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Sturk Quarry Expansion Project, Kings County

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Nova Scotia Mi'kmaq

Number	Source	Date Received
1	Kwilmu'kw Maw-Klusuaqn (KMK)	August 16, 2026

Public

Number	Source	Date Received
1	Maritime Aboriginal Aquatic Resources Secretariate (MAARS) / Native Council of Nova Scotia (NCNS)	August 12, 2026

Date: July 15, 2026
To: Mark McInnis, Environmental Assessment Officer
From: Beth Lewis, Director of Special Places Protection
Subject: **Sturk Quarry Expansion Project, Kings County**

Scope of review:

This review focuses on the following mandate: ***Archaeology and Geology***

List of Documents Reviewed:

EA Document
Final report for HRP A2025NS130

Details of Technical Review (Archaeology):

The ARIA conducted under HRP A2025NS130 identified two (2) areas of high archaeological potential. Avoidance of these areas was recommended Boreas Heritage Consulting Inc. If avoidance proved infeasible, subsurface testing of the areas impacted was recommended.

Key Considerations: (provide in non-technical language):

The section titled Mitigation Measures on pages 141 & 142 details the measures proposed by Strum to avoid the two high potential areas. If avoidance proves infeasible, these areas are to be subjected to archaeological subsurface testing.

These measures are in line with the approved report. We have no concerns at this time.

Details of Technical Review (Geology):

The bedrock geology in the project area is mapped as Goldenville Formation, and not expected to contain significant fossils.

Key Considerations: (provide in non-technical language):

No concerns for encountering significant palaeontology.

From: [Boak, James \(DFO/MPO\)](#)
To: [Environment Assessment Web Account](#)
Cc: [McInnis, Mark](#)
Subject: Environmental Assessment - Sturk Quarry Expansion Project, Kings County
Date: July 20, 2026 2:41:33 PM

Some people who received this message don't often get email from james.boak@dfo-mpo.gc.ca. [Learn why this is important](#)

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Unclassified - Non-Classifié

Hello,

Thank you for sharing the provincial Environmental Assessment Registration Document (EARD) with us for review.

Fisheries and Oceans Canada (DFO) is responsible for administering the fish and fish habitat protection provisions of the *Fisheries Act*, the *Species at Risk Act*, and the *Aquatic Invasive Species Regulations*, and conducts regulatory reviews of proposed projects under these Acts and regulations to determine if an authorization under the *Fisheries Act* and/or a *Species at Risk* permit is required.

Please note that the following outcomes are prohibited unless authorized under their respective legislation and regulations.

- the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat, which are prohibited under subsections 34.4(1) and 35(1) of the *Fisheries Act*;
- effects to listed aquatic species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the *Species at Risk Act*; and
- The introduction of aquatic species into regions or bodies of water frequented by fish where they are not indigenous, which is prohibited under section 10 of the *Aquatic Invasive Species Regulations*.

DFO is in the process of simplifying its approach to low-risk and routine projects and streamlining the approach to higher-risk and major projects, while upholding environmental standards and respecting the rights of Indigenous Peoples. This includes recent amendments to the [Authorizations Concerning Fish and Fish Habitat Protection Regulations](#), which will come into force on **October 15, 2026**.

Based on a broad review of the EARD, the Department believes that this project is likely to be

low risk to fish and fish habitat, and therefore is not providing detailed comments on the EARD. DFO recommends that Proponents continue to refer to DFO's website, <https://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>, for further information and updates on changes to DFO's regulatory review process and for further measures to protect fish and fish habitat. Proponents should be aware of any aquatic Species at Risk in the vicinity of the project as additional information may be required.

For applications that involve both watercourse alterations and wetland alterations, DFO recommends that all works, undertakings or activities in or near water associated with the proposed project be submitted to DFO as one application and include a summary table describing all works, undertakings or activities in or near water.

DFO will conduct a regulatory review of submitted projects under the *Fisheries Act*, *Species at Risk Act*, and Aquatic Invasive Species Regulations to determine if an authorization under the *Fisheries Act* and/or a *Species at Risk* permit is required.

If proponents have questions about the Department's regulatory approach or requirements, they should contact DFO at ReferralsMaritimes@dfo-mpo.gc.ca prior to the submission of their application.

James Boak, P.Eng.

Regulatory Reviews Biologist
Fish and Fish Habitat Protection Program
Fisheries and Oceans Canada
1-902-401-3934
James.Boak@dfo-mpo.gc.ca

From: [Maclean, Lachlan \(HC/SC\)](#)
To: [Environment Assessment Web Account](#)
Cc: [McInnis, Mark](#)
Subject: RE: Environmental Assessment - Sturk Quarry Expansion Project, Kings County
Date: July 20, 2026 3:30:25 PM
Attachments: [Human Health Considerations in IA.pdf](#)

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Unclassified / Non classifié

Hi Mark,

As per your email regarding the Sturk Quarry Expansion Project, please identify any specific project-related human health issues where you are looking for Health Canada's advice or guidance.

As you know, HC's role in Impact/Environmental Assessment is founded in statutory obligations under the Canadian Impact Assessment Act, and its knowledge and expertise can be called upon by reviewing bodies (e.g., Impact Assessment Agency of Canada, review panels, Indigenous groups and/or other jurisdictions). In the absence of such a request from one of the above noted groups, HC is unable to carry out a comprehensive review of the project.

However, HC can accommodate specific requests for human health advice and guidance related to provincial environmental assessments within a reasonable timeframe. Health Canada currently possesses expertise in the following areas related to human health:

- air quality;
- recreational and drinking water quality;
- traditional foods (country foods);
- noise; and
- methodological expertise in conducting human health risk assessments.

To help with your review of human health impacts, I have attached a document of common human health considerations in project reviews including links to Health Canada's guidance documents.

Let me know if you want to discuss anything further.

Thanks,
Lauchie

Lachlan MacLean, Ph.D., P.Geo.
Environmental Specialist

Environmental Assessment Division
Healthy Environments and Consumer Safety Branch
lachlan.macleam@hc-sc.gc.ca / Tel: 782-409-3340

Spécialiste environnementale

Division de l'évaluation environnementale
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Human Health Considerations in Impact Assessment

Health Canada (HC) provides the following generic considerations for evaluating human health impacts in environmental/impact assessment (EA/IA). Please note that this is not an exhaustive list of human health concerns that may result from projects, and that issues will vary based on project specifics. Please also note that HC does not approve or issue licenses, permits, or authorizations in relation to the IA. HC's role in Impact Assessment is founded in statutory obligations under the Canadian Impact Assessment Act, and its knowledge and expertise can be called upon by reviewing bodies (e.g., Impact Assessment Agency of Canada, review panels, Indigenous groups and/or other jurisdictions). In the absence of such a request from one of the above noted groups, HC is unable to carry out a comprehensive review of the project. However, HC is able to accommodate specific requests for human health advice and guidance related to provincial environmental assessments within a reasonable timeframe.

HC currently possesses expertise in the following areas related to human health: air quality, recreational and drinking water quality, traditional foods (country foods), noise, and methodological expertise in conducting human health risk assessment. Based on Health Canada's "Guidance for Evaluating Human Health Impacts in Environmental Assessment", please consider the following information on these topics to assist in your review.

	Consideration	Reference Document
Receptor Location(s)		
Please ensure the registration document clearly identifies the locations of all receptors that may be impacted by the proposed project, including any receptors located along the transportation route, if applicable.	It is important to clearly describe the location and distance from the proposed site(s) to all potential human receptors (permanent, seasonal or temporary), taking into consideration the different types of land uses (e.g. residential, recreational, industrial, etc.), and identifying all vulnerable populations (e.g. in schools, hospitals, retirement or assisted living communities). Note that the types of residents and visitors in a particular area will depend on land use, and may include members of the general public and/or members of specific population subgroups (Indigenous peoples, campers, hunters, etc.)	<i>Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Human Health Risk Assessment. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</i> https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-6-2023-eng.pdf
	If there is the potential that project-related activities could affect human receptors, impacts to human health should be considered.	

