incidental to the proposed project, including impacts on social, economic or cultural elements of the environment and human health of people in close proximity of spilled contaminants; and describe the existing emergency response mechanisms and arrangements with response organizations within the spatial extent of these activities, and describe what role it would play in the event of a spill, derailment, collision, container loss or other accident or malfunction at or adjacent to rail infrastructures, including any emergency spill response training and exercise regimes. 	
APPENDIX 1: VALUED COMPONENTS, ELEMENTS AND SPATIAL BOUNDARIES PROPOSED BY THE PROPONENT				
26	Appendix 1: Valued Components, Elements and Spatial Boundaries Proposed by the Proponent p.213	<p>Project-specific</p> <p>ECCC submitted comments to IAAC in July 2021 on the Project’s draft Tailored Impact Statement Guidelines template that included comments on Terrestrial Wildlife and their Habitat.</p> <p>The draft Joint Guidelines have not included Terrestrial Wildlife and their Habitat, nor Species at Risk as VCs in Appendix 1.</p>	<p>ECCC recommends the inclusion of Wildlife and Wildlife Habitat and Species at Risk as VCs for the Project. The draft Joint Guidelines refer to Wildlife, and Species at Risk VCs or sensitive receptors in several locations, for example:</p> <ul style="list-style-type: none"> Section 9.12 (Birds and their Habitat), p. 105: <i>“The Impact Statement must...provide a list of Wildlife Habitat Areas, Wildlife Management Areas, Bird Conservation Regions, or sanctuaries and the extent to which these overlap with the wildlife VC spatial boundaries”</i> 	Critical

		Further, there is no section on Terrestrial Wildlife and their Habitat in section 9 of the draft Joint Guidelines.		
27	Appendix 1: Valued Components, Elements and Spatial Boundaries Proposed by the Proponent Table A1.1 and Table A1.5 p.213 and p.227	Project-specific It is unclear how the requirements in section 9.11 Marine Vegetation and Wetlands will be assessed as there is no corresponding VC listed in Appendix 1, Table A1.1. However, Appendix 1, Table A1.5 presents marine vegetation and invertebrates as a subcomponent under the Marine Fish and Fish Habitat VC.	ECCC recommends that Marine Vegetation and Wetlands be assessed as a VC with appropriately designed boundaries presented in Table A1.5. ECCC does not recommend marine vegetation and wetlands be assessed as a subcomponent to marine fish and fish habitat or combined with the assessment of invertebrates.	Critical
28	Appendix 1: Valued Components, Elements and Spatial Boundaries Proposed by the Proponent Table A1.1 and Table A1.5 p.213 and p.227	Project-specific	ECCC recommends that the local and regional assessment boundaries for the Birds VC extend outward to include applicable portions of the Wildlife Management Areas. The RAA should also be large enough to provide a regional context for the assessment of birds and the variety of habitats they use within the Fraser River estuary, as well as terrestrial wetlands and habitats within the Lower Mainland. The cumulative effects assessment boundary should also be expanded to encompass an area large enough to assess the interaction of Project-related effects with those of other projects and activities.	Recommended
29	Appendix 1: Valued Components, Elements and Spatial	Project-specific The proposed 10 km Local Assessment Area (LAA) for air quality is not	ECCC recommends the following revision to the LAA for air quality in Table A1.4:	Critical

	<p>Boundaries Proposed by the Proponent</p> <p>Table A1. 4, p.223</p>	<p>sufficient to adequately determine effects to air quality from the Project footprint, which includes ships at berth.</p> <p>ECCC's recommendation on the RBT2 Project was that a larger modelling domain coupled with inclusion of regional emission sources would allow for a comprehensive assessment of that Project's effects on air quality. Since DP4's proposed LAA is much smaller than RBT2's, ECCC has the same concerns and recommends the LAA be larger.</p> <p>ECCC recommends following the BC Modelling Guidelines, specifically:</p> <ul style="list-style-type: none"> • Consider sensitive receptor areas (e.g., a hospital, recreation area or neighbourhood) or areas of interest such as nearby residents/communities where interest in the predictions may be high. • Consider other emission sources that need to be included in the modelling such as sources that contribute to baseline, whether they currently exist or could be built in the future. 	<p>Within at least 30 km (or greater if provincial modelling guidelines on domain size are to be met) of the project footprint and within at least 10 km of the shipping route utilized by the project, extending to the 12 nm limit of Canada's territorial sea.</p>	
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		<ul style="list-style-type: none"> • CALPUFF domain should be big enough to capture potential recirculation of pollutants. • The model domain size is typically chosen to include 10% of the relevant air quality objectives or standards. The inclusion of regional sources in the model domain allow for the potential interactions of those sources with those of the Project. It is common practice to model regional sources in a sufficiently large modelling domain to determine how the proposed Project could interact and contribute to regional air quality. <p>A 10x10km domain does not satisfy the three points above due to the highly populated region and numerous regional sources that will interact with the project.</p> <p>A rationale for the domain size choice should be included in the Final Guidelines.</p>		
30	Appendix 1: Valued Components, Elements and Spatial	<p>General</p> <p>Table A1.2 and A1.4 omits other sources of underwater noise including</p>	<p>ECCC recommends the addition of the following bullet for Underwater Noise in Table A1.2 and A1.4:</p> <ul style="list-style-type: none"> • Pile Driving 	Recommended

