

ATTACHMENT

Federal Authority Advice Record: Designation Request under IAA

Clearwater Peat Harvesting Project

Department/Agency	Environment and Climate Change Canada (ECCC)
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1. Has your department or agency considered whether it has an interest in the Project; exercised a power or performed a duty or function under any Act of Parliament in relation to the Project; or taken any course of action (including provision of financial assistance) that would allow the Project to proceed in whole or in part?

Specify as appropriate.

ECCC has not previously considered the Project, exercised a power or performed a duty, or taken any course of action as part of the Project.

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2. Is it probable that your department or agency may be required to exercise a power or perform a duty or function related to the Project to enable it to proceed?

If yes, specify that power, duty or function and its legislative source.

Based on the available information, ECCC does not expect that it will be required to exercise a power or perform a duty or function related to the Project to enable it to proceed. Once the scope of the Project and of the assessment are established by the Agency, this may change as additional activities or Project components could come into scope. Information on the *Migratory Birds Convention Act 1994* (MBCA) and *Species at Risk Act* (SARA) are provided below. With regards to the SARA; because the Project is not located on federal lands and there are no SARA orders in place, only the SARA prohibitions pertaining to migratory birds would apply and would not apply to critical habitat unless an order is put in place.

Migratory Birds Convention Act permits

The MBCA protects migratory birds, their eggs and nests, wherever they occur, regardless of land tenure. It is prohibited to harm or kill migratory birds or to disturb, destroy or take nests or eggs when they are protected. In rare instances, migratory bird permits may be required for activities that affect human health and safety, and that may cause injury to the use of the land, however the potential for permitting in these areas is anticipated to be case specific and at discreet locations, and unrelated to whether the Project is able to proceed.

Species at Risk Act permits

For species listed on Schedule 1 of the SARA as Extirpated, Endangered or Threatened, a permit may be required from ECCC (section 73 of SARA) for activities that affect a listed terrestrial wildlife species, any part of its critical habitat, or the residences of its individuals, where those prohibitions are in place.

Prohibitions are in place for individuals and residences on federal lands in a province, reserve or any other lands under the Indian Act, or lands under the authority of the Minister of the Environment, and for birds listed under the MBCA wherever they occur regardless of land tenure.

Furthermore, prohibitions may be in force on land other than federal land pursuant to other orders or regulations under SARA. It is possible that further prohibitions may come into force in the future through orders in Council for individuals, residences and critical habitat on non-federal lands and/or through ministerial order for critical habitat on federal lands. It is also possible that, over the course of the assessment or after the assessment, additional species could be listed under the SARA; permits may be required for Project activities that affect these additional species. Proponents are advised to monitor for such developments on the SARA Registry <https://www.canada.ca/en/environment-climatechange/services/species-risk-public-registry.html>.

Links to publicly available documents:

- Guidelines for permitting under Section 73 of Species at Risk Act <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/policiesguidelines/permitting-under-section-73.html>
- Species at Risk Permitting Policy <https://species-registry.canada.ca/index-en.html#/consultations/2983>

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3. If your department or agency will exercise a power or perform a duty or function under any Act of Parliament in relation to the Project, will it involve public and Indigenous consultation?

Specify as appropriate.

As per Question 2 above, it is unlikely that a SARA permit will be required. If a SARA permit is required for this Project, ECCC may require public and Indigenous consultation related to the issuance of a SARA permit during the impact assessment process and will determine and action accordingly.

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4. Is your department or agency in possession of specialist or expert information or knowledge that may be relevant to any potential adverse effects within federal jurisdiction caused by the Project or adverse direct or incidental effects stemming from the Project?

Specify as appropriate.

ECCC has specialist or expert information that may be relevant to the Project in the areas listed below; in each of these subject areas we have expertise related to establishing an adequate baseline, assessing potential effects to biophysical valued components, effectiveness of mitigation measures, methods for monitoring and follow-up, as well as information regarding federal policies, standards, and regulations that may be relevant to the assessment. This list may change if additional Project activities or components should come into scope.

Air Quality: ambient air quality; sources of emissions; emissions estimation and measurement; dispersion modelling; and follow-up monitoring.

Greenhouse gas emissions and climate change: estimations of greenhouse gas (GHG) emissions

(net and upstream); impact on carbon sinks; GHG mitigation measures and determination of Best Available Technologies/Best Environmental Practices (BAT/BEP); credible plan to achieve net-zero GHG emissions by 2050; climate change science to inform evaluation of potential changes to the environment and Project resilience to effects of climate change; climate change policies; and national GHG projections.

