

Potential conditions under the *Canadian Environmental Assessment Act, 2012*

The Impact Assessment Agency of Canada is contemplating the following potential conditions in relation to the Springbank Off-Stream Reservoir Project (the Designated Project) located in Alberta for recommendation to the Minister of Environment and Climate Change (the Minister) for inclusion in a Decision Statement issued under the *Canadian Environmental Assessment Act, 2012*. If the Minister decides that the carrying out of the Designated Project is unlikely to cause significant adverse environmental effects as defined under subsections 5(1) and 5(2), or if the Minister decides that the Designated Project is likely to cause significant adverse environmental effects and the Governor in Council decides such effects are justified in the circumstances, the Designated Project would be allowed to proceed, and any conditions established by the Minister under the *Canadian Environmental Assessment Act, 2012* would become legally binding.

Pursuant to section 184 of the *Impact Assessment Act*, a Decision Statement issued by the Minister under subsection 54(1) of the *Canadian Environmental Assessment Act, 2012* is deemed to be a Decision Statement issued under subsection 65(1) of the *Impact Assessment Act*, other than for the purposes of section 70.

1 Definitions

- 1.1 *Agency* means the Impact Assessment Agency of Canada.
- 1.2 *Baseline* means the environmental conditions prior to initiating construction of the Designated Project.
- 1.3 *Construction* means the phase of the Designated Project during which the Proponent undertakes the site preparation, building or installation of any components of the Designated Project, including periods during which these activities may temporarily cease.
- 1.4 *Days* means calendar days.
- 1.5 *Designated Project* means the Springbank Off-Stream Reservoir Project as described in section 2 of the draft environmental assessment report prepared by the Impact Assessment Agency of Canada (Canadian Impact Assessment Registry, Reference Number 80123).
- 1.6 *Dry operation* means the phase of operation during which the flow in the Elbow River is less than 160 cubic metre per second and the diversion inlet gates remain closed.
- 1.7 *Environment and Climate Change Canada* means the Department of the Environment as established under subsection 2(1) of the *Department of the Environment Act*.
- 1.8 *Environmental assessment* means “environmental assessment” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.9 *Environmental effects* means “environmental effects” as described in section 5 of the *Canadian Environmental Assessment Act, 2012*.

- 1.10 *Environmental impact statement* means the March 29, 2018 document entitled *Springbank Off-Stream Reservoir – Environmental Impact Statement* (Canadian Impact Assessment Registry Reference Number 80123 Document Number 21).
- 1.11 *Fish* means “fish” as defined in subsection 2(1) of the *Fisheries Act*.
- 1.12 *Fish habitat* means “fish habitat” as defined in subsection 2(1) of the *Fisheries Act*.
- 1.13 *Fisheries and Oceans Canada* means the Department of Fisheries and Oceans as established under subsection 2(1) of the *Department of Fisheries and Oceans Act*.
- 1.14 *Flood operation* means the phase of operation that starts when the auxiliary service spillway gates are raised and the diversion inlet gates are lowered to allow flows through the diversion channel for storage in the off-stream reservoir and continues until the start of post-flood operation.
- 1.15 *Follow-up program* means “follow-up program” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.16 *Heritage value* means the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations.
- 1.17 *Indigenous groups* means Blood Tribe (Kainai Nation), Ermineskin Cree Nation, Foothills Ojibway First Nation, Ktunaxa Nation Council, Louis Bull Tribe, Métis Nation of Alberta—Region 3 (MNAR3), Métis Nation of British Columbia – Region 4, Montana First Nation, Piikani Nation, Samson Cree Nation, Siksika Nation, Shuswap Indian Band, Stoney Nakoda Nation, and Tsuut’ina Nation.
- 1.18 *Listed species at risk* means a species that is listed on the List of Wildlife Species at Risk set out in Schedule 1 of the *Species at Risk Act*.
- 1.19 *Migratory bird* means “migratory bird” as defined in subsection 2(1) of the *Migratory Birds Convention Act, 1994*.
- 1.20 *Mitigation measures* means “mitigation measures” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.21 *Offsetting plan* means “offsetting plan” as described in Schedule 1 of the *Authorizations Concerning Fish and Fish Habitat Protection Regulations*.
- 1.22 *Operation* means the phase of the Designated Project during which the flood mitigation infrastructure may accommodate up to a 1:200 year flood.
- 1.23 *Post-flood operation* means the phase of operation during which the low-level outlet structure gates are opened to allow the waters retained in the off-stream reservoir to re-enter the Elbow River, except when the auxiliary service spillway gates are open or the diversion inlet gates are closed for maintenance purposes, and continue until post-flood maintenance activities are conducted and dry operation resume.

- 1.24 *Progressive reclamation* means reclamation which is carried out by the Proponent concurrently with all phases of the Designated Project to progressively return any physically disturbed areas to a state as close to the baseline as possible, as soon after the disturbance as practical.
- 1.25 *Project development area* means the geographic area occupied by the Designated Project, as described in Figure 5 of the draft environmental assessment report (Canadian Impact Assessment Registry Reference Number 80123).
- 1.26 *Proponent* means the Province of Alberta, as represented by Alberta Transportation and Alberta Environment and Parks, and its successors or assigns.
- 1.27 *Qualified individual* means someone who, through education, experience and knowledge relevant to a particular matter, provides the Proponent with advice within their area of expertise. Knowledge relevant to a particular matter may include community and Indigenous knowledge.
- 1.28 *Record* means “record” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.29 *Relevant authorities* means federal and/or provincial authorities and/or municipal authorities that are in possession of specialist or expert information or knowledge, or that have a responsibility for the administration of a law or regulation, with respect to the subject matter of a condition set out in this document.
- 1.30 *Reporting year* means April 1 of a calendar year through March 31 of the subsequent calendar year.
- 1.31 *Reservoir footprint* means the area of the project development area occupied by the off-stream reservoir described in section 2.2 of the draft environmental assessment report (Canadian Impact Assessment Registry Reference Number 80123).
- 1.32 *Structure, site or thing of historical, archaeological, paleontological or architectural significance* means a structure, site or thing that is determined by a qualified individual, on the basis of heritage value, to be associated with an aspect of the history or culture of the people of Canada, including Indigenous groups.
- 1.33 *Transport Canada* means the Department of Transport as established under subsection 3(1) of the *Department of Transport Act*.
- 1.34 *Wetland* means land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydrophytic vegetation and various kinds of biological activity which are adapted to a wet environment and as further defined in the Canadian Wetland Classification System.
- 1.35 *Wetland functions* means the natural processes and derivation of benefits and values associated with wetland ecosystems, including economic production, fish and wildlife habitat, organic carbon storage, water supply and purification (e.g. groundwater recharge, flood control, maintenance of flow regimes, shoreline erosion buffering), and soil and water conservation, as well as tourism, heritage, recreational, educational, scientific, and aesthetic opportunities.