	<p>Boundaries Proposed by the Proponent</p> <p>Table A1.2 and A1.4 p.219 and p.223</p>	<p>dredging, transport (pipeline, barge) and disposal at sea activities.</p>	<ul style="list-style-type: none"> • Marine Transportation • Dredging, transport, placement and/or disposal of sediment 	
31	<p>Appendix 1: Valued Components, Elements and Spatial Boundaries Proposed by the Proponent</p> <p>Table A1.4 and A1.5 p.224 and p.227</p>	<p>Project-specific</p> <p>ECCC notes that the Regional Assessment Area (RAA) for marine fish, salmon, demersal fish (e.g., sturgeon) and forage fish (e.g., sand lance, surf smelt, herring, eulachon), marine fish and habitat VC subcomponents, includes the Fraser River estuary (from Boundary Bay to Sturgeon Bank and from the high-water mark seaward, plus the Fraser River North and Main Arms and main stem to New Westminster) as described in Table A1.5. ECCC also notes that marine water and sediment quality is identified as an element to support the marine fish and habitat VC in Table A1.4, however, it does not appear that the LAA or RAA for the marine water and sediment quality element includes the Fraser River estuary.</p>	<p>ECCC recommends:</p> <ul style="list-style-type: none"> • Figures be provided to depict the RAA and LAA for marine water and sediment quality elements and the marine fish and habitat VC; and • The spatial scope of the marine water and sediment quality element (Table A1.4) should include all areas assessed by the marine fish and habitat VC (Table A1.5) and vice versa. 	Critical
32	<p>Appendix 1: Valued Components, Elements and Spatial Boundaries Proposed by the Proponent</p>	<p>Project-specific</p> <p>ECCC notes that marine water and sediment quality are identified as an element. The marine water and sediment quality element is linked to</p>	<p>ECCC recommends:</p> <ul style="list-style-type: none"> • Figures be provided to depict all RAAs and LAAs for elements and VCs; and • The spatial scope of assessment for the elements should be at least as large as the spatial scope of assessment for VCs. 	Recommended

	Table A1.4 and A1.5 p.223 and p.227	<p>the following VCs: marine fish and habitat, marine mammals, birds, marine use, and human health.</p> <p>However, the LAA and RAA for marine water and sediment quality does not always match the LAA and RAA of the linked VC and it is not clear how the assessment boundaries compare between the VCs and elements.</p>		
APPENDIX 6: ADDITIONAL GUIDANCE				
33	Appendix 6: Additional Guidance p.247	<p>General</p> <p>Revisions proposed for clarification and to include migratory birds, as necessary.</p>	<p>ECCC recommends the following revisions to Appendix 6:</p> <ul style="list-style-type: none"> describe the baseline conditions of the species at risk, critical habitat, migratory birds, and wetland functions potentially impacted by the project; identify the location and proposed timing of implementation of compensation projects. Include a plan to minimize the delay between the time the adverse effects occur and the time the compensation project is fully functioning and include how delays will be addressed as part of compensation planning; identify, describe, and justify in detail non-habitat related compensation measures (e.g. predator control); describe how the compensatory measures counterbalance residual effects; describe how the proposed complementary measures align with published provincial and federal recovery management or action plans and strategies for species at risk, migratory birds, fish and fish habitat and wetlands; describe the habitat functions gained at the compensation site(s) in consideration of the principles of both equivalency and additionality; 	Recommended

			<ul style="list-style-type: none"> identify and describe the criteria that would be used to determine success of the compensatory measures. Provide evidence that the loss or alteration of habitat functions can be replaced or addressed by the proposed offset activities; 	
34	Appendix 6: Additional Guidance p.248	<p>General</p> <p>Revision proposed for clarity.</p>	<p>ECCC recommends the following revision in Appendix 6:</p> <p>With respect to wetlands, compensation plans should:</p> <ul style="list-style-type: none"> clearly indicate the location and total area of each type of wetland, as well as their respective locations, for which there are residual effects; 	Recommended
35	Appendix 6: Additional Guidance p.248	<p>Project-specific</p> <p>ECCC notes that a minimum ratio of 2:1 is not considered adequate to address the effects of wetland loss in the region. ECCC recommends that a ratio of 4:1 be implemented to address time lags, technical feasibility, and historic loss of wetlands in the region, as well as the importance and sensitivity of the wetland types located at Roberts Bank and the Fraser River Estuary.</p>	<p>ECCC requests the following revision to Appendix 6:</p> <ul style="list-style-type: none"> use a minimum ratio of 4:1, or a ratio supported by the most up-to-date guidance from ECCC, for the area of wetlands to be restored or created, versus the original area of wetlands affected. A higher compensation ratio is recommended for wetland types where compensation is more difficult or where there is uncertainty about the success of the compensation measures. The choice of ratio for wetland compensation needs to be justified; 	Critical