

ATTACHMENT August 17, 2022
Federal Authority Advice Record: Designation Request under IAA
Response due by September 7, 2022
Patterson Lake South Mine Project

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|--------------------------------|---|
| Department/Agency | Environment and Climate Change Canada |
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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 considered interest in 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.

Please note the following requirements that may apply to this Project:

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.

Since the Project is not located on federal lands and there are no *Species at Risk Act* (SARA) orders in place, only the SARA prohibitions pertaining to migratory birds would apply. These SARA prohibitions would not apply to critical habitat unless an order is put in place.

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.

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, therefore no consultation is anticipated. If further information is acquired that changes this position, consultation will be conducted as needed.

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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 impact assessment 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 (Note: ECCC does not assess proposed projects for regulatory compliance, but instead provides technical input to the Agency to inform the assessment). Once the scope of the Project and of the assessment are established by the Agency, 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; atmospheric transport, transformation and 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; marine and freshwater dredging; 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; COSEWIC assessed species, SARA listed species, 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; marine winds, waves, and weather; and sea ice and icebergs.

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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 Prairie and Northern Region has not had any involvement 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

Mining Projects

The construction, operation, and decommissioning of mines can result in adverse effects on air quality. Mining operations, processing (crushing and milling), and activities associated with combustion (including transportation) can result in the emission of contaminants such as sulfur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds (VOCs), and particulate matter (PM_{2.5}, PM₁₀ and PM). Activities that cause a physical disturbance to land and ore material, such as earth moving, land clearing, blasting, crushing, and transportation, can also introduce particulate matter (e.g., dust and soot) to the surrounding region. The emission of these air contaminants can result in local or regional degradation of ambient air quality, with potential impacts on human health as well as on sensitive ecosystem receptors. Furthermore, emissions of air contaminants as a result of this 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, metals and polycyclic aromatic compound (PAC) emissions from mining activities may result in elevated concentrations of these contaminants in water, soil, flora, and fauna. Emissions of NO_x and SO₂ may also 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.

Road Transportation emissions

Projects which involve on-road vehicles and mobile off-road machines for construction, operation and decommissioning, or that lead to an increase in road traffic (e.g. hauling of material by truck from mine to shipping terminal), 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}). When some contaminants settle out of the air in the surrounding environment, their deposition may result in acidification and potential exceedance of ecosystems' critical loads. The emission of these air pollutants can result in local or regional degradation of ambient air quality, with potential impacts on 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 to 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. If not properly considered, such changes may cause issues such as equipment failures that can threaten the environment, human health and safety, interrupt essential services, disrupt economic activity, and incur high costs for recovery and replacement.

The Strategic Assessment of Climate Change (SACC) (published in October 2020) provides guidance related to climate change throughout the impact assessment process. The SACC outlines information that the Proponent should 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 would 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 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. There is potential for climate change to effect the Project, which in turn may have impacts on the surrounding environment (e.g. through accidents or malfunctions). 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.

For example, project components and activities for which climate change resilience could be important for this Project include (e.g., use of transportation road across a shrinking glacier). If the Proponent is required to conduct an Impact Statement, further information would be required through the Tailored Impact Statement Guidelines (TISG) on how the Project is resilient to and at risk from both the current and future impacts of a changing climate.

Water Quality and Quantity

Mining Projects

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

Mining projects often include the following activities: blasting, operating heavy equipment, ore processing, land clearing, etc. These activities could result in adverse effects to water quality through the release of suspended solids, ammonia, nitrate, hydrocarbons, and other contaminants to surrounding waters through erosion, sedimentation or runoff processes. Project activities may also produce airborne particulate matter that could also be a source of surface water contamination upon deposition. Contact water (including but not limited to: wastewater, effluents, runoff, seepage, discharges and spills) contains contaminants that could potentially affect water quality at all mining stages, including post-closure. Water quality could also be impacted by other mine-related releases, including sewage, chemicals, and other wastes.

Furthermore, the construction, operation, and decommissioning of mines can result in adverse effects on water quality from the potential exposure of acid-generating rock to air and water. Through the natural process of sulphide oxidation, water draining from areas of this exposed rock could acidify the aquatic receiving environment. Interaction between water, air and the exposed acid-generating rock could increase the leaching of metals into the aquatic receiving environment and water body, resulting in adverse effects to water quality.