Water quality and quantity: surface water quality insofar as it could affect fish and fish habitat; water quality predictions and modelling; contaminant sources for surface water; wastewater, seepage and runoff effects; management of contaminated soils or sediments; erosion and sedimentation; water impoundment; seasonal variation in water quality; nutrient effects; interactions and effects of groundwater on surface water quality; hydrology (streamflow rates data and modelling, flooding and extreme events management, drainage control, water levels, water balances); geochemistry; follow-up and monitoring.

Wildlife, species at risk, and habitat: migratory birds, their nests, eggs, and habitat; Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessed species, SARA listed species at risk, individuals, their residences, habitat and critical habitat including recovery strategies, action plans and management plans; ecological function of wetlands; ecotoxicology.

Environmental emergencies: emergency management planning and guidance; atmospheric transport and dispersion modelling of contaminants in air; fate and behaviour, hydrologic trajectory modelling of contaminants in water.

Climate and Meteorology: long-term climate patterns and norms.

5. Has your department or agency had previous contact or involvement with the proponent or other parties in relation to the Project?

Provide an overview of the information or advice exchanged.

Based on information readily available, ECCC-PNR has not been involved with the Proponent or other parties that would be relevant to the assessment of this Project.

6. From the perspective of the mandate and area(s) of expertise of your department or agency, does the Project have the potential to cause adverse effects within federal jurisdiction or adverse direct or incidental effects as described in section 2 of IAA? Could any of those effects be managed through legislative or regulatory mechanisms administered by your department or agency? If a licence, permit, authorization or approval may be issued, could it include conditions in relation to those effects?

Specify as appropriate.

Air quality

The proposed Project involves on-road vehicles and mobile off-road machines for construction, operation and decommissioning, which will lead to an increase in road traffic (e.g. hauling of material by truck), and have the potential to adversely affect air quality. More specifically, the combustion of fossil fuels can result in the emission of air contaminants such as sulfur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds (VOCs), and fine particulate matter (PM_{2.5}). Activities that cause a physical disturbance to land, such as earth moving, land clearing and transportation, can also introduce particulate matter (e.g. dust) to the surrounding region. The emission of these air pollutants can result in local or regional degradation of ambient air quality, with potential impacts on sensitive ecosystem receptors. Furthermore, emissions of air contaminants as a result of the Project may add cumulatively to the emissions from other activities, contributing to degradation of air quality in the region.

When contaminants settle out of the air in the surrounding environment, their deposition may result in adverse impacts to terrestrial and aquatic ecosystems. For example, emissions of NO_x and SO_x may lead to acidification and potential exceedance of ecosystems' critical loads. Air contaminant emissions can result in contamination of nearby land and waterbodies, and may affect sensitive ecosystem receptors.

Greenhouse Gas Emissions and Climate Change

The construction, operation, and decommissioning of the proposed Project may result in greenhouse gas (GHG) emissions, or impact carbon sinks, and may hinder or contribute to the Government of Canada's ability to meet its commitments in respect of climate change. Furthermore, the Project has the potential to be affected by future climate change, possibly resulting in impacts to the environment. Climate change may alter the likelihood or magnitude of sudden weather events such as extreme precipitation that can contribute to flooding, as well as contribute to longer-term changes such as sea level rise, permafrost thaw and changes to migration patterns. Changes related to warming are already evident in many parts of Canada, and are projected to continue in the future with further warming.

The [Strategic Assessment of Climate Change \(SACC\)](#)¹ (published in 2020) provides guidance related to climate change throughout the impact assessment process. The SACC outlines information that the Proponent should

1. SACC - <https://www.strategicassessmentclimatechange.ca/16736/widgets/65686/documents/40846>

provide during the impact assessment process on GHG emissions, impact of the Project on carbon sinks, impact of the Project on federal emissions reduction efforts and on global GHG emissions, GHG mitigation measures and climate change resilience; the circumstances in which an upstream GHG assessment would be required; and the circumstances in which a credible plan to achieve net-zero emissions by 2050 will be required.

More details are provided in the [draft Technical Guide Related to the Strategic Assessment of Climate Change: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan and upstream GHG assessment](#)⁹ published in August 2021.

Climate Change Resilience

Given projected changes in future climate for the Project area, climate change considerations are relevant to the Project review. Climate changes in the Project area, such as possible changes in mean and extreme precipitation and temperature and related environmental conditions, may alter baseline conditions, with implications for climate sensitive aspects of Project design and associated effects on the environment, including the hydrological regime.