Potential Conditions

These conditions may be established for the sole purpose of the Decision Statement issued under the *Canadian Environmental Assessment Act, 2012*. They do not relieve the Proponent from any obligation to comply with other legislative or other legal requirements of the federal, provincial, or local governments. Nothing in this document shall be construed as reducing, increasing, or otherwise affecting what may be required of the Proponent to comply with all applicable legislative or legal requirements.

2 General conditions

- 2.1 The Proponent shall ensure that its actions in meeting the conditions set out in this document during all phases of the Designated Project are considered in a careful and precautionary manner, promote sustainable development, are informed by the best information and knowledge, including community and Indigenous knowledge, available at the time the Proponent takes action, are based on methods and models that are recognized by standard-setting bodies, are undertaken by qualified individuals, and have applied the best available economically and technically feasible technologies.
- 2.2 The Proponent, when carrying out the Designated Project, shall do so as defined in condition 1.5 of this document.
- 2.3 The Proponent shall ensure that its actions in meeting the conditions set out in this document are taken in a way that is consistent with any applicable recovery strategy and action plans for listed species at risk.

Consultation

- 2.4 The Proponent shall, where consultation is a requirement of a condition set out in this document:
 - 2.4.1 provide a written notice of the opportunity for the party or parties being consulted to present their views and information on the subject of the consultation;
 - 2.4.2 provide all information available and relevant to the scope and the subject matter of the consultation and a period of time agreed upon with the party or parties being consulted, not to be less than 15 days, to prepare their views and information;
 - 2.4.3 undertake an impartial consideration of all views and information presented by the party or parties being consulted on the subject matter of the consultation; and
 - 2.4.4 advise in a timely manner the party or parties being consulted on how the views and information received have been considered by the Proponent, including a rationale for why the views have, or have not, been integrated.
- 2.5 The Proponent shall, where consultation with Indigenous groups is a requirement of a condition set out in this document, communicate with each group with respect to the manner to satisfy the consultation requirements referred to in condition 2.4, including methods of notification, the type of information and the period of time to be provided when seeking input, the process to be used by the Proponent to undertake impartial consideration of all views and information presented on the subject of the consultation, and the period of time and the means to advise groups of how their views and information were considered by the Proponent.

Follow-up and adaptive management

- 2.6 The Proponent shall, where a follow-up program is a requirement of a condition set out in this document, determine, as part of the development of each follow-up program and in consultation with the party or parties being consulted during the development, the following information:
 - 2.6.1 the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program;
 - 2.6.2 the scope, content and frequency of reporting of the results of the follow-up program;
 - 2.6.3 the frequency at which the follow-up program must be updated;
 - 2.6.4 the levels of environmental change relative to baseline that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities to be stopped; and
 - 2.6.5 the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.6.4 have been reached or exceeded.
- 2.7 The Proponent shall update the information determined for each follow-up program pursuant to condition 2.6 during the implementation of each follow-up program, at the minimum frequency determined pursuant to condition 2.6.3 and in consultation with the party or parties being consulted during the development of each follow-up program.
- 2.8 The Proponent shall provide the follow-up programs referred to in conditions 3.17, 3.18, 3.19, 3.20, 4.10, 6.4, 7.8, 7.9, 8.12, 8.13 and 9.9 to the Agency and to the party or parties being consulted during the development of each follow-up program prior to the implementation of each follow-up program. The Proponent shall also provide any update made pursuant to condition 2.7 to the Agency and to the party or parties being consulted during the development of each follow-up program within 30 days of the follow-up program being updated.
- 2.9 The Proponent shall, where a follow-up program is a requirement of a condition set out in this document:
 - 2.9.1 implement the follow-up program according to the information determined pursuant to condition 2.6;
 - 2.9.2 conduct monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition and/or to determine the effectiveness of any mitigation measure;
 - 2.9.3 determine whether modified or additional mitigation measure(s) are required based on the monitoring and analysis undertaken pursuant to condition 2.9.2; and
 - 2.9.4 if modified or additional mitigation measures are required pursuant to condition 2.9.3, develop and implement these mitigation measure(s) in a timely manner and monitor them pursuant to condition 2.9.2.
- 2.10 Where consultation with Indigenous groups is a requirement of a follow-up program, the Proponent shall discuss the follow-up program with each group and shall determine, in consultation with each group, opportunities for their participation in the implementation of the

follow-up program, including the conduct of monitoring, the analysis and reporting of follow-up results and whether modified or additional mitigation measure(s) are required, as set out in condition 2.9.

Annual reporting

- 2.11 The Proponent shall, commencing in the reporting year during which the Minister issues the Decision Statement for the Designated Project, prepare an annual report that sets out, for that reporting year:
- 2.11.1 the activities undertaken by the Proponent to comply with each of the conditions set out in this document;
 - 2.11.2 how the Proponent complied with condition 2.1;
 - 2.11.3 for conditions set out in this document for which consultation is a requirement, how the Proponent considered any views and information that the Proponent received during or as a result of the consultation;
 - 2.11.4 the information referred to in conditions 2.6 and 2.7 for each follow-up program;
 - 2.11.5 the results of the follow-up program requirements identified in conditions 3.17, 3.18, 3.19, 3.20, 4.10, 6.4, 7.8, 7.9, 8.12, 8.13 and 9.9;
 - 2.11.6 for any plan that is a requirement of a condition set out in this document, any updates to the plan made;
 - 2.11.7 any modified or additional mitigation measure implemented or proposed to be implemented by the Proponent, as determined pursuant to condition 2.9; and
 - 2.11.8 any change to the Designated Project for which the Proponent determined that condition 2.17 did not apply.
- 2.12 The Proponent shall submit to the Agency the annual report referred to in condition 2.11, including a plain language executive summary in both official languages, no later than June 30 following the reporting year to which the annual report applies.

Information sharing

- 2.13 The Proponent shall publish on the Internet, or any medium which is publicly available, the annual reports and the executive summaries referred to in conditions 2.11 and 2.12, the final offsetting plan(s) referred to in condition 3.9, the protocol to rescue fish referred to in condition 3.16, the migratory bird protocol referred to in condition 4.8, the protocol to prevent the mortality of amphibians referred to in condition 5.5, the communication plan referred to in condition 7.4, the archaeological and heritage management plan referred to in condition 9.3, the accident and malfunction response plan referred to in condition 10.3, the reports related to accidents and malfunctions referred to in conditions 10.5.3 and 10.5.4, the accident and malfunction communication plan referred to in condition 10.5, the schedules referred to in conditions 11.1 and 11.2, and any update or revision to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 15 years following their publication. The Proponent shall notify the Agency, Indigenous groups and potentially affected parties of the availability of these documents within 48 hours of their publication.

- 2.14 When the development of any plan is a requirement of a condition set out in this document, the Proponent shall submit the plan to the Agency prior to construction, unless otherwise required through the condition.

Change of Proponent

- 2.15 The Proponent shall notify the Agency and Indigenous groups in writing no later than 30 days after the day on which there is any transfer of ownership, care, control or management of the Designated Project in whole or in part.