Atmospheric Environment		
Project impacts to the atmospheric environment include changes to air quality and noise, and can occur in both the construction, operation and decommissioning phases of the project. Project impacts to air quality are commonly caused by emissions from equipment or vehicles as well as by dust. Noise impacts are commonly caused by equipment as well as by activities such as blasting.	• If there are receptors that could be affected by project-related activities, impacts to the atmospheric environment should be considered. Changes to the atmospheric environment that may impact human health include: ○ impacts to air quality (dust or fumes including PM_{2.5}, NO_x, SO_x, PAHs) ○ increased noise from construction or operations	<i>Health Canada. 2023. Guidance for Evaluating Human Health Impacts in Impact Assessment: Noise. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario</i> https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-3-2023-eng.pdf <i>Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Air Quality. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</i> https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-1-2023-eng.pdf
	• If there are receptors who could be impacted by project-related noise, it may be necessary to inform receptors prior to loud activities, such as blasting.	
	• If there is the potential for impacts to human receptors from noise and/or air quality changes from the project, the proponent should consider establishing mitigation measures. If complaints are received additional mitigation measures may be required.	
Recreational and Drinking Water Quality		
The proponent should consider whether any nearby waterbodies are used for recreational (i.e. swimming, boating, or fishing) or drinking water purposes, as well as whether there are any drinking water wells in the area potentially impacted by the project. Nearby drinking and/or recreational water quality may be impacted by	• If there is the potential for impacts to drinking and/or recreational water quality from the project site, the proponent should consider establishing mitigation measures. If complaints are received additional mitigation measures may be required.	<i>Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Drinking and Recreational Water Quality. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</i> https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-2-2023-eng.pdf

accidents or malfunctions, such as a fuel spill; by dust and increased sediment runoff; and by other chemical discharges to the environment. Additionally, wells in the area potentially impacted by the project may be impacted by activities such as blasting.	• The proponent should consider preparing a response plan in the event of an accident or malfunction with the potential to impact drinking and/or recreational water quality. Response plans should include a spill response kit, adequate spill response training, and a communication plan to notify all recreational and drinking water users in the impacted area as well as all relevant authorities. • In some cases, for projects that are likely to have an impact on drinking and/or recreational water quality, the proponent should consider conducting water monitoring prior to the start of the project (to establish a baseline). Monitoring would continue throughout the construction, operation and decommissioning phases of the project (as applicable) to monitor for any changes in water quality or quantity.	
Country Foods		
If there are plants or animals present in the area potentially impacted by the project that are consumed by humans, there may be potential for impacts to country foods. The proponent should consider all country foods that are hunted, harvested or fished from the area potentially impacted by the project. Impacts to country foods may occur from the release of contaminants into soil or water (including from an accident or spill) or from deposition of air borne contaminants.	• If there is the potential for impacts to country foods from the proposed project, the proponent should consider establishing mitigation measures. If complaints are received additional mitigation measures may be required. • The proponent should consider preparing a response plan in the event of an accident or malfunction with the potential to impact country foods. Response plans should include a spill response kit, adequate spill response training, and a communication plan to notify all potential consumers of country foods in the impacted area as well as all relevant authorities.	<i>Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: Country Foods. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.</i> https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-5-2023-eng.pdf

For more information on HC's guidelines for evaluating human health impacts in environmental assessments, please see:

*Health Canada. 2023. Guidance for Evaluating Human Health Impacts in Impact Assessment: **Noise**. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.*
https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-3-2023-eng.pdf

Appendix B of this guidance document provides a checklist that may be beneficial in verifying that the main components of a noise environmental assessment are completed.

*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: **Air Quality**. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.*
https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-1-2023-eng.pdf

Appendix A of this guidance document provides a checklist that may be beneficial in verifying that the main components of an air quality environmental assessment are completed.

*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: **Drinking and Recreational Water Quality**. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.*
https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-2-2023-eng.pdf

Appendix A of this guidance document provides a checklist that may be beneficial in verifying that the main components of a water quality environmental assessment are completed.

*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: **Country Foods**. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.*
https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-5-2023-eng.pdf

Appendix A of this guidance document provides a checklist that may be beneficial in verifying that the main components of a country foods environmental assessment are completed.

*Health Canada. 2023. Guidance for Evaluating Human Health Effects in Impact Assessment: **Human Health Risk Assessment**. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.*
https://publications.gc.ca/collections/collection_2024/sc-hc/H129-54-6-2023-eng.pdf

Appendix B of this guidance document provides a checklist that may be beneficial in verifying that the main components of a human health risk assessment are completed.

Date: July 21, 2026

To: Mark McInnis, Environmental Assessment Officer

From: Sustainability and Applied Science

Subject: **Sturk Quarry Expansion Project, Kings County, Nova Scotia**

Scope of review:

This review focuses on the following mandate: Protected areas

List of Documents Reviewed:

WAPA, Mapping

Details of Technical Review: Distance to closest PA is over 10 KM

Key Considerations: (provide in non-technical language)

No Concerns

Date: July 22, 2026

To: Mark McInnis, Environmental Assessment Officer

From: Department of Public Works, Environmental Services – Brent MacDonald, P. Eng.,
Manager 

Subject: **Sturk Quarry Expansion Project, Kings County, Nova Scotia**

Scope of review:

This review focuses on the following mandate: Traffic and Road Safety Engineering

List of Documents Reviewed:

Prospect Industrial Equipment Sales and Rentals Limited, *Sturk Quarry Expansion Project*, Environmental Assessment

Details of Technical Review:

The Proponent is proposing to significantly expand an existing quarry in Kings County that has been in existence since 2013 to support existing and future operations.

1. Future production is anticipated to replace and match the existing production. No changes are anticipated at the existing access from Canaan Road. This is also the case for current trucking volumes and the existing transportation route.
2. The only provincial regulatory requirement (Table 2.0, page 3) that references the Nova Scotia Department of Public Works is the transportation of dangerous goods which the Proponent mentions requiring compliance with the appropriate legislation. The Proponent must contact the NSDPW Area Manager to ensure that the compliance is maintained.
3. Table 3.2 *Summary of Minimum Setbacks and Separation Distances for Public Roads* (page 5) references a 30 m distance from the public road (regulated by the Nova Scotia Department of Environment and Climate Change [NSECC], unless otherwise authorized by NSDPW [blasting and operations]). The Proponent must confirm the correct distance with the local Area Manager.
4. Although blasting has been limited to a short window each year (a maximum of two weeks between April 1st and May 31st), it must be coordinated with the local

Area Manager for permitting so as to minimize disruption and impact to provincially owned roads.

5. Mitigation measures and procedures identified for Vehicle Collisions in Section 15.4 (page 153) appear to be sufficient.

Key Considerations: (provide in non-technical language)

1. The Proponent should communicate with the local Area Manager to confirm that the compliance with transportation of dangerous goods is maintained and to confirm blasting setbacks and schedules.

Public works is a substantial aggregate consumer in the region of Kings County through both Capital Construction and Maintenance activities. Private industry expanding their capabilities, in accordance with the applicable regulatory review, in the region would enhance our access to said aggregate. This should lead to more competitive pricing and reduce any supply constraints which may have been present in the past.

Date: July 28, 2026

To: Mark McInnis, Environmental Assessment Officer

From: Air Quality Unit

Subject: **Sturk Quarry Expansion Project, Kings County, Nova Scotia**

Scope of review:

This review focuses on the following mandate: Air Quality

List of Documents Reviewed:

- *Sturk Quarry Expansion Project EA Registration Document*
- *Drawings 1 – 7*

Details of Technical Review:

The purpose of the proposed undertaking is to develop and expand the existing <4 ha Sturk Quarry by up to 52.9 ha. The project is anticipated to commence in the fall of 2026 and with an anticipated project lifespan of 40 years. Aggregate from the Sturk Quarry is used locally for provincial road construction projects and is expected to operate on a similar level to current operations. The expansion would produce an average of 60,000-70,000 tonnes of aggregate annually based on market demands.

Impacts on air quality from this project are most likely to occur during clearing/ grubbing, blasting/ drilling/ excavation/ crushing activities, operation of heavy equipment, loading/unloading of materials, and onsite routine operations. These activities are most likely to contribute to increases in concentrations of total suspended particles (TSP), while vehicle emissions are likely to contribute to increases in fine particles (PM_{2.5}) and nitrogen oxides.

The Proponent states that dust mitigation will include the use of water spray systems, reducing vehicle speeds on gravel roads, minimizing idling, and maintaining vehicles/equipment in good working order. The Proponent states that air emissions from the proposed expansion are expected to be the same or similar to those produced by the existing quarry.

The Proponent has not included ambient air quality monitoring in the EA registration document, instead relying on data from the NSECC Kentville ambient air quality station located approximately 25 km northeast of the Project to assess existing air quality. Data from the Kentville station from 2021-2025 shows that the measured contaminants are below their respective limits set out in the Air Quality Regulations.

The nearest residential receptor is approximately 600m from the proposed expansion area. Given that the Project area is well vegetated and activities at the site are expected to

remain identical to current operations, quarry expansion activities are not expected to impact air quality at the nearest receptors.

Key Considerations:

The Air Quality Unit notes the following key considerations:

- The use of dust management methods outlined by the proponent, along with the best operational practices, should minimize air quality impacts. However, it is unclear how effective the dust mitigation methods will be without a clear Dust Management Plan, including clear chains of responsibility for actions, including timely complaint resolution.