Mining operations can expose rock that contain soluble minerals. When water passes over or through them, these minerals can dissolve in water and result in mineral depositions (e.g. calcium carbonate) and highly saline runoff; this runoff could be released to the aquatic receiving environment thereby altering streambed composition and/or salinity levels, which may result in adverse effects to water quality.

Surface water quality may also be degraded by interactions between groundwater and surface waters in the Project area. The use of water in mine production has the potential for contaminants to enter groundwater through seepage from the tailings disposal areas or other water impoundments. These contaminants could then be transported to aquatic receiving environments, resulting in possible adverse effects to water quality.

Mining projects may result in adverse effects to surface water quality by reducing the volume of inflows into nearby lakes and rivers. Surface flows can be altered through site re-contouring, surface water management (e.g., diversions of clean water around project areas), or other means. The “drawdown” of the water table – that is, lowering the elevation of subsurface water – can result from the construction and dewatering of open pits and underground mines. Drawdown can also result from the

withdrawal of water from constructed wells for water-intensive operational processes at the mine. Reducing the quantity of surface and groundwater available to recharge surface water bodies could reduce the total volumes of water in nearby lakes or rivers and potentially increase the concentration of contaminants and natural elements in those water bodies.

Adverse effects to water quality could, in turn, result in adverse effects to sensitive ecosystem receptors.

Linear Projects

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

Constructing watercourse crossings, conducting hydrostatic tests, constructing and maintaining access roads, excavating or reworking of soils, sediments or rocks, and drilling and blasting may result in the deposit of contaminants to watercourses and water bodies and result in adverse effects on water quality.

Disturbing soils, rock, and streambanks during construction 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.

Disturbing soil and rock may also result in processes such as acid rock drainage, or metal leaching, which has adverse effects on water quality due to acidification and introduction of metal contaminants into the waterbody.

Contaminants may be introduced into waterbodies through wastewater discharge, groundwater resurgence, or spills 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.

Water impoundment or withdrawals (for example, for hydrostatic tests) and disturbances to the natural flow of surface water (for example, watercourse crossings) could have effects on the quantity, availability and hydrological regimes of watercourses and waterbodies.

Adverse effects to water quality could, in turn, result in adverse effects to sensitive ecosystem receptors.

Wildlife, species at risk, and habitat

Mining Projects

Migratory birds and species at risk and their habitat

The activities linked to the construction, operation, and decommissioning of a mine and associated infrastructure could have negative effects on terrestrial wildlife, migratory birds and species at risk (e.g. amphibians, arthropods, birds, lichens, terrestrial mammals, mosses, reptiles, and vascular plants) listed on the SARA, and their habitat (e.g. wetlands) and critical habitat. See Annex 1 for a list of Species at Risk with potential to interact with the Project.

The nature of effects to wildlife and habitat (including residences and critical habitat defined under the SARA) can vary based on a number of factors, including: Project location, duration, scale, and configuration; ancillary project activities (e.g., land clearing, dredging, and flaring); existing cumulative effects; the type of habitat that may be disturbed; and sensitivity of species found in the project area. The pathway through which potential effects are conveyed will depend on the land, air, and water constituents associated with the site along with the behavioural adaptability, presence and interaction with the species limiting factor (e.g. habitat supporting staging, nesting, roosting or foraging) and population resilience.

More specifically, the Project is proposed within the SK2 caribou range and in close proximity to the SK1 caribou range. The Project is likely to affect critical habitat for the federal SK2 boreal caribou range as identified in the Federal Recovery Strategy for Woodland Caribou Boreal population. The SK2 range is considered 52% undisturbed, which is below the minimum 65% undisturbed management threshold. ECCC considers all existing habitat as critical habitat and advises that avoidance,

restoration, or offsetting are important to help achieve a no-net-loss goal for the Project and support the Recovery Strategy objectives to achieve the 65% undisturbed threshold for habitat. ECCC assessed the range to be “as likely as not” self-sustaining in the Federal Recovery Strategy. The rate of population decline in recent years (2017-2019) is around 30% per year (based on Saskatchewan’s 2021 Population Trend Analysis).