Change to the Designated Project

- 2.16 The Proponent shall consult with Indigenous groups and relevant authorities prior to notifying the Agency, pursuant to condition 2.17, of any potential change to the Designated Project.
- 2.17 The Proponent shall notify the Agency in writing of any potential change to the Designated Project that would result in a change to the Designated Project description included in this document or that may result in adverse environmental effects. In notifying the Agency, the Proponent shall provide a description of the change(s) to the Designated Project, the predicted adverse environmental effects and the proposed mitigation measures and follow-up requirements to be implemented by the Proponent to ensure that the change(s) do not result in adverse environmental effects greater than those predicted in the draft environmental assessment report. The Proponent shall also describe the results of the consultation with Indigenous groups and relevant authorities.

3 Fish and fish habitat

- 3.1 The Proponent shall develop, prior to construction, and implement during all phases of the Designated Project, measures to control erosion and sedimentation within the project development area in a manner consistent with the *Fisheries Act* and its regulations. The Proponent shall submit these measures to the Agency before implementing them. In doing so, the Proponent shall:
- 3.1.1 manage surface water around stockpiles;
 - 3.1.2 stockpile any excavated material above the highwater mark;
 - 3.1.3 install and maintain silt fences and turbidity barriers to prevent future bank erosion during construction and operation;
 - 3.1.4 install riprap material on the diversion channel side slopes outside curves, on the water face of the off-stream storage dam, and where the diversion channel enters the reservoir to prevent future bank erosion;
 - 3.1.5 implement measures to allow sediment to settle out before returning dewatering discharge into the Elbow River, including by removing downstream barriers first when removing isolation barriers during flood operation; and
 - 3.1.6 install energy dissipation blocks to control flows and erosion in the diversion channel and low level outlet channel.

- 3.2 The Proponent shall inspect all erosion and sediment control measures installed within the project development area pursuant to condition 3.1 including during flood operation and post flood operation, and document and repair any defective or damaged control measure in a timely manner such that any impacts to fish and fish habitat resulting from the defective or damaged control measures are minimized or avoided.
- 3.3 The Proponent shall isolate in-water construction activities and shall use temporary access structures for any in-stream construction activity.
- 3.4 The Proponent shall maintain machinery and construction equipment in working order and inspect any machinery and construction equipment before it enters the project development area for the presence of leaks, invasive species and noxious weeds, taking into account Alberta's *Decontamination protocol for work in or near water: quick reference guide*.
- 3.5 The Proponent shall not undertake vehicle, machinery, and equipment cleaning, fuelling, and maintenance and shall not store substances with the potential to cause harmful effects to the receiving environment, including fuel and lubricant storage tanks, within 100 metres from any fish-bearing water.
- 3.6 The Proponent shall not deposit any debris in watercourses that may cause adverse environmental effects on fish and fish habitat during all phases of the Designated Project and shall remove, after each flood, debris accumulated at the debris deflector identified in Figure 5 of the draft environmental assessment report.
- 3.7 The Proponent shall implement measures to allow sediment to settle down before dewatering discharge into a water body.
- 3.8 The Proponent shall remove, during dry operation, the first layer of substrate in the diversion channel and store the layer for use at the beginning of the subsequent dry operation phase, to restore the diversion channel.
- 3.9 The Proponent shall develop, to the satisfaction of Fisheries and Oceans and in consultation with Indigenous groups, any offsetting plan(s) related to any harmful alteration, disruption or destruction of fish habitat, and death of fish associated with the carrying out of the Designated Project. The Proponent shall implement the plan. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation.
- 3.10 The Proponent shall, for any fish habitat offsetting measure(s) proposed in any offsetting plan(s) referred to in condition 3.9 that may cause adverse environmental effects not considered in the environmental assessment, develop and implement, following consultation with Indigenous groups and relevant authorities, measures to mitigate those effects. The Proponent shall submit these measures to the Agency before implementing them.
- 3.11 The Proponent shall conduct in-water project activities, including debris removal from the water intake structures, outside of the Government of Alberta restricted activity periods, unless otherwise agreed to by relevant authorities. If in-water project activities cannot be conducted outside of the Government of Alberta restricted activity periods, the Proponent shall develop and implement additional mitigation measures, in consultation with Indigenous groups and Fisheries and Oceans Canada, to protect fish during sensitive life stages.

- 3.12 The Proponent shall maintain fish passage in the Elbow River during all phases of the Designated Project. In doing so, the Proponent shall maintain flows downstream of the bypass channel.
- 3.13 The Proponent shall install, prior to operation and in consultation with Transport Canada and Fisheries and Oceans Canada, rock v-weirs downstream of the spillway to mitigate the effects of dewatering discharge from the reservoir area on the Elbow River stream's depth.
- 3.14 The Proponent shall design, install and operate the water intake structures in fish-bearing waterbodies in a manner which mitigates the incidental capture of fish by entrainment and impingement of fish through the use of an appropriately sized fish screen, taking into account Fisheries and Oceans Canada's *Freshwater Intake End-of-Pipe Fish Screen Guideline* and in a manner consistent with the *Fisheries Act* and its regulations.
- 3.15 The Proponent shall construct and maintain graded drainage areas within the reservoir to prevent stranding of fish during release of stored floodwater from the reservoir. In doing so, the Proponent shall re-grade the reservoir during post-flood operation as necessary.
- 3.16 The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada and other relevant authorities, a protocol to rescue fish during post-flood operation. The Proponent shall develop the protocol prior to construction and implement it during dry operations. As part of the development of the protocol, the Proponent shall determine the rescue methods, the environmental conditions under which fish rescue can occur, including the ambient air temperature and the rate of receding water level, and the frequency at which fish rescue must be undertaken. The protocol shall include having a qualified individual:
 - 3.16.1 determine during draw down the earliest possible timing for fish rescue;
 - 3.16.2 prior to relocating fish in accordance with condition 3.16.4, record through visual observation and photographs, external physical damage on stranded fish that show signs of injury;
 - 3.16.3 locate stranded fish in any isolated pool in the reservoir area, the low-level outlet canal and the intake channel during each post-flood operation phase; and
 - 3.16.4 relocate stranded fish identified as per condition 3.16.3 in suitable habitat in the Elbow River.
- 3.17 The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to fish passage in the Elbow River. As part of the follow-up program, the Proponent shall:
 - 3.17.1 develop criteria to determine fish passage success;
 - 3.17.2 monitor passage of migratory salmonids and other fish species identified during the development of the follow-up program;
 - 3.17.3 if monitoring in 3.17.2 indicates that criteria for fish passage success established in condition 3.17.1 have not been met, implement modified or additional mitigation measures.

