

Original Text	Suggested Change	Rationale/Recommendation
Section		
<p><i>EXAMPLE:</i> Condition 4.1 – Migratory Birds Quote (Pg. X): “Original Text”</p>	<p>ECCC suggest the following be added to/removed from/replaced in this statement: <i>Provide suggested text.</i></p>	
<p>3.19 Fish and Fish Habitat</p>	<p>ECCC suggests the following be added to listed conditions under 3.19:</p> <p>monitor, at a minimum of weekly during flood-operation and a minimum of daily during post-flood operations, turbidity within the reservoir, at the outlet channel, in the Elbow River upstream, in the immediate receiving environment, and downstream</p>	<p>ECCC recommends the Agency include a requirement to monitor for turbidity, consistent with monitoring for dissolved oxygen and temperature, prior to discharge of the reservoir (flood-operation). Given the potential for residual effects due to turbidity, monitoring must be sufficient to assess potential impacts and inform adaptive management. Therefore, monitoring is required in advance of discharge given the variability in potential discharge scenarios (late or early discharge) and the various effects each of these scenarios will have on the Elbow River. In addition, daily monitoring of turbidity at the source, upstream, immediate receiving environment, and downstream, during discharge, will allow for interpretation of potential impacts and an assessment of the magnitude of change in water quality due to turbidity in the Elbow River.</p>
<p>3.19.3 Fish and Fish Habitat monitor during post-flood operation and taking into account Alberta Transportation’s Turbidity and monitoring specifications, turbidity levels at sites located upstream and downstream of the outlet channel and report any exceedance to the Canadian Council of</p>	<p>monitor at a minimum of daily during post-flood operation...</p>	<p>ECCC recommends the Agency include additional specificity regarding the frequency of monitoring during discharge from the reservoir (post-flood operation). ECCC recommends that turbidity monitoring occur at a minimum of daily during discharge of the reservoir to monitor for effects to the Elbow</p>

<p>Ministers of the Environment’s Guidelines for the Protection of Freshwater Aquatic Life to relevant provincial authorities;</p>		<p>River from increased sediment load and to inform adaptive management. Sediment concentrations associated with the discharge of the reservoir may be highly variable and therefore, in order to effectively manage potential effects to the Elbow River, monitoring must occur frequently enough to capture changes in sediment concentrations associated with the discharge.</p>
<p>3.19.4 Fish and Fish Habitat monitor, at a minimum weekly during flood-operation, temperature and dissolved oxygen in the reservoir and in the immediate receiving environment;</p>	<p>monitor, at a minimum weekly during flood-operation and a minimum of daily during post-flood operations, temperature and dissolved oxygen in the reservoir, at the outlet channel, in the Elbow River upstream, and in the immediate receiving environment, and downstream;</p>	<p>ECCC recommends the Agency include additional requirements for monitoring of temperature and dissolved oxygen. The existing conditions do not provide any requirements for monitoring of dissolved oxygen and temperature during discharge of the reservoir to the Elbow River (post-flood). Monitoring will be required within the reservoir/at the outlet channel (source quality) as well as upstream (background quality) and in the immediate receiving environment/downstream in order to assess the magnitude of change to water quality within the Elbow River due to the discharge and to assess the potential for effects. ECCC recommends that temperature and dissolved oxygen be monitored at a minimum of daily during post-flood operations to monitor for effects to the Elbow River due to changes in temperature or dissolved oxygen and to inform adaptive management. Temperature and dissolved oxygen concentrations associated with the discharge of the reservoir may be highly variable and therefore, in order to effectively manage potential effects</p>

		<p>to the Elbow River, monitoring must occur frequently enough to capture changes in temperature and dissolved oxygen concentrations associated with the discharge.</p>