Date: July 28, 2026

To: Mark McInnis, Environmental Assessment Officer

From: Air Quality Unit

Subject: **Sturk Quarry Expansion Project, Kings County, Nova Scotia**

Scope of review:

This review focuses on the following mandate: Noise

List of Documents Reviewed:

- *Sturk Quarry Expansion Project EA Registration Document*
- *Drawings 1 – 7*

Details of Technical Review:

The purpose of the proposed undertaking is to develop and expand the existing <4 ha Sturk Quarry by up to 52.9 ha. The project is anticipated to commence in the fall of 2026 and with an anticipated project lifespan of 40 years. Aggregate from the Sturk Quarry is used locally for provincial road construction projects and is expected to operate on a similar level to current operations. The expansion would produce an average of 60,000-70,000 tonnes of aggregate annually based on market demands.

The Proponent has not included any baseline noise monitoring/modelling but has provided expected sound levels produced by equipment/operations at the site, ranging from 84 – 107 dBA depending on equipment type. Given that the nearest receptor is 600m from the proposed expansion, it is unclear if this receptor could experience sound levels above the limit in the NSECC Guideline for Environmental Noise Measurement and Assessment (GENMA) for a rural classification. The area surrounding the Project has tree cover and is well vegetated which should reduce noise impacts at the nearest receptors.

The Proponent states that noise mitigation will include maintaining vehicles and heavy equipment in operational order, reducing idling, and operating during daytime hours. The proponent states that blasting may occur 2 weeks per year following the guidance in the NSECC Pit and Quarry Guidelines and that noise from operations will adhere to the sound level limits in GENMA for a rural classification.

Noise from the proposed expansion is expected to be similar to that already produced at the site, since there is no anticipated change in the operational scope. If approved, the Proponent states that noise monitoring will be conducted as required in the industrial approval.

Key Considerations:

The Air Quality Unit notes the following key considerations:

- It is unclear if the proposed expansion has the potential to exceed the appropriate GENMA permissible sound levels at the nearest receptor (rural classification).
- It is unclear how effective noise management and mitigation will be in the absence of a Noise Management Plan with a clear chain of responsibility for actions, including timely complaint resolution.

July 27, 2026

TO: Mark McInnis, Environmental Assessment Officer

FROM: Dawn M. Sutherland, Provincial Director of Planning, Land Use Planning

SUBJECT: **STURK QUARRY EXPANSION PROJECT, KINGS COUNTY, NOVA SCOTIA**

Scope of Review:

This review focuses on the following mandates: Statements of Provincial Interest and engagement with municipalities.

List of Documents Reviewed:

Environmental Assessment Registration Document – Sturk Quarry Expansion Project

Details of Technical Review:

The proponent does not mention meeting with the Municipality regarding this project in the documents.

Statements of Provincial Interest:

- **Drinking Water:** No Impact. The closest municipal water supply is McGee Lake which is a protected water area used as a back-up supply for the Town of Kentville. No portion of the study area is within the protected area.
- **Agricultural Land:** No impact. There are properties zoned Rural Mixed Use (A2) directly abutting the study area. Impact to agricultural operations would be similar to existing conditions as this would be an expansion to an existing quarry.
- **Flood Risk:** No impact. There are no flood risk areas within the study area.
- **Infrastructure:** No impact. There is no municipal servicing in the study area.
- **Housing:** No impact. No aspects of the SPI are impacted by this proposal.

Key Considerations (Provide in non-technical language):

The proponent **should engage** with the Municipality of the County of Kings as the project moves forward.

Date: July 27, 2026

To: Mark McInnis, Environmental Assessment Officer

From: Climate Change Division – Lori Skaine, Executive Director

Subject: **Sturk Quarry Expansion Project, Kings County, Nova Scotia**

Scope of review:

This review focuses on the following mandate: Climate change adaptation and mitigation

List of Documents Reviewed:

Environmental Assessment Registration Document

Details of Technical Review:

Adaptation

Section 14.0 *Effects of the Environment on the Undertaking* provides a brief overview of climate change impacts and adaptation considerations, including sub-sections on increased air temperature, changes in precipitation, severe weather events, and wildfire. The proponent has described general climate change trends and referenced climate change projections for average air temperature and total precipitation.

The proponent has noted that climate change and weather-related hazards have the potential to affect all phases of the Project. Planning and operational strategies have been proposed to mitigate these effects, including training for personnel on safe working conditions, maintaining existing watercourse buffers and drainage patterns, and developing a contingency plan for fire safety.

Mitigation

The primary sources of greenhouse gas (GHG) emissions associated with the project include fuel combustion from diesel-fueled equipment, including trucks, bulldozers, excavators, crushers, and other heavy equipment. The proposed mitigation steps identified in Section 7.2.6 of the EA registration are appropriate and include routine inspection and maintenance of heavy equipment to reduce exhaust fumes. The proponent has mentioned that project-related GHG emissions are expected to be in the range from low to moderate (less than 100,000 t CO₂e per year).

Key Considerations: (provide in non-technical language)

Adaptation

To inform the design or implementation of proposed climate risk mitigation strategies, the proponent may wish to consider referencing additional climate change projections for hazards such as extreme heat and intense precipitation.

Mitigation

The proponent is encouraged to track expected greenhouse gas (GHG) emissions from potential sources using published quantification methods, such as those outlined in the Greenhouse Gas Reporting Program (GHGRP). If projected emissions exceed 10,000 tonnes of CO₂ equivalent (t CO₂e) per year, the proponent should provide more detailed reporting

Date: July 28, 2026

To: Mark MacInnis, Environmental Assessment Officer

From: Water Branch, Sustainability & Applied Science Division

Subject: **Sturk Quarry Expansion Project, Kings County, Nova Scotia**

Scope of review:

This review focuses on the following mandate surface water quality and quantity, groundwater quality and quantity, and wetlands.

List of Documents Reviewed:

Environmental Assessment Registration Document (EARD) Submission, including Appendices.

Details of Technical Review:**Surface Water**

The Study Area lies entirely within the Annapolis River primary watershed (1DC) and the South River tertiary watershed (1DC-3-NN). Five unnamed watercourses occur within the Study Area, including two connected systems in the southwest and three interconnected systems in the northeast. Two north-flowing streams exit the Study Area, converge approximately 830 m downstream, and continue to the South River before discharging to the Annapolis River and ultimately the Bay of Fundy. All watercourses pass through the Factorydale Power Dam before reaching the South River.

The EARD reports no records of aquatic species at risk (SAR), critical habitat, significant fish species, or significant fish habitat within the Study Area. However, the broader watershed may support American Eel (COSEWIC Threatened), Atlantic Salmon (Nova Scotia Southern Upland West population; COSEWIC Endangered), and other fish species associated with the Annapolis River watershed.

The EARD identifies several potential surface water quantity and quality concerns associated with quarry expansion, including vegetation clearing, grubbing, blasting, and wetland alteration. Key concerns include:

- Increased sediment runoff and elevated total suspended solids (TSS).
- Accidental releases of fuels, oils, or other contaminants.
- Water quality changes associated with blasting activities.
- Reduced water quality treatment and water retention functions resulting from wetland loss.
- Reduced infiltration and groundwater recharge (predicted to decrease by up to 6.22%), which may reduce groundwater contributions to stream baseflow and will increase surface

runoff by up to 8.6%. This increase in runoff is within the acceptable margin of balancing with pre-development conditions, in accordance with the Storm Drainage Works Approval Policy.

The proponent concludes that residual effects on surface water quantity and quality will be low in magnitude and not significant with the proposed mitigation measures, including the following:

- Developing a site-specific ESC plan;
- Limiting slope gradients in disturbed areas;
- Maintaining the quarry floor above the water table;
- Directing runoff away from wetlands and watercourse;
- Avoiding and minimizing impacts to wetlands;
- Scheduling work to avoid wet-weather period; and
- Regulatory buffers.