- 3.18 The Proponent shall develop and implement, in consultation with Indigenous groups and Fisheries and Oceans Canada, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to fish rescue. As part of the follow-up program, the Proponent shall:
- 3.18.1 monitor fish strandings and safe passage when exiting the reservoir; and
 - 3.18.2 if the results of the monitoring conducted in accordance with condition 3.18.1 demonstrate fish failure to exit the reservoir, or fish harm or mortality when exiting, the Proponent shall develop and implement modified or additional mitigation measures to allow for safe and feasible fish passage through the reservoir outlet.
- 3.19 The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada, Environment and Climate Change Canada and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to water quality. As part of the follow-up program, the Proponent shall:
- 3.19.1 monitor, at a minimum every 3 hours during construction and monthly during operation, total suspended sediment levels at a minimum three locations in the Elbow River, one location in the immediate receiving environment, one location downstream of the low level outlet, and one location at the outlet channel;
 - 3.19.2 if the results of the monitoring conducted in accordance with condition 3.19.1 demonstrate higher levels of total suspended sediment than the baseline levels identified in Table 3-6, Appendix J of Volume 4 of the Environmental Impact Statement, or in Table 6-6, volume 3B, section 06 of the Environmental Impact Statement during flood operation, determine, in consultation with Fisheries and Oceans Canada, Environment and Climate Change Canada and other relevant authorities, if additional mitigation measures are required;
 - 3.19.3 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 Ministers of the Environment's *Guidelines for the Protection of Freshwater Aquatic Life* to relevant provincial authorities;
 - 3.19.4 monitor, at a minimum weekly during flood-operation, temperature and dissolved oxygen in the reservoir and in the immediate receiving environment;
 - 3.19.5 if results of the monitoring conducted in accordance with condition 3.19.4 demonstrate warmer temperature or lower levels of dissolved oxygen from modelling predictions identified in Appendix 1-1 submitted in the Response to Information Request Round 2 Package 4 -01 to -04 (Canadian Impact Assessment Registry Reference Number 80123, Document Number 1311), implement modified or additional mitigation measures; and
 - 3.19.6 monitor surface water quality at the low-level outlet channel prior to any discharge from the reservoir. If the results of the monitoring demonstrate exceedance of parameters identified in Appendix K, Table 2-4 of the Environmental Impact Statement, for water quality of the Elbow River downstream of the outlet channel, the Proponent shall develop and implement modified or additional mitigation measures prior to any subsequent flood operation.

- 3.20 The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to channel morphology. As part of the follow-up program, the Proponent shall monitor channel morphology of the Elbow River and outlet channel through Light detection and ranging LiDAR mapping during post-flood operation.

4 Migratory birds

- 4.1 The Proponent shall carry out the Designated Project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's *Guidelines to reduce risk to migratory birds*. The Proponent's actions when carrying out the Designated Project shall be in compliance with the *Migratory Birds Convention Act, 1994*, the *Migratory Birds Regulations* and with the *Species at Risk Act*.
- 4.2 The Proponent shall give preference to the use of existing access roads and disturbed areas for temporary workspaces and transportation activities over building new access roads and temporary workspace in undisturbed areas, and shall not remove native vegetation when building temporary workspace.
- 4.3 The Proponent shall control the lighting required for Designated Project activities throughout all phases of the Designated Project, including its direction, duration of use, intensity, spectrum colour and brightness, to mitigate the adverse effects of the Designated Project on migratory birds and species at risk caused by sensory disturbances due to light, while complying with operational health and safety requirements.
- 4.4 The Proponent shall identify, in consultation with relevant authorities, dates of breeding season for migratory birds and notify the Agency of these dates prior to construction.
- 4.5 The Proponent shall conduct vegetation removal, and any other activity that could potentially disturb migratory birds, within the project development area outside of the breeding season(s) for migratory birds identified in condition 4.4. If vegetation removal or the conduct of other disturbance activity outside of the breeding season(s) is not technically feasible during any given year, the Proponent shall develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid harm to migratory birds and their nests or eggs. The Proponent shall submit these measures to the Agency prior to implementing them.
- 4.6 The Proponent shall remove sediment and debris in the off-stream reservoir within seven days after the draining of the reservoir. If it is not technically feasible for the Proponent to remove sediment and debris within seven days after the draining of the reservoir, the Proponent shall develop and implement additional mitigation measures, in consultation with relevant authorities, to avoid harm to migratory birds and their nests or eggs. The Proponent shall submit these measures to the Agency prior to implementing them.

- 4.7 For any active migratory bird nests identified during construction or operation, the Proponent shall establish and implement, in consultation with relevant authorities, mitigation measures to avoid destroying, disturbing or taking the nest(s), including by implementing a disturbance setback buffer.
- 4.8 The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a protocol to prevent harm to migratory birds, including migratory birds species at risk identified in Table 7.2-1 of the draft environmental assessment report, within the reservoir footprint. The Proponent shall develop the protocol prior to construction and implement it prior to flood operation. The protocol shall include:
- 4.8.1 flood forecasting undertaken prior to inventories conducted in accordance with condition 4.9; and
 - 4.8.2 measures to rescue migratory birds chicks and eggs.
- 4.9 The Proponent shall conduct inventories of potential migratory bird habitat, including the collection of information on breeding bird densities and the presence of ground nesting birds, as well as mapping of important habitat features, shrublands, wetlands and grassland within the reservoir footprint every five years starting the first year of operation, and update the migratory bird protocol referred to in condition 4.8 based on the results of the inventories.
- 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.

5 Species at risk

- 5.1 The Proponent shall conduct pre-construction surveys to determine the distribution of little brown myotis (*myotis lucifugus*) in the project development area. The Proponent shall establish, in consultation with Indigenous groups and relevant authorities, buffer zones around little brown myotis (*myotis lucifugus*) active roosts identified during the pre-construction surveys or found by the Proponent or brought to the attention of the Proponent by an Indigenous group during any phase of the project. The Proponent shall maintain the buffer zones from their installation and for the duration of the project or until the roosts are permanently abandoned.
- 5.2 The Proponent shall conduct, prior to construction and in consultation with Indigenous groups and relevant authorities, breeding habitat surveys for the northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) within the project development area.
- 5.3 For any construction activity within 100 metres of breeding habitat identified under condition 5.2 for the northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), or western

tiger salamander (*Ambystoma mavoritium*) during the breeding season, the Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, measures to prevent northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) from accessing the active construction areas. Measures shall include:

- 5.3.1 the installation of silt fencing prior to construction; and
 - 5.3.2 the monitoring, during construction and by a qualified individual, of the presence of northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), or western tiger salamander (*Ambystoma mavoritium*) in active construction areas within 100 metres of their breeding habitat.
- 5.4 If the results of the monitoring conducted in accordance with condition 5.3.2 identify the presence of northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), or western tiger salamander (*Ambystoma mavoritium*) in active construction areas within 100 metres of their breeding habitat, the Proponent shall implement additional species-specific mitigation measures in consultation with Indigenous groups and relevant authorities.
- 5.5 The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a protocol to prevent the mortality of amphibians, including northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) during flood operation within the reservoir footprint. The Proponent shall develop the protocol prior to construction, taking into account the flood forecasting undertaken in accordance with condition 4.8.1. The protocol shall include measures to rescue and relocate northern leopard frog (*Lithobates pipiens*), western toad (*Anaxyrus boreas*), and western tiger salamander (*Ambystoma mavoritium*) to suitable habitat outside the reservoir footprint.
- 5.6 The Proponent shall mitigate the adverse environmental effects of the Designated Project on wetland functions by avoiding the loss of wetlands and wetland functions when feasible. When avoidance is not feasible, the Proponent shall minimize adverse effects on wetlands, and shall compensate any permanent loss of wetlands or wetland function, taking into account *Alberta Wetland Policy*.
- 5.7 The Proponent shall direct any drainage pathway, constructed or modified as part of the Designated Project, away from wetlands.
- 5.8 The Proponent shall not grub vegetation when undertaking construction work in wetlands.
- 5.9 The Proponent shall maintain a distance of 100 metres from any water body and wetland during maintenance activities in the off-stream reservoir, except for weeds and invasive species management and in-stream maintenance activities.