More details are provided in the *Draft technical guide related to the Strategic Assessment of Climate Change: Assessing climate change resilience* published in March 2022.

Water Quality and Quantity

The activities linked to the construction, operation, and decommissioning of the Project can have adverse effects on the quality of groundwater and surface water, as well as on the hydrological regimes of watercourses and water bodies.

As described in the designation request letter from Rae and Company, the first phase of the Project includes the clearing and drainage of approximately 135.9 ha of peatland for horticulture purposes with a total Project footprint of 155.5 ha including harvest sections, access roads, harvest roads, sedimentation ponds, and drainage ditches. Few other details are available at this time.

Peat harvesting projects typically involve construction of a drainage ditch system to reduce water levels within the peat in order to facilitate peat removal, as well as sedimentation ponds for collection and settling of drained waters prior to discharge to the receiving environment. These activities could result in erosion and sedimentation, increases in suspended solids, changes in pH, and mobilization of other contaminants to surrounding waters, resulting in adverse effects on water quality. The deposition of airborne particulate matter generated by the Project could also be a source of surface water contamination.

Surface water quantities could be changed by alteration of surface flows, potentially affecting water quality. Constructing and maintaining access and harvest roads, constructing watercourse crossings, excavating or reworking of soils, sediments or rocks, clearing vegetation, and harvesting of peat may result in the deposit or mobilization of contaminants to watercourses and water bodies and result in adverse effects on water quality. Disturbances to the natural flow of surface water such as water impoundment, installation of drainage ditches, diversion channels, crossing of watercourses, or removal of peat could have effects on the quantity, availability and hydrological regimes of watercourses and waterbodies. The extent and significance of this impact depends on the extent of active disturbance and success of reclamation. Removal of peatlands may also reduce the natural treatment and filtering capacity of the area, potentially resulting in poorer water quality downstream.

Disturbing soils, rock, streambanks and wetlands during Project activities may cause erosion and result in deposition of soils and sediments to waterbodies. Soils and sediments can also enter waterbodies through streambed disturbance. These suspended solids can have adverse effects on water quality.

Contaminants may be introduced into waterbodies through wastewater discharge, groundwater resurgence, or spills resulting in adverse effects on water quality.

Adverse effects on water quality could potentially lead to adverse effects on sensitive ecosystem receptors, such as fish and fish habitat, migratory birds, plants and wildlife.

Wildlife, species at risk, and habitat

The activities linked to the construction, operation, and decommissioning of the Project could have negative effects on terrestrial wildlife, including migratory birds and species at risk (amphibians, arthropods, birds, lichens, terrestrial mammals, mosses, reptiles, and vascular plants) listed on the SARA, and their habitat (e.g. wetlands).

The Project will cause the loss, fragmentation and alteration of habitat, and can negatively impact the reproduction, migration and wintering of affected species. The Project's disturbances may also have other negative effects on wildlife, particularly by facilitating the movement of predators in the area, thereby increasing predator abundance, distribution and hunting efficiency or reducing connectivity within the habitat. The construction of the Project may also promote access to the region and increased hunting pressure, which may affect wildlife.

The Project is within the range of the Yellow Rail (SARA Special Concern), and there may be potential habitat on the project site.

Migratory birds and their habitat

The Project has the potential to affect migratory birds and their eggs and nests, protected under the Migratory Birds Convention Act (MBCA). Modernization of the MBCA in 2022 has additionally identified 18 species of birds whose nests are protected year round (Schedule 1 of the Migratory Birds Regulations (MBR) 2022).

The Project will remove habitat important for nesting, foraging, staging, and overwintering for migratory birds. Individual mortality and the destruction of nests and eggs or any other structure necessary for the reproduction and survival of species at risk could occur during all Project phases, particularly during site preparation, operation and Project decommissioning. Mortality of migratory birds and species at risk could also occur due to collisions with vehicles or infrastructure related to the Project. Accidental oil or chemical spills could also have adverse effects if these substances come into contact with migratory birds and species at risk. There is a higher risk that these effects would be more severe for migratory birds that are also species at risk and species where habitat is sensitive to disturbance (e.g., wetlands) or where there is already a high degree of cumulative effects to habitat or individuals.

Migratory birds and species at risk could be affected by sensory disturbances during the construction, operation, and decommissioning of the Project. Some examples of potential sources of sensory disturbance include noise from various project activities, lights, vibrations from excavation work and the operation of machinery, as well as the presence of workers. The amount, duration, frequency, and timing of noise are important to understand potential effects. Sensory disturbance may make adjacent habitats unsuitable for use by wildlife and cause avoidance effects in many species. Sandhill crane and other shorebird species that use open wetland areas (peatlands) are likely to be breeding in the Project area.