Within the SK2 West administrative unit (which is a subset of the SK2 range), the Saskatchewan Ministry of Environment estimates that 61.2% of the area is disturbed (with 24.8% of the disturbance human-caused and 36.5% due to wildfire).

Saskatchewan’s 2022 SK2 West Range Plan identifies four provincial landscape management goals, all of which are relevant to this Project:

1. Reduce the amount of human-caused disturbance,
2. Maintain greater than or equal to 80% of high-potential woodland caribou habitat in a condition unaffected by human-caused disturbance in all of SK2 West,
3. Maintain adequate connectivity between the SK2 West and adjacent Caribou Administration Units and jurisdictions, and
4. Decrease the total amount of non-permanent linear features.

This proposed mine could adversely affect the achievement of these management goals and could negatively impact the province’s ability to meet their commitments under the Canada-Saskatchewan Conservation Agreement for the Conservation of the Woodland Caribou, Boreal Population in Saskatchewan per SARA Section 11.

Additionally, the Project will likely contribute to cumulative effects including destruction and fragmentation of critical habitat and sensory disturbance to caribou due to multiple existing and proposed mine developments such as Cluff Lake, McLean Lake, Wheeler River and Rook I.

Based on information in the provincial SK2 West Range Plan the proposed mine site overlaps with areas of current caribou use and with important caribou habitat. The proposed mine location has direct overlap with habitat containing biophysical attributes important for caribou (i.e., areas with moderate to high potential to provide forage, refuge, and calving habitat, and good habitat suitability for caribou). The proposed mine site is located entirely within a Tier 1 Caribou Management Habitat Area, identified as such because it is an area of high-moderate caribou habitat potential with high levels of observed caribou use and low levels of human-caused disturbance. The primary provincial management objective for the area is habitat retention. The SK2 West Range Plan indicates that Tier 1 areas are “preferred deferral or avoidance areas for industrial developments or other land uses.” Primary management strategies for the area are 1) avoidance and 2) access management. Mitigation offsets in Tier 1 areas are considered, based on risk, and would have high offset requirements. According to the provincial SK2 West Range Plan, new disturbance in Tier 1 habitat is strongly discouraged and should only be considered in exceptional circumstances.

Without appropriate caribou habitat mitigation (including but not limited to alternative project siting, high requirement offsetting, or other measures), and monitoring, the Project would not be consistent with the Federal Recovery Strategy, the Saskatchewan Range Plan or the ECCC Canada-Saskatchewan Section 11 conservation agreement. As proposed, the Project would contribute to the cumulative loss of critical habitat in the SK2 caribou range and would not align with the Minister’s management objectives of a minimum of 65% undisturbed habitat defined within the federal Recovery Strategy as necessary for the survival and recovery of the species.

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, right-of-way maintenance and Project dismantling. Exploration and construction of mines and associated infrastructure usually contribute to large-scale land clearing activities, which leads to destruction, disturbance and fragmentation of habitat (e.g., foraging, nesting, hibernating), habitat avoidance, sensory disturbance, and the inadvertent disturbance and destruction of individuals, nest and eggs of 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. Destruction and/or disturbance of habitat can have increased impacts on species at risk individuals, residence and their critical habitat, which can lead to changes in prey and predator dynamics, loss of food resources, loss of breeding areas, changes in migration or movement, and increased risk of mortality. For example, certain species at risk (e.g. turtles) and migratory birds (e.g. Bank swallows, Common nighthawk) may nest in large piles of soil left unattended/unvegetated during the most critical period of breeding season. Other species at risk (e.g. bats) rely on summer and fall roosts and winter hibernacula that may have conditions (e.g.

humidity) disturbed by blasting and vibration associated with underground mining activities. At risk bat species and Common Nighthawk have been identified in the project area. Mortality in migratory birds and species at risk could also occur because of collisions with vehicles or infrastructure related to the Project. Accidental oil or chemical spills could also have adverse effects if these substances make their way into the habitats frequented by migratory birds and species at risk.