6 Atmospheric environment

- 6.1 The Proponent shall ensure that all vehicles required for construction of the Designated Project meet or exceed emission standards applicable at time of introduction, and are operated, inspected and maintained in accordance with engine instructions provided by the manufacturer to meet the emissions standards.

- 6.2 The Proponent shall develop, prior to construction, and implement, during construction, a no-idling policy for all vehicles within the project development area. The Proponent shall require that all persons abide by this policy, unless not technically feasible or not feasible for health or safety reasons. The Proponent shall submit the policy to the Agency prior to construction.
- 6.3 The Proponent shall develop, prior to construction and in consultation with relevant authorities, and implement during all phases of the Designated Project, measures to maintain baseline air quality and prevent exceedance of the Canadian Council of Ministers of the Environment' Canadian Ambient Air Quality Standards.
- 6.4 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Health Canada, and implement during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to air quality attributed to the Designated Project. As part of the follow-up program, the Proponent shall:
- 6.4.1 identify, in consultation with the parties involved in the development of the follow-up program, the locations for the monitoring referred to in conditions 6.4.2 and 6.4.3, including a minimum of one location, within the community of Springbank;
 - 6.4.2 monitor nitrogen dioxide continuously during construction;
 - 6.4.3 monitor total suspended particulate (TSP), coarse particulate matter (PM10) and fine particulate matter (PM2.5) continuously during construction, flood operation and post-flood operation. Monitoring of total suspended particulate and fine particulate matter shall be done at one location between the permanent access road and the diversion channel excavation work, one location at the dam construction site and one location at any borrow source site used, and shall include:
 - 6.4.3.1 visual observation during construction; and
 - 6.4.3.2 monitoring, other than through visual observation, during construction, flood operation and post-flood operation.
 - 6.4.4 monitor meteorological factors, including wind speed, wind direction and temperature during all phases of the Designated Project;
 - 6.4.5 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.

7 Human health

- 7.1 The Proponent shall not exceed the noise limits set out in the U.S. Environmental Protection Agency Office of Noise Abatement and Control document titled *Information on levels of environmental noise requisite to protect public health and welfare with an adequate margin of safety* for short-term noise exposure during construction.

- 7.2 For any blasting activities required for the Designated Project, the Proponent shall take into account Environment and Climate Change Canada's *Environment Code of Practice for Metal Mines* for the control of noise and vibration from blasting and thresholds and mitigation measures for blasting noise identified in Health Canada's *Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise*.
- 7.3 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, a protocol for receiving complaints related to exposure to noise attributable to the Designated Project. The Proponent shall provide the protocol to the Agency prior to construction and shall implement it during construction. As part of the implementation of the protocol, the Proponent shall respond to any noise complaint attributed to any component of the Designated Project within 48 hours of the complaint being received and shall implement any corrective action, if required to reduce exposure to noise, in a timely manner.
- 7.4 The Proponent shall develop a communication plan in consultation with Indigenous groups. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up to date during all phases of the Designated Project. The plan shall include procedures, including timing and methods, for sharing information on the following:
- 7.4.1 the schedule and location of construction activities that have the potential to exceed the noise limits set out in the U.S. Environmental Protection Agency Office of Noise Abatement and Control document *Information on levels of environmental noise requisite to protect public health and welfare with an adequate margin of safety*, and any update to that schedule;
 - 7.4.2 the details of the protocol for receiving complaints related to exposure to noise attributable to the Designated Project implemented pursuant to condition 7.3, including how to record a complaint; and
 - 7.4.3 the time periods identified pursuant to condition 8.7.
- 7.5 The Proponent shall implement, during all phases of the Project, measures to mitigate fugitive dust emissions attributable to the Designated Project. As part of the measures, the Proponent shall:
- 7.5.1 establish speed limits on Designated Project roads during all phases of the Designated Project and require that all persons abide by these speed limits; and
 - 7.5.2 apply dust suppressant on the project permanent access roads during all phases of the Designated Project. The Proponent shall select, in consultation with relevant authorities, dust suppressants with the least potential effects on human health and the environment.
- 7.6 The Proponent shall decommission and plug off water wells located within the project development area that are not used to monitor groundwater quality pursuant to condition 7.9.1, prior to construction.
- 7.7 The Proponent shall monitor, at a minimum twice prior to construction and weekly during flood operation, total mercury and methylmercury levels in the Elbow River upstream of the intake structure, in the off-stream reservoir, and in the low-level outlet downstream of the off-stream reservoir outlet gate. The Proponent shall measure total mercury and methylmercury levels in accordance with the Response to the IAAC Information Request Technical Review Round 2

Package 4 - 01 to 04, IR4-02 (Canadian Impact Assessment Registry Reference Number 80123, Document Number 1311) and shall determine, in consultation with Environment and Climate Change Canada, if modified or additional mitigation measures are required based on the results of the monitoring.

- 7.8 The Proponent shall develop, in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to contamination of country food. As part of the follow-up program, the Proponent shall:
- 7.8.1 monitor, simultaneously and prior to flood operation, total mercury, methylmercury, carbon-13 and nitrogen-15 stable isotopes concentration, fish age and morphometric data in fish muscle. The Proponent shall monitor a minimum of 12 adult fish of a top predatory fish species at each site and shall co-locate fish sampling with sampling for mercury in water at two sites downstream and upstream the project development area;
 - 7.8.2 monitor for muscle or whole body total mercury and methylmercury, carbon-13, nitrogen 15- stable isotopes, and morphometric data in one lower food web fish species;
 - 7.8.3 monitor total mercury and methylmercury, carbon-13 and nitrogen 15- stable isotopes in invertebrates that are key fish food source in the Elbow River;
 - 7.8.4 the Proponent shall undertake the monitoring referred to in conditions 7.8.1, 7.8.2 and 7.8.3 after flood operation.
- 7.9 The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of the mitigation measures as it pertains to drinking water quality. As part of the follow-up program, the Proponent shall:
- 7.9.1 monitor groundwater level, major ions, dissolved metals, nutrients, benzene, toluene, ethylbenzene, xylenes (BTEX), F1 to F2 fraction hydrocarbons, and bacteriological parameters at locations selected from existing domestic wells and locations identified in Figure 7-1 of Appendix IR15-1 submitted in the Response to Information Request Round 1 package 3 (Canadian Impact Assessment Registry Reference Number 80123, Document Number 1260) between the project development area and Tsuut'ina Nation 145 Reserve during dry operation and at the start of post-flood operation;
 - 7.9.2 report the results of monitoring referred to in condition 7.9.1 to Tsuut'ina Nation 145 Reserve;
 - 7.9.3 if the results of the monitoring referred to in condition 7.9.1 demonstrate any exceedance of thresholds for parameters identified in Health Canada *Guidelines for Canadian Drinking Water Quality*, the Proponent shall determine, in consultation with the parties involved in the development of the follow-up program, if the source of exceedance is attributable to the Designated Project and develop and implement modified or additional mitigation measures for any such exceedance.