Groundwater

In the EARD, the proponent has assessed background geological conditions, groundwater quality and quantity, and groundwater well conditions in the vicinity of the proposed activity. The primary relevant points from this work are as follows:

- According to the EARD, two wells were identified within 800 m of the study area. One of these is on the site, provides water supply to the current activity and is owned by the proponent. The other is at a residence to the southwest.
- A review confirmed the proponent's observation that some water well locations identified in online databases may have limited location accuracy. Any residential structures at civic addresses within monitoring distances should be field verified for the presence and location of wells.
- The Greenwood Wellfield operated by the Municipality of the County of Kings is the nearest public municipal water supply and is located about 10 km west of the site.
- The nearest Public Registered Drinking Water Supply (PRDWS) is at the Fox Mountain Camping Park just over 1 km northeast of the site along Aylesford Road.
- The EA report relied on a desktop study to present information on geology, groundwater quality and quantity, and groundwater wells.
- No groundwater monitoring network or program is currently in place for the existing quarry site and the depth to the water table has not been established.
- No dewatering is proposed for the activity, and the proponent states operations will be kept above the water table. However, based on this review, the planned quarry floor elevation of 158 m will be below the estimated water table in areas of the expansion. This is based on an average Nova Scotia water table depth of 3-5 metres below surface, which is consistent with water well records for the local area. This finding on its own does not imply that there will be any adverse effects to groundwater receptors from the operations as proposed.
- The EARD states that, as a result of potential impacts to groundwater quality and quantity, the proponent will conduct pre-blast surveys for wells within 800 m of blasting activities, which may include ground-truthing for nearby well locations, as needed. This is in

reference to the requirements of NSECC's *Procedure for Conducting a Pre-Blast Survey* (NSECC, 1993).

- The EARD also states that both a site-specific Groundwater Monitoring Plan, and an ESC Plan (erosion and sediment control plan) will be developed and implemented for the site.
- On the site, a number of wetlands will be directly lost as a result of the quarry expansion. However, some significant wetlands are being avoided and wetland monitoring is proposed to be conducted when quarry activities are within 30 m any of these wetlands. Groundwater levels are an important factor to monitor when assessing the effects of quarrying on wetlands.
- The EARD states that no water will be used for processing on site.
- A water balance assessment was completed and shows that there will be a small increase in watershed surface water runoff, at the expense of a decrease in groundwater infiltration. Water balance changes are expected to result in up to a 6.2% reduction in groundwater infiltration recharge and up to an 8.6% increase in surface water runoff, based on local site watershed area B which shows the greatest effects. Overall, for the combined site watershed areas A and B, cumulative surface water runoff is estimated to increase by 2.69 %.

Wetlands

The EARD identified 18 wetlands within the Study Area. One wetland has been determined to be a Wetland of Special Significance (WSS) and is proposed to be avoided. Through refinement of the Project Development Area (PDA), the proponent states that the project has been designed to avoid many wetland features; however, 11 wetlands remain subject to potential alteration. Of these, nine wetlands may be completely altered and two partially altered, resulting in an estimated 1.65 ha (16,506 m²) of direct wetland loss over the life of the quarry. This represents approximately 27% of the wetland area within the Study Area, but only about 0.3% of the wetland resource within the Local Assessment Area (LAA). The identified Wetland of Special Significance (WL5) and the largest delineated wetland (WL10) are proposed to be avoided. Wetland alteration would occur progressively over an estimated 40-year operational period, rather than all at once.

The assessment identifies both direct and indirect effects on wetlands. Direct effects are primarily associated with permanent wetland loss resulting from quarry expansion and vegetation clearing. Indirect effects include potential changes to wetland function resulting from altered hydrology, erosion and sedimentation, dust deposition, introduction of invasive species, and soil compaction. The report recognizes that changes to wetland hydrology have the potential to affect neighbouring wetlands beyond the footprint of alteration, while sedimentation and dust may reduce vegetation health and ecological function if not effectively controlled.

To mitigate these effects, the proponent proposes several measures, including avoiding wetlands where feasible, clearly delineating wetland boundaries prior to construction, preparing and implementing a site-specific Erosion and Sediment Control (ESC) Plan, minimizing exposed soils, directing runoff away from wetlands, limiting equipment travel through wetlands, using swamp mats where access is unavoidable, implementing dust suppression measures, cleaning equipment to reduce the spread of invasive species, and monitoring wetlands when quarry operations occur within 30 m of wetland boundaries. Where wetland alteration cannot be avoided, the proponent commits to obtaining wetland alteration approval, adhering to approval conditions, and preparing a wetland compensation plan consistent with the Nova Scotia Wetland

Overall, the assessment concludes that, after implementation of the proposed mitigation and compensation measures, the residual effects on wetlands are expected to be not significant. The report characterizes direct habitat loss as moderate because of the permanent loss of wetland habitat, while predicted changes to wetland function are considered low due to the proposed mitigation and monitoring program. Residual effects are considered partially reversible through compensation and reclamation but acknowledge that baseline wetland conditions cannot be fully restored.

Key Considerations: (provide in non-technical language)

Surface Water

- Although no aquatic species at risk, critical habitat, significant fish species, or significant fish habitat have been identified within the Study Area, the broader watershed may support species such as American Eel and Atlantic Salmon. Quarry expansion activities, including clearing, grubbing, blasting, and wetland alteration, could increase sedimentation, affect water quality, and alter local drainage conditions if not properly managed. The proponent predicts these effects will be low and not significant with mitigation measures in place.
- To support these commitments, the proponent should develop and implement a detailed erosion and sediment control (ESC) plan, prepared by a qualified professional, before expansion activities begin. In accordance with ECC guidelines, the plan should describe how sediment, suspended solids, and potential contaminants will be prevented from reaching nearby watercourses and wetlands; how mitigation measures will be inspected, maintained, and monitored during operations; and how natural drainage patterns and wetland functions will be maintained, where feasible. The ESC plan should also establish clear water quality performance objectives, including target limits for total suspended solids prior to discharge.
- The Project is expected to reduce infiltration and groundwater recharge while increasing surface runoff within local catchments. Although the EARD concludes that these changes will be minor, the proponent should develop and implement a site-specific surface water management and monitoring program that demonstrates how runoff will be managed and how downstream watercourses will be protected from erosion and water quality impacts.
- Ongoing monitoring of water quality, drainage conditions, and mitigation effectiveness throughout the life of the Project should be conducted to verify impact predictions and provide assurance that nearby aquatic habitats remain protected.

Groundwater

- The Sturks Quarry Expansion EARD has evaluated the proposed quarrying operations with respect to groundwater. The report identifies minor changes that may occur, including reduced recharge and the potential for blasting effects, but does not flag anything of concern.
- The nearest off-site water supplies include one residential receptor well and one PRDWS, within about 800 m and 1 km, respectively, of the quarry.

- A pre-blast survey plan for wells within 800 m is proposed.
- The site has no current Groundwater Management Plan. However, such a plan is proposed in the EARD and should be developed as part of further operation approvals. Regular monitoring of groundwater conditions should be conducted as part of the plan, primarily to ensure that groundwater receptors, including residential wells and wetlands, are not affected by site operations.
- Although the quarry will likely excavate below the water table, this may not result in any issues due to likely low groundwater influx rates. However, groundwater conditions should be monitored to verify this.

Wetlands

- The project will require Wetland Alteration Approval from Nova Scotia Environment and Climate Change before any wetland alteration can occur.
- The final wetland alteration footprint should continue to be minimized where practicable to reduce the amount of permanent wetland loss.
- The proponent is required to develop a wetland compensation plan consistent with the Nova Scotia Wetland Conservation Policy.
- A detailed Erosion and Sediment Control Plan should be prepared and implemented prior to construction to prevent sediment from entering adjacent wetlands.
- Wetland boundaries should be clearly marked in the field before clearing begins to avoid unnecessary disturbance.
- Wetlands located adjacent to quarry activities should be monitored throughout construction and operations to identify any changes in hydrology, vegetation, or overall wetland function so that corrective actions can be implemented if required.

Agriculture

Date: July 28, 2026

To: Mark McInnis, Environmental Assessment Officer

From: Amy Melmock, Executive Director, Industry Development,
Nova Scotia Department of Agriculture

Subject: Sturk Quarry Expansion Project, community of Morristown, in Kings
County, Nova Scotia

Thank you for the opportunity to review the documents for the above-noted project.

No agricultural impacts are anticipated given that:

- There is no agricultural activity, mapped agricultural land, or registered farm within the project area. The nearest registered farms are a dairy operation and a beef farm, located approximately 1.22 km and 1.43 km from the project area, respectively.
- Within 2 km of the project area, there are 28 mapped agricultural fields: rotational crops (61%), long-term crops (38%), and inactive agricultural land (1%).
- The nearest mapped agricultural field, a pasture, is approximately 0.3 km from the project area; no impacts to livestock or agricultural operations are anticipated.

Date: July 28, 2026

To: Mark McInnes, Environmental Assessment Officer, Environment & Climate Change

From: Lesley O'Brien-Latham, Executive Director, Policy and Strategic Advisory Services

Subject: Sturk Quarry Expansion - King's County

Scope of review:

The scope of this review follows the Department of Fisheries and Aquaculture's (NSDFA) legislated mandate to develop, promote and support fishing, aquaculture, seafood processing and sportfishing in Nova Scotia.

