

September 10, 2019

File No. 01-0430-45-2019

Regan Elley
Planner
Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place
Vancouver, BC V6C 3T4

Dear Mr. Elley:

Re: Referral – PER No. 18-163 CP Cascade Capacity Expansion, South Shore Burrard Inlet

Understanding of the Application

- CP Rail is proposing to expand their existing railway infrastructure along the south shore of the Burrard Inlet by constructing an additional track between Reed Point Marina and Suncor's facility.
- All infrastructure will be located within the CP Right-of-Way, grading works, erosion protection, and offsetting will occur on VFPA land.
- The project requires:
 - Clearing of 4525 m² of riparian vegetation for extension of embankment
 - Infilling of 6560 m² of intertidal habitat for embankment extension
 - Infilling of 1229 m² of intertidal habitat for temporary workspace
- DFO determined that the proposed works requires a Fisheries Act Authorization as works will likely result in serious harm to fish. CP has prepared a Habitat Offsetting Plan that aims to enhance and restore nearshore rearing habitat for juvenile salmonids and enhance and restore forage fish spawning habitat. CP has also indicated that they will contribute to forage fish research initiative led by Tsleil-Waututh First Nation.

City of Port Moody Comments

Staff have reviewed the resources provided on VFPA's website and provide the following comments for consideration regarding the above captioned proposed project:

Habitat Offsetting and Restoration

- The proposed works involve the loss of the intertidal habitat in Port Moody and Burnaby to accommodate the rail embankment expansion. Habitat offsetting works for intertidal

habitat are only proposed in Burnaby. The City would expect that offsetting measures incorporate impacts within each municipality that is impacted by the project works.

- The stewardship groups in Port Moody and Burnaby have worked extensively to enhance the marine and aquatic habitat in Port Moody and Indian Arm. The City encourages CP to consult with stewardship groups (e.g. Burrard Inlet Marine Enhancement Society; Pacific Wildlife Foundation) as they can provide site specific knowledge of the area that may benefit the habitat offsetting plan. The City also requests that CP present the project to staff and the City's Environmental Protection Committee.
- The Fish and Fish Habitat Offsetting Plan indicates that previously completed offsetting measures similar to what is proposed for the Cascade Capacity Expansion Project provide confidence that proposed offsetting measures will successfully reach their intended function. Please clarify which projects were referenced for the purpose of this project and how they informed the planning process for the Offsetting Plan.
- The DFO Authorization Application indicates that the material required for temporary works (e.g. roads and unloading pads) will be removed post construction. The City requests that these areas be completely restored and enhanced. The offsetting and planting plans should be updated to include the measures to restore and enhance these areas.
- The Planting Plan lacks species diversity and only includes two species. Staff request a more diverse, mixed species, planting palette that supports the features, functions and conditions of fish habitat as well as other species and reflects best management practices for riparian restoration.
- The DFO Authorization Application indicate that a riparian 'micro-site' that provides important habitat to fish and other wildlife will be destroyed and reinstalled north of the site. Plants from this site will be transplanted into the reinstalled 'micro-site'. The City requests additional details on how the plants will be transplanted and monitored and how the applicant will ensure the ecological function of the re-installed 'micro-site' will be maintained or enhanced.
- The City encourages the VFPA to require a longer post-construction monitoring program along with a detailed monitoring plan to ensure the long-term success of the habitat offsetting works. The City requests copies of monitoring reports for review.

Climate change mitigation and adaptation

- There is no consideration of climate change adaptation measures, and measures to increase the resiliency of the new track to projected impacts of sea level rise. The City is concerned that additional shoreline armoring, resulting in additional habitat loss, may be required to adapt to future sea level rise and other impacts of climate change.
- Apart from a statement that indicates that it may be prudent that sea level rise be considered in habitat offsetting, there is no indication that the impacts of climate change have been incorporated into the Offsetting Plan. The City encourages VFPA and DFO to require that the habitat compensation plan incorporate sea level rise predictions to ensure that off-setting habitats can still function as intended under future climate conditions.