8 Current use of lands and resources for traditional purposes

- 8.1 The Proponent shall undertake, in consultation with Indigenous groups and relevant authorities, progressive reclamation of areas disturbed by the Designated Project, including bank and riparian areas. In doing so, the Proponent shall:
 - 8.1.1 identify agronomic plant species and plant species native to the regional assessment area to use for revegetation, including native seed mix suitable for wetlands;
 - 8.1.2 revegetate the diversion channel, earthen embankment and floodplain berm prior to operation;
 - 8.1.3 reclaim non-native plant areas to equivalent baseline land functions after construction and during post flood operation; and
 - 8.1.4 reclaim the surface drainage patterns of the area.
- 8.2 The Proponent shall manage weeds and invasive species as necessary to promote successful revegetation that includes traditional plant establishment and growth. In doing so, the Proponent shall not use herbicide within 30 metres of wetlands and waterbodies in the project development area.
- 8.3 The Proponent shall conduct pre-construction surveys to determine the presence of grizzly bear (*Ursus arctos*) western population dens in the project development area. The Proponent shall establish, in consultation with Indigenous groups and relevant authorities, no-work buffer zones around grizzly bear (*Ursus arctos*) western population dens identified during the pre-construction surveys or found by the Proponent or brought to the attention of the Proponent by an Indigenous group during any phase of the Designated Project. The Proponent shall maintain the buffer zones from their establishment and throughout operation.
- 8.4 The Proponent shall follow the timing restrictions on industrial activities identified in the Alberta's *Recommended Land Use Guidelines: Key Wildlife and Biodiversity Zones* when undertaking construction and maintenance activities in the Key Wildlife and Biodiversity Zone identified along the Elbow River. In doing so, the Proponent shall:
 - 8.4.1 if it is not economically or technically feasible for the Proponent to follow the timing restrictions on industrial activities identified in the Alberta's *Recommended Land Use Guidelines: Key Wildlife and Biodiversity Zones*, develop and implement additional mitigation measures, in consultation with Environment and Climate change Canada and other relevant authorities. The Proponent shall submit these measures to the Agency prior to implementing them.
- 8.5 The Proponent shall install and maintain, during construction and operation, one underpass under Highway 22 where it crosses the diversion channel and wildlife friendly fences to provide passage for grizzly bear western population (*Ursus arctos*) and ungulates. The Proponent shall install the wildlife friendly fences as identified in Figure IR 15-1 submitted in the Response to Information Requests Round 1 Package 2 (Canadian Impact Assessment Registry Reference Number 80123, Document Number 1260), taking into account Alberta Conservation Association *Landholder's Guide to Wildlife Friendly Fencing*, to prevent access by livestock and allow safe passage for wildlife. The Proponent shall maintain the fences during all phases of the Designated Project.

- 8.6 The Proponent shall maintain navigation on the Elbow River during all phases of the Designated Project. In doing so, the Proponent shall establish and maintain, in consultation with Transport Canada, a portage route around the diversion inlet gate and the service spillway locations to maintain navigation on the Elbow River during construction of these project components and install safety signage to signal the presence of the diversion inlet gate and location of the portage route until such time that the portage route is no longer required to maintain navigation on the Elbow River.
- 8.7 The Proponent shall provide the Agency and Indigenous groups with the final project design within seven days of its finalization and shall notify Indigenous groups at least 30 days in advance of construction to allow Indigenous groups to catalogue, harvest and transplant traditional and medicinal plants present within the project development area. The Proponent shall identify and implement, in consultation with Indigenous groups, time periods during which maintenance activities shall not occur within the project development area to accommodate Indigenous harvesting activities, unless if maintenance activities are necessary for safety reasons.
- 8.8 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, a Land Use Plan to support and prioritize Indigenous groups' practice of traditional activities within the project development area, and implement the Plan during all phases of the Designated Project. As part of the Land Use Plan, the Proponent shall:
- 8.8.1 secure for the exclusive use by Indigenous groups, sufficient land area within the project development area to support Indigenous traditional use activities, including hunting, plant gathering, trapping, fishing and access to cultural sites;
 - 8.8.2 provide maps of the land use areas identified pursuant to condition 8.8.1 to the Agency and Indigenous groups prior to construction;
 - 8.8.3 install, prior to construction, signage at the limits of the land use areas identified pursuant to condition 8.8.1 encouraging low noise level use of the land adjacent to the land use areas and indicating the potential presence of Indigenous peoples exercising their Treaty rights to hunt for food and the use of hunting weapons;
 - 8.8.4 provide access to Indigenous groups to the land use areas identified pursuant to condition 8.8.1 during all phases of the Designated Project, to the extent that such access is safe. The Proponent shall notify Indigenous groups in a timely manner if access must be prohibited for safety reasons.
- 8.9 The Proponent shall establish, in consultation with Indigenous groups, a staging area for Indigenous traditional use activities in close proximity to the land use areas identified in condition 8.8. The Proponent shall provide maps to the Agency and Indigenous groups of the staging area prior to construction.
- 8.10 The Proponent shall provide unimpeded access to the staging area identified in condition 8.9, except during the flood operation when access to the staging area may be prohibited for safety reasons. The Proponent shall communicate to Indigenous groups the closure of the staging area when required for safety reasons during flood season.
- 8.11 The Proponent shall establish, prior to construction and in consultation with Indigenous groups, and maintain, throughout construction and operation, a Land Use Advisory Committee (the committee) to support the development and implementation of the Land Use Plan identified in

condition 8.8. The Proponent shall invite Indigenous groups to participate in all committee activities. As part of the establishment of the committee, the Proponent shall co-develop Terms of Reference for the committee with Indigenous groups. The Proponent shall submit the completed Terms of Reference to the Agency prior to construction. The Terms of Reference shall include:

