

CEA Agency Comments
Cumulative Environmental Effects Assessment
South Fraser Perimeter Road

The Canadian Environmental Assessment Agency (the Agency) provided advice to the Ministry of Transportation regarding the methodology, scope and projects to include in the cumulative environmental effects assessment for the South Fraser Perimeter Road during the preparation of their Application for an Environmental Assessment Certificate under the BC Environmental Assessment Act and upon subsequent review of the Application. Upon reviewing the July 6, 2007 draft of the revised cumulative environmental effects assessment, the Agency offers the following general comments:

Throughout the cumulative environmental effects assessment MOT discusses the proportion of SFPR's contribution to cumulative effects as being proportionally small, thus, not adding to cumulative effects. The SFPR's residual effects contribute to cumulative effects, no matter what SFPR's proportion of the total effects from other past, present and future projects may be. Whether these small contributions are significant depends on the situation for each residual effect.

The Agency's specific comments follow below.

10.3.3 Scoping: Second sentence is a bit misleading. Scoping is used to identify the spatial and temporal overlap of residual effects from this project, with other past, present and future projects. This is to ensure that the cumulative effects assessment identifies appropriate issues and assesses whether these may be additive, thereby leading to a potentially significant adverse environmental effect.

Table 10.3-1: Are there no emissions of CAC and GHG from transportation infrastructure? One activity in Burns Bog that has not been identified is reclamation of the bog, as a viable bog. Isn't this a present activity? Activity location: why is 500m the extent of municipal development and transportation infrastructure?

Table 10.3-2: Habitat loss would have occurred with all listed projects/activities, not just the Golden Ears Bridge. Isn't the Fraser River entirely within Canada; why refer to this as 'Canadian'?

Page 4, first paragraph: A cumulative environmental effects assessment is not done to determine what proportion of environmental impacts is attributable to the project. A cumulative environmental effects assessment is done to determine what the total impacts are once the project's residual effects are added in (i.e. 'the straw that broke the camel's back'). Third paragraph, first sentence: same comment ... 'very small component of the cumulative impact in the context of such significant changes'. This statement implies that the cumulative impacts

are already significant. Is this what was meant? Why was 30, the number of years selected?

Page 5, Municipal Development: cumulative environmental effects are not restricted to the 'study area', which is 500m either side of SFPR. In addition, the exclusion of habitat loss due to port activities (Fraser River foreshore) is not well explained. Is this because the type of habitat is different, the species present are different, or some other reason? It seems reasonable to assume that habitat loss from foreshore activity could act cumulatively with SFPR if the same species are involved.

Page 5, Transportation Infrastructure: why is habitat loss/fragmentation not included?

Page 6, Highway 91, Border Infrastructure Projects, Pitt River Bridge, Port Mann Highway, Golden Ears Bridge, BCTC transmission line upgrade and Deltaport Third Berth: why is habitat loss/fragmentation not included for all of these projects?

Page 8, paragraph 2: The last sentence beginning 'For this CEA this includes ... has part missing.

Page 8, Potential expansion of rail corridors: why are these judged not to result in the potential for cumulative effects? It seems that these would exacerbate habitat fragmentation, and, depending on their location, could affect species at risk that are also affected by SFPR.

Page 8, Future residential/commercial and agricultural development: These types of projects/activities would cause habitat loss/fragmentation, reduce or cut off migration corridors and possibly affect species at risk. These would interact with SFPR if they affect the same type of habitat and species.

Page 8, last paragraph: The OCP does not plan for 'no residual effects'. This analysis is flawed as SFPR would be additive to the effects of residential/commercial and agricultural development. The case has not been made that there are no residual effects from such development; thus, the effects may be worse with SFPR, not the 'same with or without the SFPR'.

Page 13, Socio-Community/Socio-economic: The Canadian Environmental Assessment Act does not require an evaluation of direct effects on socio-economic values. The explanation offered for not including 'indirect' effects should include all potential residual effects that could impact these values so the case for not including an evaluation of socio-economic values under CEAA is clearly laid out.

Table 10.3-3: Transportation Infrastructure (hwys/local rds) will likely have impacts on

riparian forests, upland forests, wetlands, habitat fragmentation, wildlife pattern changes and wildlife mortality (possibly barn owl, other small mammals).

Page 16, Riparian Forests: There are more listed wildlife species present than just Pacific water shrew. Last paragraph: MOT has used its professional judgment where ‘likelihood, extent and significance of the potential impact is unknown’ to conclude the impact of SFPR ‘is likely to be minor’. Can MOT be clearer in providing reasons why this is minor, such as there is no riparian forest remaining due to intensive development of transportation?