Construction Impact Mitigation

- Given the extensive enhancement works stewardship groups have accomplished over the last 40 years, every effort to salvage fish and all benthic species (including molluscs, crustaceans, and macroalgae) should be implemented. A salvage plan should be prepared to outline methodology and a monitoring protocol. The CEMP should be amended to indicate when and how salvage works will take place.
- Though pile driving is not anticipated, the CEMP indicates that if sound pressure from potential impact pile driving exceeds 30 kPa, work will be halted and additional measures will be established. The City recommends reassessing the 30 kPa threshold, as this threshold is based on industry standards (BC Pile Driving Association) and not scientific literature and best management practices (e.g. US National Marine Fisheries Services; Department of Fisheries, 2018), which suggests alternative thresholds. The City encourages VFPA to request additional monitoring requirements and an updated CEMP should pile driving be required.
- The City requests clarification around invasive species removal and management. The CEMP has indicated that management plans for invasive species will be developed if removal is necessary, while the DFO Authorization indicates that removal of invasive species will be required. Given the City's and Stewardship Community's investment into managing invasive species in the area, additional best management practices should be implemented to avoid spreading invasive species. This should include specific requirements for works around knotweed. The City requests to review any knotweed related management plan or proposed works so that efforts can be coordinated.
- Given that the Burrard Inlet has been designated as an Important Bird Area and that Butler et al., 2015 has found that areas within and adjacent to the project site support high densities of migratory waterfowl, the City encourages VFPA to require the applicant undergo a risk assessment (e.g. types, intensity and frequency of potential disturbances) to avoid disruptive activities at key locations or during key periods for migratory waterfowl (e.g. surf scoters) and other birds that rely on marine and intertidal habitat.

Additional Environmental Considerations

- The Fisheries Act Authorization Application concludes that given the net gain of habitat and the results of previous offsetting project, the applicant is confident that offsetting measures will successfully reach their intended function. However, building and supporting resilient ecosystems to withstand future climatic conditions as well as other pressures requires more than offsetting serious harm and destruction of fish habitat. Ecological investments are required to strengthen environmental conditions, beyond those which solely serve to offset impacts.
- Opportunities exist to include in the project scope of works environmental investments (i.e. ecological enhancements) that extend beyond impact mitigation and offsetting, and work towards contributing to more resilient ecosystems and communities (e.g. addressing fish passage issues on or off sites; managing invasive species, etc.).

Geotechnical

- Geotechnical report (section 7.1.1) - Seismic assessment did not include train surcharge. As the extension is a siding, it is more likely that rail cars will be stationed at

the given location. Consider updating the assessment to include parked rail cars in the seismic evaluation.

- Geotechnical report (section 6.3) - Rip rap is recommended 0.3m above the High Water Mark. Has this taken into consideration climate change and impacts to riparian areas?
- Geotechnical report (section 7.1) - If Rapid Impact Compaction (RIC) is included in the construction methodology, the existing culverts must be monitored for settlement as well as condition.
- Geotechnical report (Section 7.3) - indicates immediate settlement when subject to train surcharge - how has the differential settlement between the new and old track been addressed in the design of the culvert extensions?
- The ground water levels were assessed in August - how will the high water table effect the design and construction?

Drainage

- Typical drawings have been provided for culvert design - each culvert requires a detailed design identifying the new outfall elevations and confirmation of capacity. Capacity should take into consideration climate change and sea level rise. Future IDF curves are available through the Port Moody Engineering Department.
- Condition assessments need to be conducted for each culvert to confirm if lining is necessary.
- The City does not have records of the culverts shown on the design drawings. Ownership of culverts needs to be confirmed by CP Rail.
- Culverts need to be monitored for settlement during construction and the condition confirmed upon project completion.

Water

- Identify valve locations for emergency shutoff and install new gate valves on the up and downstream side of casing pipe.
- Will the project require access to a municipal source of water?

Construction

- Submit a Traffic Impact Study to the City which includes a Construction Access and Staging Management Plan. Identify intersection upgrades at Barnet Highway at Reed Point Marina including options for a traffic signal.
- Will materials be delivered by trucks or alternative modes such as rail and barge?
- The temporary access road is drained to the ocean - how will erosion sediment control be mitigated?
- Confirm if the temporary construction road cuts off overland drainage.

Thank you for the opportunity to provide comments on the proposed CP Cascade Capacity Expansion project. We look forward to receiving a response to the City's comments and questions. If you require clarification on the information included in this letter, please contact Mary De Paoli, Manager of Policy Planning, at mdepaoli@portmoody.ca or 604-469-4702.

Yours truly,



André Boel, MCIP, RPP
General Manager, Planning and Development

CC: Lesley Douglas, General Manager of Environment and Parks
Stephen Judd, Manager of Infrastructure Engineering Services
Karen Devitt, Environmental Coordinator