List of Documents Reviewed:

- Sturk Quarry Expansion Environmental Assessment Registration Document.pdf (EARD)

Details of Technical Review:Aquaculture:

NSDFA's Aquaculture Division's mandate includes the development, regulation, promotion and support of aquaculture and rockweed industries in Nova Scotia.

Based on our review, there are no rockweed harvesting leases or aquaculture operations within a 25 km radius of the proposed project. Consequently, the Aquaculture Division has no concerns regarding the proposed development.

Marine Fisheries:

The proposed quarry expansion is located inland in Morristown, Kings County, Nova Scotia, and does not encompass any marine waterbodies containing commercially valuable species within the project footprint. Consequently, there is no anticipated risk to commercially valuable marine aquatic species.

The nearest commercial fishing wharf is in Halls Harbour, approximately 40 kilometers northeast of Morristown. At this location is the nearest licensed fish plant, Halls Harbour Lobster Pound. The L.J. Robichaud Fisheries plant in Middleton is about 30 kilometers from the project site. Given these distances and the nature of the project, it is reasonable to conclude that there will be no direct or indirect impacts on the commercial seafood sector including licensed processors and buyers.

The quarry expansion is expected to continue supplying aggregate materials for regional infrastructure projects, consistent with its historical operations since 2013. There is no indication of overlap with commercial fisheries or seafood processing activities or labour forces.

Inland Fisheries:

NSDFA's Inland Fisheries Division's mandate is managing Nova Scotia's recreational sportfishery.

The aquatic assessment identified five watercourses within the Study Area and confirmed the presence of brook trout and American eel. Quality fish habitat occurs in WC1, a perennial stream supporting brook trout and American eel, while WC4A provides marginal habitat but still supports fish and fish habitat. No aquatic species at risk critical habitat was identified.

The proposed quarry expansion has been designed to avoid all watercourses and fish habitat, with a minimum 30 m buffer maintained from watercourse banks. As a result, no direct loss of fish habitat or fish mortality is anticipated. Potential indirect effects related to sedimentation, runoff, and blasting are proposed to be managed through erosion and sediment control measures, blasting controls, monitoring, and maintenance of natural drainage patterns. Residual effects to fish and fish habitat were assessed as low and not significant.

Standard mitigation measures will be implemented to avoid or minimize impacts, including:

- Avoid all watercourses during quarry expansion.
- Maintain 30 m vegetated buffers around watercourses and prohibit vegetation clearing, fueling, and equipment operation within 30 m of watercourses.
- Minimize exposed soil and stabilize disturbed areas through seeding, mulching, and rock cover and direct runoff away from wetlands and watercourses. Install and maintain erosion and sediment control measures, including rock check dams to reduce sediment from entering fish-bearing waters
- Limit slope gradients to reduce erosion and sediment transport.
- Maintain machinery in good condition and prevent fuel or hydraulic fluid leaks.
- Develop and implement a Blast Management Plan to reduce the risk of fish injury or mortality.

Key Considerations: (provide in non-technical language)

Due to the project's location, the Aquaculture and Marine Divisions do not anticipate any impacts to rockweed harvesting leases, aquaculture operations, or the commercial seafood sector.

The Department has no direct concerns for the sportfishery resulting from this proposed quarry expansion. Several watercourses adjacent to the proposed expansion support brook trout but should not be impacted if the mitigation measures proposed in the submission are effective and adhered to.

From a freshwater fish perspective, the project design avoids direct impacts to watercourses and maintains a 30 m buffer; therefore, the proponent concludes that no direct fish habitat destruction or direct fish mortality is anticipated. Remaining inland fisheries concerns are primarily related to indirect effects, including sedimentation, water quality changes, and hydrologic alteration. The effectiveness of the proposed mitigation measures will be important in minimizing potential impacts to downstream fish habitat and recreational fisheries resources.

Project proponent should be made aware of:

- the [Fisheries and Coastal Resources Act](#),

Date: July 28, 2026

To: Mark McInnis, Environmental Assessment Officer

From: Adrian Fuller, Executive Director Compliance

Subject: **Sturk Quarry Expansion Project, Kings County, Nova Scotia**

Scope of Review

This review focuses on compliance with the *Environment Act*, associated regulations, Industrial Approval requirements, and related compliance considerations.

Documents Reviewed

Environmental Assessment Registration Document for the Sturk Quarry Expansion Project, June 2026.

Comments

To support the Industrial Approval amendment review, the proponent should provide clear, site-specific information confirming how the project will meet applicable regulatory requirements and protect groundwater, surface water, wetlands, and adjacent properties.

- Provide timelines for proposed activities, reports, plans, updates, and required submissions.
- Identify required buffers, setback areas, refueling locations, proposed quarrying areas, and maximum excavation depths on project maps and site plans.
- Confirm how the quarry floor will remain safely above groundwater levels, supported by site-specific groundwater level and quality information.
- Develop and maintain a groundwater monitoring program to establish baseline conditions, confirm groundwater levels during development, and identify potential effects on groundwater quantity or quality.
- Provide information on the quarry pond, including water quality, overflow status, discharge location, and compliance with applicable freshwater quality guidelines.
- Provide information on fuel storage and refuelling practices, as applicable.
- Prepare site-specific contingency, spill response, erosion and sediment control, reclamation, blast management, and wetland monitoring plans, as applicable.

From: [Argueta,Andrea \(ECCC\)](#)
To: [Environment Assessment Web Account](#)
Subject: ECCC Comments - Sturk Quarry Expansion Project, Kings County
Date: July 29, 2026 12:04:09 PM
Attachments: [OMNRF \(2017\) Survey Protocol for Species at Risk Bats within Treed Habitats.pdf](#)

You don't often get email from andrea.argueta@ec.gc.ca. [Learn why this is important](#)

**** EXTERNAL EMAIL / COURRIEL EXTERNE ****

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Good morning,

Environment and Climate Change Canada has reviewed the EA Registration Document (EARD) for Prospect Industrial Equipment Sales and Rentals Ltd.'s proposed Sturk Quarry Expansion Project, located in Morristown, Kings County, NS, and offer the below comments for consideration.

Attachments and References

- Ontario Ministry of Natural Resources and Forestry (OMNRF) (2017). Survey Protocol for Species at Risk Bats within Treed Habitats, Little Brown Myotis, Northern Myotis & Tri-Colored Bat (attached); Note: there is a 2022 update, but our expert recommends the Phased approach described in the 2017 guidance.
- ECCC 2025. *Nesting Periods*. <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html>
- Calvert et al. 2013. *A synthesis of human-related avian mortality in Canada*. Avian Conservation and Ecology 8(2): 11. <https://ace-eco.org/vol8/iss2/art11/>
- Balzer et al. 2021. *Capture Rate Declines of Northern Myotis in the Canadian Maritimes*. Wildlife Society Bulletin (45). <https://doi.org/10.1002/wsb.1223>

General Comments

1. Given that the project is registered under Nova Scotia's (NS) *Environmental Assessment Regulations*, it remains the discretion of the province whether sufficient information has been provided to assess the potential effects of the Project under their jurisdiction and responsibility. ECCC does not have any permits (or authorizations) or approvals in relation to the proposed project. Any advice provided by ECCC is intended to support Nova Scotia Environment and

Climate Change (NS ECC) Environmental Assessment review process. The Proponent is responsible for identifying measures which ensure their compliance with the federal *Migratory Birds Convention Act* (MBCA) and the *Species at Risk Act* (SARA).

2. ECCC notes that the Province of NS's Department of Natural Resources and Renewables (NS DNRR) holds technical expertise, jurisdiction, and management authority for birds not protected by the MBCA (e.g., raptors) and terrestrial species at risk (SAR) including bats, reptiles, amphibians, land-mammals, insects, plants, and lichen. ECCC advice on these species is derived from federal recovery strategies produced as per the *Species at Risk Act* and are focused on species recovery. SAR are a shared responsibility between the federal government and the provinces and ECCC comments reflect this.
3. The proponent should retain raw survey data (e.g., radar, breeding bird surveys) until appropriate data standards have been developed. Proponents are encouraged to share and store data with:
 - The ECCC's Canadian Wildlife Service (SAR observations; scf-atldonneesei-cws-atliadata@ec.gc.ca)
 - The Atlantic Canada Conservation Data Center (SAR/SOCC observations; <http://accdc.com/en/contribute.html>)
 - NA Bat (acoustic bat data; <https://www.nabatmonitoring.org/upload-data>)
4. If NSECC is considering wildlife protection, mitigation, monitoring and adaptive management plans as part of potential approval conditions related to avifauna and/or migratory bird SAR, ECCC recommends clarifying what elements are expected to be included, and that the consultation process is clear for all parties.
5. ECCC's preference is that any documents and requests for advice from the proponent be submitted and coordinated through NS ECC as part of their EA process via the ECCC-EA window (FCR_Tracker@ec.gc.ca).