<p>4 Migratory Birds</p>	<p>ECCC suggests the following new condition be added under 4.x, Migratory Birds:</p> <ul style="list-style-type: none"> • Develop, prior to construction, and in consultation with Environment and Climate Change Canada, other relevant authorities and Indigenous nations, and implement prior to and during construction, a species-specific mitigation plan to address Bank Swallow. As part of development of the plan: <ul style="list-style-type: none"> ○ Take into account the Government of Canada’s <i>Description of Residences for Bank Swallow (Riparian riparia) in Canada (2019-05-14)</i>; ○ Take into account foraging habitat to ensure it is maintained within 500m of the residences; ○ Establish a timeline for implementation of the plan to enable implementation prior to construction; the plan should include monitoring to demonstrate how compensation measures implemented by the Proponent under the plan will compensate for Project effects to Bank 	<p>Additional conditions are suggested to address the potential for Project effects to Bank Swallow <u>residences</u>, in cases where avoidance may not be possible.</p> <p>It is recommended that the Proponent develop a species-specific mitigation plan, prior to construction that includes specific instruction to avoid effects to the species and any destruction of a residence. If destruction of residences cannot be avoided, then it is recommended that the condition require the Proponent to construct artificial nests. Monitoring should be used to ensure that artificial nests are suitable to avoid or lessen effects to the species.</p> <p>Note, similar conditions were proposed to address the destruction/disturbance of Bank Swallow residences for the Contrecoeur Project in Quebec (December, 2020). https://iaac-aeic.gc.ca/050/evaluations/document/136804 https://iaac-aeic.gc.ca/050/evaluations/document/136803</p> <p>However, while Contrecoeur conditions directed the Proponent to provide alternative nests in the Project Area, in this case, where the PDA intersects with the Elbow River,</p>

	<p>Swallow and demonstrate no measurable change to Bank Swallow abundance;</p> <ul style="list-style-type: none"> ○ Consider recovery strategies or action plans and adapt the plan to be consistent with these documents including any critical habitat or biophysical attributes associated with those plans; ○ If there is anticipated impact to Bank Swallow residence: <ul style="list-style-type: none"> ▪ Install, prior to construction, and in consultation with Environment and Climate Change Canada, artificial nesting boxes within the Local Assessment Area to compensate for the loss of nesting sites at the location of the construction footprint. In doing so: <ul style="list-style-type: none"> ○ install the artificial nest boxes before construction; ○ maintain the artificial nest boxes annually and keep them accessible during Project construction and operation. ○ Ensure foraging habitat is present (either maintained or created) within 500m of 	<p>banks may or may not be modified where residences of bank swallows exist. If residences are impacted, then the construction of artificial nests will be required.</p> <p>In addition, ECCC recommends other minor changes, including the need to consider maintenance of adequate foraging habitat within 500m of the residences, as this is a key component of the draft recovery strategy that is contemplated for release this calendar year.</p> <p>ECCC also recommends the Proponent include results of monitoring in reporting to relevant authorities and updates to mitigation and monitoring plans as part of adaptive management.</p>
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	<p>the artificial nesting structure.</p> <ul style="list-style-type: none">▪ Install in the Project Development Area, prior to the arrival of the Bank Swallow in the spring, a geotextile sheet to cover vertical and near-vertical banks at the location of the reservoir outlet channel and maintain the sheet in place until the end of the nesting period for the species.▪ Maintain piles of topsoil, soil or sediment located within the Project Development Area with a slope of less than 70 per cent in order to limit the attraction to the piles for the Bank Swallow.▪ Monitor the use (expressed in number of breeding pairs and active burrows) of the Bank Swallow monitoring study area to ensure mitigation is effective to avoid or lessen impacts to Bank Swallow. Carry out this monitoring annually during construction and for the first three years following the end of construction and every five years thereafter.	