- 8.11.1 the means by which the Proponent and Indigenous groups shall jointly identify issues to be discussed by the committee, including issues related to the shared use of the project development area by the public for recreational and agricultural purposes and by Indigenous groups;
 - 8.11.2 the frequency, timing and location of committee meetings during each phase of the Designated Project;
 - 8.11.3 the means by which the Proponent shall share information related to the implementation of the Designated Project with the committee, including when and how information will be shared;
 - 8.11.4 the means by which the Proponent shall document the activities of the committee including all views and information received through the committee; and how the Proponent has considered all views and information received through the committee;
 - 8.11.5 the means by which the Proponent shall document any issue for which committee members are unable to find resolution, including a rationale for the lack of resolution, and any solutions for finding a resolution proposed by the committee;
 - 8.11.6 the means by which the Proponent shall share a yearly report documenting the information pursuant to conditions 8.11.4 and 8.11.5 with committee members and with the Agency, including when and how this information shall be shared; and
 - 8.11.7 the means by which the Proponent shall evaluate and revise as necessary, in consultation with Indigenous groups, the Terms of Reference throughout construction and operation.
- 8.12 The Proponent shall develop, prior to operation, a follow-up program to verify the accuracy of the environmental assessment as it pertains to natural re-vegetation of the drained reservoir during post-flood operation. As part of the development of the follow-up program, the Proponent shall identify objectives that shall be used by the Proponent to evaluate the success of re-vegetation. The Proponent shall implement the follow-up program during operation. As part of the implementation of the follow-up program, the Proponent shall:
- 8.12.1 monitor the composition and abundance of natural re-vegetation occurring in the drained reservoir, for the first six months of post-flood operation; and
 - 8.12.2 develop and implement additional mitigation measures if the results of the monitoring referred to in condition 8.12.1 demonstrate that additional mitigation measures are required to promote successful re-vegetation of the drained reservoir. As part of these measures, the Proponent shall mitigate wind erosion through the application of a tackifier.
- 8.13 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of mitigation measures as it pertains to the adverse environmental effects of the Designated Project on the current use of lands and resources for traditional purposes. The

Proponent shall implement the follow-up program during all phases of the Designated Project to monitor:

- 8.13.1 the effectiveness of progressive reclamation;
- 8.13.2 the effectiveness of the Land Use Plan in supporting and prioritizing Indigenous groups' practice of traditional activities within the project development area;
- 8.13.3 the effectiveness of the Land Use Advisory Committee in addressing views and information received pursuant to condition 8.11.4; and
- 8.13.4 that the availability and quality of resources for traditional use activities is as predicted in the environmental assessment.

9 Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance

- 9.1 The Proponent shall retain, prior to construction, the services of Indigenous monitors from all Indigenous groups to observe, record, and report on the implementation, throughout construction, of requirements set out in this document including the archeological and heritage management plan referred to in condition 9.3. Prior to retaining the services of Indigenous monitors, the Proponent shall determine, in consultation with Indigenous groups, the scope, purpose and objectives of the participation of Indigenous monitors and shall provide that information to the Agency prior to construction.
- 9.2 The Proponent shall develop and implement, prior to construction and in consultation with Indigenous groups and Alberta Culture and Tourism, a historic resource impact assessment of the project development area. The Proponent shall apply the archaeological and heritage management plan pursuant to condition 9.3 to structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources identified as part of the historic resource impact assessment.
- 9.3 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Alberta Culture and Tourism, and implement, during construction and operation, an archaeological and heritage management plan for any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources within the project development area, including, but not limited to sites and things subject the *Alberta Historical Act*. The archaeological resources and heritage management plan shall include:
 - 9.3.1 avoidance measures for any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources within the project development area identified in Table IR 10-1 submitted in the Response to Information Request Round 1 Package 2 (Canadian Impact Assessment Registry Reference Number 80123, Document Number 1260) and the historic resource impact assessment pursuant to condition 9.2;
 - 9.3.2 procedures to record, analyze, and mitigate the effects on any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources that could not be avoided pursuant to condition 9.3.1;

- 9.3.3 a process for reporting information about any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources to Indigenous groups;
- 9.3.4 a chance find procedure to apply in the event that any previously unidentified structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources are discovered within the project development area by the Proponent or brought to the attention of the Proponent by an Indigenous group. As part of the chance find procedure the Proponent shall:
 - 9.3.4.1 immediately halt work at the location of the discovery, except for actions required to be undertaken to protect the integrity of the discovery;
 - 9.3.4.2 delineate an area of at least 30 metres around the discovery as a no-work zone;
 - 9.3.4.3 inform the Agency and Indigenous groups within 24 hours of the discovery, and allow Indigenous groups to monitor archaeological works at the location of the discovery;
 - 9.3.4.4 have a qualified individual, who is a registered archeologist under the Alberta's *Historical Resources Act*, conduct an assessment at the location of the discovery; and
 - 9.3.4.5 consult with Indigenous groups and relevant authorities with respect to applicable legislative or legal requirements and associated regulations and protocols respecting the discovery, recording, transferring and safekeeping of previously unidentified structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources.
- 9.4 The Proponent shall develop and implement, in consultation with Indigenous groups, cultural awareness training for all employees associated with the Designated Project during all phases of the Designated Project.
- 9.5 The Proponent shall, prior to construction and in consultation with Indigenous groups, provide access to Indigenous groups to the project development area for the purpose of conducting ceremonies, to the extent that such access is safe. At the request of Indigenous groups, the Proponent may participate in any ceremony held by Indigenous groups, including for the purpose of making offerings.
- 9.6 The Proponent shall provide the Agency and Indigenous groups with a map of the final construction site within seven days of its finalization and shall not undertake any construction activity outside of the final construction site, to the extent that it is technically feasible or unless required to meet safety requirements. In the event that the Proponent shall conduct any construction activity outside of the final construction site, the Proponent shall apply the requirements set out in condition 9.3.4 for any previously unidentified any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources discovered outside of the final construction site.
- 9.7 The Proponent shall have a qualified individual conduct paleontological monitoring during construction when:
 - 9.7.1 excavating bedrock for the diversion inlet;

- 9.7.2 excavating 4 metres of bedrock or greater, including for the emergency spillway;
 - 9.7.3 excavating bedrock for new road alignments including on Highway 22; and
 - 9.7.4 using open cut methods for relocation of pipelines and utilities under the diversion channel.
- 9.8 The Proponent shall strip and stockpile topsoil during construction and shall prevent mixing of topsoil with other soil horizons. The Proponent shall replace the topsoil during progressive reclamation pursuant to condition 8.1.
- 9.9 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and Alberta Culture and Tourism, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all mitigation measures for effects to any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources. The Proponent shall implement the follow-up program during all phases of the Designated Project and submit the results of the follow-up program to Alberta Culture and Tourism.