The construction, operation and decommissioning of mines may impact wildlife directly and indirectly through impacts to habitat through changes in geomorphological processes (e.g., sedimentation processes, water quality and quantity). Additionally, birds that land on and/or frequent waste water (e.g., submerged tailings in tailings ponds, pit water) have the potential to come into contact with toxic substances which can result in on and off site mortality. During construction, operation, maintenance and decommissioning, there is the potential for harmful substances to enter or be spilled into the receiving environment that may negatively affect wildlife. Depending on the nature of the release (e.g., toxicity, volume release, exposure pathways), effects to wildlife could be acute, chronic or both. Changes to water quality and quantity can affect migratory birds, wildlife, and their habitat.

Migratory birds and species at risk could be affected by sensory disturbances during the construction, operation, and decommissioning of the Project. Noise, vibrations and light from construction and operation activities may result in habitat disturbance, which can lead to avoidance of use. 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. The cumulative effect of noise and light disturbance from the proposed Rook I uranium mine at Patterson Lake also should be considered since sensory disturbance may make adjacent habitats unsuitable for use by wildlife and cause avoidance effects in many species.

Linear disturbance

The activities linked to the construction, operation, and decommissioning of a linear project and associated infrastructure 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, their habitat (e.g., wetlands) and critical habitat.

Migratory birds and species at risk and their habitat

Individual mortality and the destruction of nests and eggs or any other structure necessary for the reproduction and survival of species of risk could occur during all Project phases, particularly during site preparation, right-of-way maintenance and Project dismantling. Mortality in migratory birds and species at risk could also occur because of collisions with vehicles or infrastructure related to the Project. Accidental oil or chemical spills could also have adverse effects if these substances make their way into the habitats frequented by 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.

Linear disturbance (including but not limited to any new access road or road improvements required for the mine) can cause the loss, fragmentation and alteration of habitat, and can negatively impact the reproduction, migration and wintering of affected species. There is the potential for removal of habitat important for nesting, foraging, staging, and overwintering migratory birds. Linear 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 creating connectivity issue within the habitat. The construction of the Project may also promote access to the region and increased harvesting pressure, which may affect wildlife. Where a mining project requires new road infrastructure or an increase in capacity to existing road networks, the increase in road traffic volumes are likely to result in an increase in wildlife injury, mortality, the introduction of invasive species (e.g., Common Reed (*Phragmites australis*) and hunters/poachers. A linear disturbance is also more likely to create introduction and dispersal pathways for invasive species. The spread of invasive species may pose a threat to wildlands.

Wetlands

The activities linked to the construction, operation, and decommissioning of a mine and associated linear disturbances could have negative effects on wetlands and their ecological functions that are important to migratory birds and boreal woodland caribou. Carrying out the Project, particularly the activities related to construction, is likely to alter the existing hydrological regimes essential for maintaining wetlands and thus affect the quality or availability of habitat for migratory birds and other wildlife. The destruction and modification of wetlands is likely to cause negative effects on or harm

migratory birds and species at risk that use these areas for breeding and migration, as well as for foraging or resting areas. Indirect effects of wetland contamination from dust or toxicity can have an impact on important prey species at risk (e.g., aerial insectivores and bats) and migratory birds.

Environmental Emergencies

The proposed mining Project includes a tailing management facility, hazardous materials handling and storage area, fuel and oil, propane tanks and a wastewater treatment facility. As such, there is potential for adverse environmental effects from accidents and malfunctions, such as a failure of the tailings dam, spills of hazardous chemicals, fires from flammable gases or failure of the water treatment system. Adverse effects to air quality, water quality, wildlife and wildlife habitat could result from the accidental release of high concentrations of ammonia, hydrocarbons, and other contaminants to surrounding waters. Optimized spill prevention, preparedness and response 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:
- is located in an environmentally sensitive area including within the territory of the Boreal Shield Woodland Caribou;
 - is anticipated to adversely impact areas within federal jurisdiction, including Indigenous peoples and lands, species at risk, fish and fish habitats;
 - is anticipated to significantly and adversely impact the ability for Métis people to exercise their rights and may compromise the integrity of their Land Claim;
 - presents a risk to the human and socio-economic health of Métis and other Indigenous peoples, both in and around the Project location, and through the transportation corridor which passes through a number of majority-Métis communities;
 - will contribute to the cumulative impacts of other developments in an around Patterson Lake, an area of cultural significance to Metis Nation of Saskatchewan; and
 - will create adverse impacts that will not be adequately or fully addressed through the provincial environmental assessment process.