Wetlands

The activities linked to harvesting peatlands would have negative effects on wetlands and their ecological functions. Carrying out the Project would most likely alter the existing hydrological regimes essential for maintaining wetlands and thus affect the quality or availability of habitat for migratory birds and other wildlife, including species at risk. The destruction and modification of wetlands is likely to cause negative effects or harm to migratory birds and species at risk that use these areas for breeding and migration, as well as for foraging or resting areas. The Project may be likely to create pathways for the introduction and dispersal of invasive species. The spread of invasive species may pose a threat to wetlands.

The existing cumulative effects of habitat destruction are high in the area surrounding the Project, including agriculture, oil and gas, forestry and housing development. The area targeted by the Project contains residual habitat that has remained because it is less suitable for cultivation. The Project will highly fragment and destroy a large portion of this remaining residual habitat as shown in Figure 1 below.

Figure 1. Cumulative regional impacts



Environmental Emergencies

The proposed harvesting Project includes the potential for adverse environmental effects from accidents and malfunctions, such as spills from fuelling activities, leaking equipment or failure of sedimentation ponds.

Optimized spill prevention, preparedness and response construction of roads, including internal bog roads, a drainage network including sedimentation ponds, site clearing, mulching, and grading and peat harvesting (pulled by tractors), ancillary infrastructure, and maintenance and reclamation activities. An aboveground storage tank for fuel storage may be on site. As such, there is potential measures and systems will be important given the risk of spills of hazardous substances to the environment, especially to nearby waterways and environmentally sensitive areas.

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7. Does your department or agency have a program or additional authority that may be relevant and could be considered as a potential solution to concerns expressed about the Project? In particular, the following issues have been raised by the requestor. The Project could result in potential:
- adverse effects to areas within federal jurisdiction, including Indigenous peoples and lands;
 - adverse impacts to soil, water, wetlands, watersheds, medicines, vegetation and other component of the environment important to O'Chiese First Nation treaty rights;
 - alteration of the land and hydrological and ecological functions of groundwater, surface water, and wetlands in O'Chiese First Nation's traditional territory;
 - significant adverse impacts on the treaty and aboriginal rights of O'Chiese First Nation as well as significant adverse effects on health, social, and economic conditions;
 - adverse impacts to O'Chiese First Nation's Section 35 rights;
 - impacts to highly used traditional hunting, trapping and gathering areas including areas of cultural importance (i.e. gravesite located approximately 6km from the Project area);
 - contribution to climate change due to loss of peatland carbon storage and sequestration area; and
 - cumulative effects of existing peat harvesting operations in the area, which are likely irreversible or not restorable for well over 100 years.)

If yes, please specify the program or authority.

Please see answers to Question 6.

- *Fisheries Act*: Environment and Climate Change Canada administers Section 36(3) of the *Fisheries Act*, which prohibits the deposit of deleterious substances into waters frequented by fish, unless the deposit is authorized by regulations. The owner/operator will be required to ensure there are no deposits of deleterious substances that would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish.
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8. Does your department or agency have information about the interests of Indigenous groups in the vicinity of the Project; the exercise of their rights protected by section 35 of the *Constitution Act, 1982*; and/or any consultation and accommodation undertaken, underway, or anticipated to address adverse impacts to the section 35 rights of the Indigenous groups?

If yes, please specify.

No, ECCC does not have information about the interests of Indigenous groups in the vicinity of the Project as they relate to the Project.

9. If your department has guidance material that would be helpful to the proponent or the Agency, please include these as attachments or hyperlinks in your response.

ECCC Suggested hyperlinks

Species at risk public registry - Canada.ca <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>

Federal Policy on Wetland Conservation <https://publications.gc.ca/collections/Collection/CW66-116-1991E.pdf>
ECCC's Guidelines to Reduce Risk to Migratory Birds
<https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-riskmigratory-birds.html>

Federal Sustainable Development Strategy <https://www.fsds-sfdd.ca>

Strategic Assessment of Climate Change <https://www.strategicasessmentclimatechange.ca/>

Canadian Council of Ministers of the Environment – Air Quality
<https://ccme.ca/en/air-quality-report>

Margaret Fairbairn

Name of departmental / agency responder

Acting Regional Director

Title of responder

December 19, 2022

Date