10 Accidents and malfunctions

- 10.1 The Proponent shall take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects and to mitigate any adverse environmental effect from accidents and malfunctions that do occur. As part of these measures, the Proponent shall:
- 10.1.1 update the probable maximum precipitation and hydrologic modelling for the Designated Project, including the parameters values, the precipitation variations and spatial and temporal evolution of the 2013 Alberta flood;
 - 10.1.2 store hazardous materials, including lubricating oil in designated areas with proper primary and secondary containment and in accordance with appropriate federal, provincial and municipal safety procedures and requirements;
 - 10.1.3 store combustible and flammable materials in designated areas at least six metres away from the project development area limits; and
 - 10.1.4 locate spill containment kits in designated locations within the project development area where there is a higher risk of spills;
 - 10.1.5 conduct annual testing of all equipment and project components and implement any corrective measures required based on the result of the annual testing prior to flood operation;
 - 10.1.6 ensure that all electrically-powered components of the Project have backup generators and can be manipulated manually , if required.
- 10.2 The Proponent shall consult, prior to construction, Indigenous groups on the measures to be implemented to prevent accidents and malfunctions.
- 10.3 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, an accident and malfunction response plan in relation to, and for all phases of the Designated Project. The accident and malfunction plan shall include:

- 10.3.1 the types, location, and quantities of all substances expected to be stored and transported by pipelines within the project development area that may cause adverse environmental effects in case of a spill;
 - 10.3.2 a description of the types of accidents and malfunctions that may cause adverse environmental effects during any phase of the Designated Project, including fire, spills and overtopping, failure or breach of the auxiliary spillway and pipeline rupture;
 - 10.3.3 the measures to be implemented in response to each type of accident and malfunction referred to in condition 10.3.1 to mitigate any adverse environmental effect caused by the accident or malfunction, including:
 - 10.3.3.1 measures to prevent or minimize containerized material spills from spreading over land surfaces and measures to recover spilled materials from water bodies, as required;
 - 10.3.3.2 measures to identify any sensitive habitats where response efforts shall be prioritized and where shoreline clean up shall be undertaken; and
 - 10.3.3.3 measures to reduce fire hazard and enhance fire preparedness.
 - 10.3.4 the locations of spill containment kits within the project development area;
 - 10.3.5 the implementation of regular and coordinated personnel training exercises for the prevention of and response to accidents and malfunctions referred to in condition 10.3.2; and
 - 10.3.6 a description of how the Proponent will evacuate its property and participate in coordinated evacuation procedures with relevant authorities in the case of an accident or malfunction requiring evacuation.
- 10.4 The Proponent shall maintain the accident and malfunction response plan referred to in condition 10.3 up-to-date during all phases of the Designated Project. The Proponent shall submit any updated accident and malfunction response plan to the Agency and to the parties being consulted during the development of the plan within 30 days of the plan being updated.
- 10.5 In the event of an accident or malfunction with the potential to cause adverse environmental effects, the Proponent shall immediately implement the measures appropriate to the accident or malfunction referred to in condition 10.3.2 and shall:
- 10.5.1 implement the communication plan referred to in condition 10.6 as it relates to accidents and malfunctions;
 - 10.5.2 notify, as soon as possible, Indigenous groups and relevant authorities of the accident or malfunction, and notify the Agency in writing no later than 24 hours following the accident or malfunction. For the notification to Indigenous groups and the Agency, the Proponent shall specify:
 - 10.5.2.1 the date when and location where the accident or malfunction occurred;
 - 10.5.2.2 a summary description of the accident or malfunction; and
 - 10.5.2.3 a list of any substance potentially released into the environment as a result of the accident or malfunction.
 - 10.5.3 submit a written report to the Agency no later than 30 days after the day on which the accident or malfunction occurred. The written report shall include:

- 10.5.3.1 a detailed description of the accident or malfunction and of its adverse environmental effects;
 - 10.5.3.2 a description of the measures that were taken by the Proponent to mitigate the adverse environmental effects caused by the accident or malfunction;
 - 10.5.3.3 any view from Indigenous groups and potentially affected parties and advice from relevant authorities received with respect to the accident or malfunction, its adverse environmental effects and the measures taken by the Proponent to mitigate these adverse environmental effects;
 - 10.5.3.4 a description of any residual adverse environmental effect and any modified or additional measure required by the Proponent to mitigate residual adverse environmental effects; and
 - 10.5.3.5 details concerning the implementation of the accident or malfunction response plan referred to in condition 10.3.
- 10.5.4 submit a written report to the Agency no later than 90 days after the day on which the accident or malfunction occurred that includes a description of the changes made to avoid a subsequent occurrence of the accident or malfunction and of the modified or additional measure(s) implemented by the Proponent to mitigate and monitor residual adverse environmental effects and to carry out any required progressive reclamation, taking into account the information submitted in the written report pursuant to condition 10.5.3. The report shall include all additional views from Indigenous groups and potentially affected parties and advice from relevant authorities received by the Proponent since the views and advice referred to in condition 10.5.3.3 were received by the Proponent.
- 10.6 The Proponent shall develop, in consultation with Indigenous groups and potentially affected parties, a communication plan for accidents and malfunctions occurring in relation to the Designated Project, including accidents and malfunctions occurring within the project development area which may affect area(s) outside of the project development area. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up-to-date during all phases of the Designated Project. The plan shall include:
- 10.6.1 the types of accidents and malfunctions requiring the Proponent to notify Indigenous groups and potentially affected parties;
 - 10.6.2 the manner by which Indigenous groups and potentially affected parties shall be notified by the Proponent of an accident or malfunction and of any opportunity to assist in the response to the accident or malfunction; and
 - 10.6.3 the contact information of the representatives of the Proponent that Indigenous groups and potentially affected parties may contact and of the representatives of each Indigenous groups and potentially affected parties to which the Proponent shall provide notification.

11 Schedules

- 11.1 The Proponent shall submit to the Agency a schedule for all conditions set out in this document no later than 60 days prior to the start of construction. This schedule shall detail all activities planned to fulfill each condition set out in this document and the commencement and estimated completion month(s) and year(s) for each of these activities.

- 11.2 The Proponent shall submit to the Agency a schedule outlining all activities required to carry out all phases of the Designated Project no later than 60 days prior to the start of construction. The schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities, including the commencement and estimated completion of each of the three construction phases, the commencement of the operation phase and the commencement of the operation phase at which the Designated Project operates at its full operational capacity.
- 11.3 The Proponent shall submit to the Agency in writing an update to schedules referred to in conditions 11.1 and 11.2 every year no later than June 30.
- 11.4 The Proponent shall provide Indigenous groups and potentially affected parties with the schedules referred to in conditions 11.1 and 11.2, and any update to the initial schedule made pursuant to condition 11.3 at the same time the Proponent provides these documents to the Agency.

12 Record keeping

- 12.1 The Proponent shall maintain all records relevant to the implementation of the conditions set out in this document. The Proponent shall provide the aforementioned records to the Agency upon demand within a timeframe specified by the Agency.
- 12.2 The Proponent shall retain all records referred to in condition 12.1 at a facility in Canada and shall provide the address of the facility to the Agency. The Proponent shall notify the Agency at least 30 days prior to any change to the physical location of the facility where the records are retained, and shall provide to the Agency the address of the new location.
- 12.3 The Proponent shall notify the Agency of any change to the contact information of the Proponent.