Page 17, Wetlands: Since there is a complete section on Burns Bog, it is confusing to have the discussion of wetlands mixed with a discussion of Burns Bog. The last paragraph beginning with “The relatively greater degree of impacts on wetlands from other projects ... points to a lack of cumulative effects” because MOT will avoid or mitigate impacts on wetlands is not substantiated in the discussion as there is no mention of what MOT will do. If SFPR will affect wetlands, then it is unlikely that there will be no residual effects from SFPR on wetlands. Mitigation can minimize impacts but cannot reduce impacts to zero. Since MOT has included Burns Bog in this discussion, there is no evidence in the discussion that impacts on Burns Bog have been reduced to zero.

Page 19, Burns Bog: The mitigation by specialized design and construction has been discussed visually in meetings; but, no plans have been provided that federal agencies can review and comment on, or agree to. The proposal is not a proven technology and only conceptual at best.

Page 19, second paragraph: It does not matter that the area of impact (north and west fringe of Burns Bog) is small relative to the area of Burns Bog; this area is critical to maintaining the hydrological conditions in the bog. Thus, this area is of primary concern as impacts on this area have the potential to eventually have far greater impacts on a much larger portion of the Bog habitat.

Page 19, Burns Bog, last paragraph: MOT is again assuming that cumulative effects of a project relate to the proportion of impacts that SFPR will have relative to other past projects. It does not matter how small a contribution SFPR may have; if these amplify or provide the ‘last straw’, then cumulative impacts of SFPR may not be of low significance as MOT has concluded. Furthermore, discussion to date has focused on the seriousness of both direct and cumulative impacts on Burns Bog.

Page 19, Indirect Habitat Loss Impacts: Sentence beginning, “Raptors also use cultivated fields, ...” concludes that raptors are not affected by noise disturbance, therefore there are no residual effects on raptors. However, if the cultivated fields are affected in a way that affects prey species, then raptors (and other predators) would be affected by reduced accessibility of prey species.

Page 20, first sentence: Again, it is not the proportion of SFPR's contribution to cumulative effects that matters; it is the total of all past, present and future projects.

Page 20, paragraph three: While the nature of other sources of noise may be masked (e.g. shrill noise covered by hissing noise of highway), it is a stretch to conclude that other noise sources "reduce the additional sensory impacts from the SFPR".
Final sentence: Although the magnitude of impacts may not be entirely known, the direction of impact (increase/decrease), ecological context, and permanence (temporary, permanent) can be inferred.

10.3.4.2 Habitat fragmentation: Habitat fragmentation was a big concern for Pacific water shrew in the review of the Golden Ears Bridge; this species should be included in the discussion here.

10.3.4.3 Wildlife Pattern Changes: What are "cosmopolitan species"? Last paragraph: There are other roads and infrastructure that impact wildlife patterns besides the major highways. Last sentence: Again, it is not the proportion of SFPR's contribution to cumulative effects that matters; it is the total of all past, present and future projects.

10.3.4.4 Wildlife Mortality from Collisions: The conclusion of low to moderate impacts of residual effects is not an indication of the level of cumulative effects. What is the cumulative effect?

10.3.4.5 Aquatic Impacts, last sentence: As there is an increase in impervious surface throughout the entire alignment by 78ha, this will lead to cumulative effects of an additional 1% in impervious surfaces. This is a small increase, but not zero.

10.3.4.6 Air Quality: It has been difficult to assess SFPR air quality without looking at the Gateway Program, as noted in meetings. However, the discussion in this section should focus on SFPR, to the extent possible, and avoid discussing Gateway which is not the project being assessed. GHG: The seven bullets on the bottom of page 26 could be used to draw a conclusion about SFPR's contribution (or lack of) to GHG. Particulate matter in Burns Bog: The first paragraph does not address the concerns raised at several meetings by the Scientific Advisory Panel regarding the serious issue of airborne mineral particulates from SFPR and the potential for irreversible impacts on Burns Bog. According to discussions at these meetings, Highway 91 has already had an impact, therefore the conclusion that SFPR has 'no potential for cumulative effects' requires further consideration. The second paragraph notes that 0.03 kg/ha will be added from SFPR which contradicts the statement of no cumulative effects. Again, it is not the proportion of SFPR's contribution to cumulative effects that matters; it is the total of all past, present and future projects, represented by ambient background.

10.3.4.7 Change in Noise Levels: Why is there no information on ambient noise from existing railway, residential and port activities? The discussion of sites 21 and 22 is confusing. How does the addition of 50dBA at both sites lead to only 0.3dBA increase at site 21 and a 4dBA increase at site 22? How can the interaction between the Port Mann Highway 1 expansion and SFPR not be cumulative when noise walls are only likely to be effective in reducing noise effects at ground level; what about the noise from the existing Port Mann bridge? What about the noise interactions between SFPR and Industrial sites? Although there may be sensitive sites associated with noise, noise from SFPR emanates from the entire alignment. Again, it is not the proportion of SFPR's contribution to cumulative effects that matters; it is the total of all past, present and future projects, represented by ambient background.

10.3.6 Conclusion: Federal agencies will come to their own conclusion on the cumulative environmental effects of the project.