Specific Comments

Migratory Birds and avian Species at Risk (SAR) and Species of Conservation Concern (SOCC)

6. ECCC advises that avian SAR listed under the *Species at Risk Act* (SARA) may occur in the Project area, including but not limited to:

- **Bank Swallow** (SARA-listed Threatened)
- **Barn Swallow** (SARA-listed Threatened)
- **Canada Warbler** (SARA-listed Threatened)
- **Chimney Swift** (SARA-listed Threatened)
- **Common Nighthawk** (SARA-listed Threatened)
- **Eastern Wood-pewee** (SARA-listed Special Concern)
- **Evening Grosbeak** (SARA-listed Special Concern)
- **Olive-sided Flycatcher** (SARA-listed Threatened)
- **Red Crossbill** (SARA-listed Threatened)
- **Rusty Blackbird** (SARA-listed Special Concern)
- **Savannah Sparrow, *princeps* subspecies** (SARA-listed Special Concern)

For projects undergoing environmental assessment, ECCC recommends that adverse effects of the project on SAR and their Critical Habitat are identified, and, if the project is carried out, that mitigation measures are taken to avoid or lessen those effects. We recommend that mitigation measures:

- be consistent with best available information including any Recovery Strategy, Action Plan or Management Plan in a final or proposed version; and
- respect the terms and conditions of the *Species at Risk Act* (SARA) regarding protection of individuals, residences, and critical habitat of Extirpated, Endangered, or Threatened species.

We also recommend follow-up monitoring to verify impact predictions, and adequacy of mitigation measures, and adaptive management in the event that SAR or their critical habitat are adversely affected by the project.

Common Nighthawk

7. Quote (pg. 122): “*Common nighthawk was the most abundant SAR found during field surveys due to the execution of targeted nightjar surveys. Given that breeding territories for this species can extend over several kilometres (ECCC, 2016), common nighthawk are expected to interact with the Project even though all observations occurred outside the Study Area.*”

Common Nighthawk and other ground or burrow-nesting migratory birds may be attracted to stockpiles or exposed areas for nesting, particularly if there is a delay between clearing activities and subsequent construction activities.

Additionally, Common Nighthawk may have a higher collision risk with turbines/blades than other bird SAR recorded during the breeding period, as this species is an aerial insectivore known to occupy open habitat areas and flying at various heights in search of insects. They also defend their territories by aerial displays (wing booms) that might make them more susceptible to collisions if they choose to nest close to turbines.

ECCC-CWS offers the following recommendations:

- Undertake a habitat suitability assessment for this species and clarify whether areas with suitable breeding habitat will be avoided during micro-siting of turbines.
- Develop measures to deter birds from nesting in work areas, such as covering exposed areas or stockpiles when not in use and minimizing the delay between clearing and subsequent construction activities.
- Identify other targeted mitigation measures to avoid and minimize impacts on Common Nighthawk and its habitat;
- Develop a monitoring plan that includes:
 - Post-construction nightjar surveys (dusk and dawn);
 - Post-construction mortality monitoring to evaluate bird strikes; and
 - Adaptive management measures to be implemented should adverse effects be detected.
 - Reference the *Recovery Strategy for the Common Nighthawk (Chordeiles minor) in Canada [Final] (2016)* to inform the development of mitigation measures for this species: https://species-registry.canada.ca/index-en.html#/species/986-668#recovery_strategies

Pileated Woodpecker

8. Quote (pg. 121): “*Pileated woodpeckers were observed multiple times during the breeding bird and fall migration field seasons*”. ECCC offers the following general recommendations regarding Pileated Woodpecker nesting cavities, which are protected year-round under Schedule 1 of the [Migratory Birds Regulations](#):

- Review and understand proponents’ responsibilities under the amended *Migratory Bird Regulations* (MBR 2022).
- Conduct a survey to identify suitable nesting habitat within the area planned for vegetation clearing.
- Inspect identified suitable nesting trees for any Pileated Woodpecker cavities and determine occupancy; Note: In the Maritimes, ECCC recommends surveying during the second half of June to confirm

nesting. By that time, the nestlings are large and loud and may be heard before the cavity can be seen.

- Notify the ECCC Minister through the [Abandoned Nest Registry](#) if any abandoned nesting cavities are found on trees that require removal.
- Monitor occupancy of cavity(ies) over the next 36 months prior to removal and establish a vegetated buffer around the tree. Note: it is important that the nest itself remains intact, and we strongly encourage the Proponent to maintain as much surrounding vegetation as possible to preserve the woodpecker's habitat. If the construction activities are expected to extend during the breeding season, then actions must be taken to ensure that the nesting woodpecker is not disturbed by the construction activities.

For more information on the amended nest protections under the MBR 2022, frequently asked questions on how these protections apply to migratory birds, including Pileated Woodpecker, and your responsibilities for reporting abandoned nests, please visit the following:

- Nest Protection Fact Sheet: <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/fact-sheet-nest-protection-under-mbr-2022.html>
- MBR 2022 FAQ: <https://www.canada.ca/en/environment-climate-change/services/migratory-bird-permits/faq-migratory-birds-regulations-2022.html>.

Nest Sweeps

9. Quote (pg. 125): "*If vegetation and tree clearing activities during the nesting/breeding season cannot be avoided, nest sweeps and area searches will be conducted by a qualified avian biologist to search for any confirmed breeding bird evidence which must be avoided.*"

Nests in complex habitats (e.g., forests, wetlands) are difficult to locate, and adult birds avoid approaching their nests in a manner that would attract predators to their eggs or young. In many circumstances, disturbance and/or harm to migratory birds is still likely to occur even when nest sweeps are conducted prior to vegetation clearing activities.

Therefore, ECCC does not recommend nest sweeps in vegetation prior to clearing or land disturbance activities during the breeding season. Rather, to promote compliance with the [Migratory Birds Convention Act](#) (MBCA) and its regulations and the [Species at Risk Act](#) (SARA), ECCC recommends that activities that may result in incidental take of

nests or eggs, such as vegetation clearing and maintenance, occur outside the migratory bird nesting period (**early-April to mid-August** in this region; nesting zone “C2”, [ECCC 2025](#)).

For additional information, see “Vegetation Clearing” standard recommendations below.

Bank Swallow

10. The Bank Swallow (SARA-listed Threatened) is a colonial, burrow-nesting aerial insectivore known to nest in large piles of soil left unattended/un-vegetated at work sites. If migratory birds take up occupancy of these piles, any industrial activities will cause disturbance to these migratory birds and inadvertently cause the destruction of nests and eggs, which is prohibited under SARA. ECCC offers the following general recommendations for avoiding and minimizing impacts of the project on Bank Swallow:

- To discourage nesting, the proponent should consider measures to cover or to deter birds from nesting in these large piles of unattended soil during the breeding season. The Government of Canada guidance document “*Bank Swallow (Riparia riparia) in Sandspit and Quarries*” (GoC 2020) offers advice in preparing mitigation measures in the management of stockpiles during construction activities: <https://species-registry.canada.ca/index-en.html#/documents/1602>.
- Be aware of the risk of nesting Bank Swallows in project footprint, and educate site workers about this risk, and what constitutes a contravention of the SARA and the MBCA.
- Manage site activities to reduce the risk of Bank Swallows initiating a colony within their project footprint.
- Protect Bank Swallow colonies that establish within the footprint of the project until such a time the colony is no longer active and fledglings have naturally left the area.
- Understand what constitutes an active bank swallow residence. The period when nests would be considered active would include not only the time when birds are incubating eggs or taking care of flightless chicks, but also a period after chicks have learned to fly, as Bank Swallows return to their colony to roost after fledging. A *Bank Swallow Residence Description* (GoC 2019) is available at: <https://species-registry.canada.ca/index-en.html#/documents/3521>

Non-avian SAR and SOCC

11. ECCC advises that avian SAR listed under the *Species at Risk Act* (SARA) may occur in the Project area, including but not limited to:

- **Little Brown Myotis** (SARA-listed Endangered)
- **Northern Myotis** (SARA-listed Endangered)
- **Tri-coloured Bat** (SARA-listed Endangered)
- **Silver-haired Bat** (COSEWIC-assessed Endangered)
- **Monarch** (SARA-listed Endangered)
- **Eastern Painted Turtle** (SARA-listed Special Concern)
- **Snapping Turtle** (SARA-listed Species Concern)
- **Wood Turtle** (SARA-listed Threatened)

For projects undergoing environmental assessment, ECCC recommends that adverse effects of the project on SAR and their Critical Habitat are identified, and, if the project is carried out, that mitigation measures are taken to avoid or lessen those effects. We recommend that mitigation measures:

- be consistent with best available information including any Recovery Strategy, Action Plan or Management Plan in a final or proposed version; and
- respect the terms and conditions of the *Species at Risk Act* (SARA) regarding protection of individuals, residences, and critical habitat of Extirpated, Endangered, or Threatened species.