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<p>4 Migratory Birds</p> <p>4.10 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all mitigation measures to avoid harm to migratory birds, including migratory birds that are listed species at risk, their eggs and nests. The follow-up program shall include the mitigation measures used to comply with conditions 4.1 to 4.9. As part of the development of the follow-up program, the Proponent shall identify performance indicators that shall be used by the Proponent to evaluate the effectiveness of mitigation measures. The Proponent shall implement the follow-up program during all phases of the Designated Project.</p>	<p>ECCC suggests the following be added to listed conditions under 4 Migratory Birds:</p> <ul style="list-style-type: none"> • undertake, in consultation with Indigenous groups and relevant authorities, progressive reclamation of the project study area. The Proponent shall identify, prior to the start of progressive reclamation and in consultation with Indigenous groups and relevant authorities, plant species native to the area of the Designated Project to use for revegetation as part of the progressive reclamation, including plant species suitable as habitat for migratory birds such as Olive-sided Flycatcher and Bank Swallow. <p>ECCC suggests the following text (indicated in bold) be added to the draft condition 4.10:</p> <p>“...As part of the development of the follow-up program, the Proponent shall identify performance indicators that shall be used by the Proponent to evaluate the effectiveness of mitigation measures including the progressive reclamation referred to in condition 4.# and species-specific mitigations referred to in condition 4.#. The Proponent shall implement the follow-up program during</p>	<p>ECCC recommends that habitat requirements for migratory birds such as Olive Sided Flycatcher and Bank Swallow be incorporated into the progressive reclamation (eg. the Proponent’s revegetation and reclamation plan), and that these requirements be met through conditions specific to migratory birds, as suggested in the proposed condition language.</p> <p>Habitat loss of the Olive Sided Flycatcher is noted in the Proponent’s assessment, and will be in part addressed through reclamation activity (31 ha) that may result in reversal of the majority of the effect in the long term.</p> <p>However, in order to ensure that reclamation and revegetation is suitable to support migratory birds, including SAR, the Proponent should be required to consider and include species-specific habitat requirements in the Project’s revegetation, reclamation and land use plans, which could be achieved through conditions.</p> <p>The Agency may consider requiring the Proponent to address habitat loss for migratory bird species at risk in order to ensure full reclamation or offsetting for those portions of the habitat that will not be reclaimed.</p>
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	<p>all phases of the Designated Project. As part of the implementation of the follow-up program, the Proponent shall:</p> <p>4.#.1 conduct migratory bird surveys annually for the first three years following completion of construction to assess changes in migratory bird populations caused by the Designated Project. The Proponent shall determine the methodology for the migratory bird surveys in consultation with Indigenous groups and relevant authorities. The Proponent shall determine, in consultation with Indigenous groups and relevant authorities and based on the results of the initial surveys, if additional surveys are required after the first three years following completion of construction and at what frequency and in which locations these additional surveys shall occur; and</p> <p>4.#.2 monitor the effectiveness of the progressive reclamation referred to in condition 4.X, including the establishment of native plant species to create habitat for migratory birds. The Proponent shall monitor the effectiveness of the progressive reclamation referred to in condition 4.X until the Proponent</p>	
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	<p>has determined, in consultation with Indigenous groups and relevant authorities, that the performance indicators have been met.</p>	
<p>6.4.5 Atmospheric Environment use the Canadian Council of Ministers of the Environment' Canadian Ambient Air Quality Standards management levels for nitrogen dioxide and fine particulate matter (PM2.5) and the Canadian Ambient Air Quality Standards Air Zone Management Framework to determine if modified or additional mitigation measures are required based on the results of monitoring conducted in accordance with conditions 6.4.2 and 6.4.3.</p>	<p>use the Canadian Council of Ministers of the Environment Canadian Ambient Air Quality Standards management levels for nitrogen dioxide and fine particulate matter (PM2.5) and the Canadian Ambient Air Quality Standards Air Zone Management Framework, <u>while also considering pre-project baseline concentrations, to establish concentration thresholds with appropriate statistical metrics</u> to determine if modified or additional mitigation measures are required based on the results of monitoring conducted in accordance with conditions 6.4.2 and 6.4.3.</p>	<p>ECCC recommends the Agency include additional language to clarify that the CAAQS/AQMS can be used as a guidance tool, with some adaptation of statistical metrics, for Project-specific emissions mitigation.</p> <p>The AQMS/CAAQS are geared towards air zone management as opposed to project-level emissions management and therefore do not explicitly detail when projects should initiate mitigation measures. Furthermore, the statistical metrics outlined under CAAQS may not necessarily suit emissions from this type of seasonally-based project.</p>