If yes, please specify the program or authority.

Please see responses to Question 6.

ECCC would like to clarify that the Project is located in close proximity to the Boreal Shield (SK1) Woodland Caribou range, and within the Boreal Plain (SK2) Woodland Caribou range. The Project is not directly within the territory of the Boreal Shield Woodland Caribou as indicated in the question.

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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.

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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.

SARA Registry

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

Species at Risk Act Permits and Agreements

- <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/permits-agreements-exceptions/permits-agreements-information.html>

Range Plan and Appendices for Woodland Caribou in Saskatchewan, SK2 West Administration Unit:

- <https://publications.saskatchewan.ca/api/v1/products/101694/formats/112399/download>
- <https://publications.saskatchewan.ca/api/v1/products/103592/formats/114946/download>

ECCC's Modernization of Migratory Bird Regulations 2022:

- <https://www.canada.ca/en/environment-climate-change/services/migratory-game-bird-hunting/status-update-modernization-regulations.html>
- <https://laws.justice.gc.ca/eng/regulations/SOR-2022-105/page-1.html>

ECCC's Guidelines to reduce Risk to Migratory Birds

- <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html>

Federal Sustainable Development Strategy

- <https://www.canada.ca/en/services/environment/conservation/sustainability/federal-sustainable-development-strategy.html>

Strategic Assessment of Climate Change

- <https://www.canada.ca/en/services/environment/conservation/assessments/strategic-assessments/climate-change.html>
- 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
<https://www.canada.ca/en/environment-climate-change/corporate/transparency/consultations/draft-technical-guide-strategic-assessment-climate-change.html>
- Draft technical guide related to the Strategic Assessment of Climate Change: Assessing climate change resilience
<https://www.canada.ca/en/services/environment/conservation/assessments/strategic-assessments/draft-second-technical-guide-strategic-assessment-climate-change.html>

<Original signed by>

Margaret Fairbairn
Name of departmental / agency responder

A/ Regional Director
Title of responder

Sept. 7, 2022
Date

Annex 1: Species at Risk with potential to interact with the Project

Table: Species at Risk with potential to interact with the Project based on the location of identified critical habitat, recorded species occurrences, and/or spatial overlap with described species ranges. Subject to review as further Project information becomes available.

**Fission Patterson Lake South
SARA Summary Table**

| Species Common Name | SARA Schedule 1 Designation | Notes |
|--|--------------------------------|---|
| <i>Species with critical habitat (CH) and/or reported occurrence in or near the project area:</i> | | |
| Boreal Woodland Caribou* | Threatened | Critical habitat covers entire project area, SK1 and SK2 ranges |
| Common Nighthawk* | Threatened | <i>Migratory Birds Convention Act</i> |
| Little Brown Myotis* | Endangered | |
| Northern Myotis* | Endangered | |
| Wolverine* | Special concern | |
| <i>Species listed on Schedule 1 of the Species at Risk Act which have ranges that intersect the project area:</i> | | |
| Bank Swallow | Threatened | <i>Migratory Birds Convention Act</i> |
| Barn Swallow | Threatened | <i>Migratory Birds Convention Act</i> |
| Horned Grebe (Western population) | Endangered | <i>Migratory Birds Convention Act</i> |
| Olive-sided Flycatcher | Threatened | <i>Migratory Birds Convention Act</i> |
| Rusty Blackbird | Special concern | Not protected by the <i>Migratory Birds Convention Act</i> |
| Short-eared Owl | Special concern | Not protected by the <i>Migratory Birds Convention Act</i> |
| Whooping Crane | Endangered | <i>Migratory Birds Convention Act</i> |
| Yellow Rail** | Special concern | <i>Migratory Birds Convention Act</i> |
| Nine-spotted Lady Beetle | Endangered (COSEWIC only) | |
| Transverse Lady Beetle | Special concern (COSEWIC only) | |
| Gypsy Cuckoo Bumble Bee | Endangered | |
| Yellow-banded Bumble Bee | Special concern | |

* Detected during baseline surveys; Fission Project Description, section 3.5

** Included in baseline surveys but not detected; Fission Project Description, section 3.5