We also recommend follow-up monitoring to verify impact predictions, and adequacy of mitigation measures, and adaptive management in the event that SAR or their critical habitat are adversely affected by the project.

Bats

12. The populations of the three SARA-listed bat species (Little Brown Myotis, Northern Myotis, and Tricolored Bat) are highly depressed in NS, primarily due to introduction of White-nosed Syndrome (WNS), and therefore few acoustic detections are expected. Any additional loss of SAR bat individuals, maternity roosts, or and/or hibernacula remaining on the landscape can be biologically significant for these long-lived, k-selected species, and affect their recovery.

The Recovery Strategy for the Little Brown Myotis (*Myotis lucifugus*), the Northern Myotis (*Myotis septentrionalis*), and the Tricolored Bat (*Perimyotis subflavus*) in Canada (2018) should be consulted: <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/recovery-strategies/little-brown-myotis->

[2018.html](#).

Three bat species assessed as Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) may occur in the Project area, including Hoary Bat, Eastern Red Bat, and Silver-haired Bat. From a mitigation and management perspective, ECCC recommends that proponents consider these Species of Conservation Concern as at risk, given the potential for their legal listing during the Project's lifetime.

Three bat SAR listed as Endangered under Schedule 1 of SARA, including Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and/or Tri-colored Bat (*Perimyotis subflavus*), are known to occur in Kings County. ECCC is of the opinion that any additive mortality of the SARA listed bat species in White-nose Syndrome (WNS) affected areas has the potential to be biologically important. The mortality of even a small number of remaining individuals, particularly breeding adults, or disturbance to important habitat features like maternity roosts or hibernacula, has the potential to negatively impact the survival of local populations, their recovery, and potentially, the development of resistance to the fungus that causes WNS.

Quote (pg. 98): *"Surveys of suitable bat maternity roost habitat and the presence of maternity colonies were completed in nine forest stands in the Study Area [based on the Nova Scotia Forest Inventory in December 2025. Meandering transects were completed through forest stands while searching for suitable habitat, active roost trees, and evidence of bat activity (e.g., presence of bats and guano)."* In areas to be cleared, ECCC recommends completing a survey to identify suitable maternity roosting habitat using the *Survey Protocol for Species at Risk Bats within Treed Habitats, Little Brown Myotis, Northern Myotis & Tri-Colored Bat* (OMNRF 2017).

ECCC acknowledges maternity roost habitat surveys conducted in December is good timing as this is the leaf-off period, which allows for cavities, cracks, crevices, etc., to be more readily observed. However, December is not an effective time for assessing presence as bats will either be in hibernation or have migrated from Canada. Further, ECCC does not recommend using meandering surveys and incidental sightings as sampling methods for the presence of these nocturnal species that vocalize (at night) outside the range of human hearing. Guano is also not easily observed in a forested setting. The guano will typically be inside the roosting cavity of a tree for the species that use these features. The species that don't use cavities either roost singularly or in small groups making the presence of guano an ineffective tool to indicate species' presence. Trees/snags identified as having the characteristics of maternity roosts should have

targeted acoustic surveys or emergence surveys done to assess use.

Quote (pg. 97): *"The likelihood of encountering bat species or suitable bat habitat in the Study Area was assessed by reviewing the locations of known bat hibernacula and AMOs."* ECCC notes that this statement only pertains to overwintering habitat and does not inform the likelihood of encountering bat species during the rest of the year.

The Proponent should identify mitigation measures to protect bat individuals and habitat features, should they be suspected or confirmed during surveys, and include these measures in the WMP. ECCC recommends establishing a 100m minimum buffer around large diameter tree (s) (>25 cm dbh) with suitable maternity roost habitat characteristics until occupancy can be confirmed.

Monarch

13. Quote (pg. 100): *"There were no observations of invertebrate SAR or SOCI recorded during the field assessments and no milkweed plants were observed during botany surveys to support monarch butterflies."*

ECCC-CWS recommends that the Proponent avoid disturbance or clearing of milkweed from late May through September to prevent harm to Monarch eggs, larvae, and chrysalises. Seasonal restrictions and habitat protection measures should be incorporated into the Terrestrial Habitat and Wildlife Management Plan. ECCC-CWS recommends referencing the *Monarch (Danaus plexippus): management plan 2016* to inform the development of mitigation measures for this species: <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/management-plans/monarch-2016.html>

Wood Turtle

14. Quote (pg. 100): *"No herpetofauna species or signs thereof (e.g., nests, eggs, shell fragments) were observed during targeted wood turtle surveys or during other biophysical assessments."* However, as the Project area overlaps with Critical Habitat of Wood Turtle, ECCC recommends taking a precautionary approach and recommends reviewing the following federal documents regarding Wood Turtle:
 - [*Recovery Strategy for the Wood Turtle \(Glyptemys insculpta\) in Canada \(2020\)*](#).
 - [*Species at Risk Guide: Mitigating Road Mortality of Reptiles and Amphibians \(2026\)*](#).

The following advice was developed for federal lands but may be considered and applied, where appropriate, on other land tenure types for Wood Turtle.

- Avoid known or suitable nesting areas (e.g., sandy or gravelly riverbanks and bars with high sun exposure) during the nesting period (May–July).
- Avoid known or suitable overwintering habitats, including deep pools in streams and other aquatic habitats used for overwintering.
- Schedule terrestrial work, where feasible, during the inactive season (November–March) when turtles are overwintering underwater. Avoid in-water works that could alter overwintering habitat conditions during this period.
- Develop measures to avoid disturbance, injury, and mortality during sensitive periods, including nesting (May–July), hatchling emergence (August–October), and seasonal movements between aquatic and terrestrial habitats (generally April–October).
- Implement measures to reduce mortality risk within Wood Turtle habitat, including:
 - delaying mowing or material placement in meadows, hayfields, and floodplains until late summer where feasible;
 - maintaining mower blade heights of at least 10 cm; and
 - implementing road mortality mitigation measures along roads intersecting Critical Habitat and in areas of known turtle crossings or roadkill hotspots.
- Conduct pre-construction surveys, as appropriate, to confirm turtles are not present at a site prior to initiating work activities. Survey methods and any handling or relocation of turtles should follow guidance from the appropriate provincial species at risk specialist.
- Secure food and waste to avoid attracting predators such as raccoons and skunks.
- Do not share precise Wood Turtle location information, maps, coordinates, or identifiable photographs outside of project requirements (e.g., on social media).
- Submit Wood Turtle observations to the appropriate provincial species at risk specialist.

ECCC-CWS defers to the province of Nova Scotia for further considerations on specific survey design and protocols for turtles, and ECCC-CWS is available to provide guidance, if required.

Wetland

15. ECCC advocates for the conservation of wetlands, especially in areas where wetland losses have already reached critical levels (e.g., NB, NS, PEI, southern Ontario, Prairies), regionally important wetlands, and wetlands used by avian SAR and SOCC as part of their lifecycle (e.g., Canada Warbler, Chimney Swift, Olive-sided Flycatcher Common Nighthawk, Lesser Yellowlegs, Greater Yellowlegs, Spotted Sandpiper, Upland Sandpiper, etc.).

ECCC advocates for planning, siting and designing a project in a manner that considers wetland mitigation options in a hierarchical sequence – avoidance, minimization, and as a last resort, compensation.

Quote (pg. 79): “*A wetland compensation plan will be created*”. Given that wetlands are highly productive, potentially slow maturing, ecologically sensitive, and important habitat for many migratory birds and SAR, ECCC-CWS considers wetlands to reasonably fall within the category of requiring a ratio higher than the 2:1 minimum, now recommending a minimum compensation ratio of 4:1. A growing body of scientific literature indicates that a 2:1 ratio is unlikely to achieve “no net loss”, particularly when accounting for uncertainty, temporal lags, and restoration risk. Please note that activities related to compensation (restoration, enhancement, protection, education, etc.) may require higher compensation ratios to achieve “no net loss” or “net gains”. Use of offset calculators could be considered to help guide decisions related to compensation ratios.

In assessing potential for avoidance and minimization impacts to wetlands and avian SAR and SOCC that use wetlands, ECCC recommends that the proponent consider implementing a 30-m buffer around wetlands for all project infrastructure (e.g., turbine pads, access roads, transmission corridors, substation). Any vegetation clearing (even if temporary) should be considered an alteration requiring compensation or other measures to ensure wet soils and wetland functions are maintained for migratory birds and species at risk.

ECCC also recommends the following general measures:

- Developments on wetlands should be avoided;
- Hydrological function of the wetland should be maintained;
- Runoff from development should be directed away from wetlands;

A 30-metre buffer from the high-water mark of any water body (1:100 Flood Zone) should be maintained in order to retain movement corridors for migratory birds. Please see <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm->

[migratory-birds/reduce-risk-migratory-birds.html](https://www.ecccc.ca/migratory-birds/reduce-risk-migratory-birds.html) for further information concerning buffer zones.

Post-Construction Wildlife Management Plan

16. Quote (pg. 126): “A site-specific post-construction Wildlife Management Plan will be developed in consultation with government regulators and all other relevant parties. This plan will include mitigation measures, monitoring, and adaptive management frameworks for minimizing impacts to avifauna”.

ECCC is available to review the post-construction Wildlife Management Plan, at the discretion of NS ECCC, once developed.

Applicable Legislation and Standard Advice

Canadian Environmental Protection Act

The proponent should also be aware of the potential applicability of the [Canadian Environmental Protection Act, 1999](#). The Canadian Environmental Protection Act enables protection of the environment, and human life and health, through the establishment of environmental quality objectives, guidelines and codes of practice, and the regulation of toxic substances, emissions and discharges from federal facilities, international air pollution, and disposal at sea.

Fisheries Act

Pollution prevention and control provisions of the [Fisheries Act](#) are administered and enforced by Environment and Climate Change Canada (ECCC). The proponent should be aware of the general applicability of Section 36(3) of the Fisheries Act which states: “no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substances or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water”. Environmental protection and mitigation measures should reflect the need to comply with Section 36(3) of the Fisheries Act.

It is the responsibility of the proponent to ensure that all reasonable measures are conducted to prevent the release of substances deleterious to fish from their proposed activities. In general, compliance is determined at the last point of control of the substance before it enters waters frequented by fish, or, in any place under any conditions where a substance may enter such waters.

Additional information on what constitutes a deposit under the Fisheries Act can be found at:

<https://www.canada.ca/en/environment-climate-change/corporate/transparency/acts-regulations/fisheries-act-registry/frequently-asked-questions.html>

Migratory Birds Convention Act

The federal *Migratory Birds Convention Act* (MBCA) and its [regulations](#) protect migratory birds and their eggs and prohibit the disturbance, damage, destruction or removal of migratory bird nests that contain a live bird or a viable egg. Migratory birds are protected at all times; all migratory bird nests are protected when they contain a live bird or viable egg; and the nests of 18 species listed in [Schedule 1 of the MBR 2022](#) are protected year-round. These general prohibitions apply to all lands and waters in Canada, regardless of ownership. For more information, please visit: <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html>.

For migratory birds that are listed as Endangered, Threatened or Extirpated on Schedule 1 of the *Species at Risk Act* S.32 (protection of individuals) and S.33 (protection of residences) apply to all land tenure types in Canada. For some migratory bird species listed under the *Species at Risk Act* (SARA), the residence prohibition will protect nests that are not active but are re-used in subsequent years (please note that the residence of a migratory bird may not necessarily be limited to their nest).

Section 5.1 of the MBCA describes prohibitions related to depositing substances harmful to migratory birds:

“5.1 (1) No person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.

(2) No person or vessel shall deposit a substance to be deposited in any place if the substance, in combination with one or more substances, result in a substance – in waters or an area frequented by migratory birds or in a place from which it may enter such waters or such an area – that is harmful to migratory birds.”

The proponent is responsible for ensuring that activities are managed to ensure compliance with the MBCA and associated regulations.

Species at Risk Act

The Species at Risk Act (SARA) “General prohibitions” apply to this project. In applying the general prohibitions, the proponent, staff and contractors, should be aware that no person shall:

- kill, harm, harass, capture or take an individual;
- possess, collect, buy, sell or trade an individual, or any part or derivative;
- damage or destroy the residence of one or more individuals.

General prohibitions only apply automatically:

- on all federal lands in a province,
- to aquatic species anywhere they occur,
- to migratory birds protected under the Migratory Birds Convention Act (MBCA) 1994 anywhere they occur.

Section 33 of SARA prohibits damaging or destroying the residence of a listed threatened, endangered, or extirpated species. For migratory bird species at risk (SAR), this prohibition immediately applies on all lands or waters (federal, provincial, territorial and private) in which the species occurs.

For project assessments, SARA requires:

79 (1) Every person who is required by or under an Act of Parliament to ensure that an assessment of the environmental effects of a project is conducted, and every authority who makes a determination under paragraph 82(a) or (b) of the [*Impact Assessment Act*](#) in relation to a project, must, without delay, notify the competent minister or ministers in writing of the project if it is likely to affect a listed wildlife species or its critical habitat.

(2) The person must identify the adverse effects of the project on the listed wildlife species and its critical habitat and, if the project is carried out, must ensure that measures are taken to avoid or lessen those effects and to monitor them. The measures must be taken in a way that is consistent with any applicable recovery strategy and action plans.

ECCC notes that all comments it provides concerning species at risk that are not migratory birds derive from federal recovery/management plans as posted on the Species at Risk Registry (<https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html>), and thus comments may not be comprehensive to the body of knowledge for the species.

For species which are not listed under SARA but are listed under provincial legislation

only or that have been assessed and designated by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), it is best practice to consider these species in EA as though they were listed under SARA.

Vegetation Clearing

Clearing vegetation may cause disturbance to migratory birds and inadvertently destroy their nests and eggs. Many species use trees, as well as brush, deadfalls and other low-lying vegetation for nesting, feeding, shelter and cover. This would apply to songbirds throughout the region and waterfowl in wetland areas. Disturbance of this nature would be most critical during the key breeding period (mid-April to late-August in this region), however some species protected under the MBCA do nest outside of this time period. Please see the webpage “Nesting Periods” (<https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html>) for more specific information concerning the breeding times of migratory birds. This project falls within zone “C3”.

ECCC provides the following recommendations:

- Avoid certain activities, such as clearing, during the regional nesting period for migratory birds. The breeding season for most birds within the project area occurs between **mid-April and late-August** in this region (see above website for more specific time periods by zone).
- Active nests can be discovered during project activities outside of the regional nesting period. To reduce the risk of impacting nests or birds caring for pre-fledged chicks at those times, ECCC recommends implementation of measures such as the establishment of vegetated buffer zones around nests, and minimization of activities, in the immediate area until nesting is complete, and chicks have naturally migrated from the area. It is incumbent on the proponent to identify the best approach, based on the circumstances, to comply with the MBCA.
- Be cognizant that while most migratory bird species construct nests in trees (sometimes in tree cavities) and shrubs, mitigations should be appropriate for migratory birds with different strategies. For example, several species nest at ground level (e.g. Common Nighthawk, Killdeer, sandpipers), in hay fields, pastures or in burrows. Some bird species may nest on cliffs or in stockpiles of overburden material from mines or the banks of quarries. Some migratory birds (including certain waterfowl species) may nest in head ponds created by beaver dams. Some migratory birds (e.g. Barn Swallow, Cliff Swallow, Eastern Phoebe) may build their nests on structures such as bridges, ledges, or gutters.
- Develop and implement a management plan that includes appropriate preventative measures to minimize the risk of impacts on migratory birds (Please

see 'Guidelines to reduce risk to migratory birds' at <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html>). For beneficial management practices regarding how to avoid the incidental take of migratory bird nests and eggs, please refer to the Avoidance Guidelines (Website: <https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/guidelines.html>). The management plan should include processes to follow should an active nest be found at any time of the year.

Buildings, Bridges, and Other Infrastructure

Certain species of migratory birds may nest on the sides of buildings, bridges or other pieces of infrastructure. Additionally, some species may nest on equipment, if they are left unattended/idle for long periods of time.

ECCC recommends the following beneficial management practices:

- The proponent should ensure that project staff are aware of the potential of migratory bird nests on infrastructure, buildings, and bridges, if applicable.
- If a nest is discovered, the proponent should conduct no activities around the nest that may cause the nest to be abandoned or destroyed. Activities should be suspended until the chicks have fledged and left the area.
- If the proponent anticipates that birds may nest on infrastructure, the proponent should install anti-perching and nesting exclusion devices (e.g. snow fencing, chicken wire fencing, etc.) before any nest attempts are made.

If there is ultimately a need to decommission a building or structure used for nesting by migratory birds, ECCC-CWS should be consulted in a timely manner in advance of any proposed decommissioning activities for species-specific considerations.

Lighting

Attraction of migratory birds and SAR to light at night or in poor visibility conditions during the day may result in collision with lit structures, their support structures, or with other migratory birds. Disoriented migratory birds are prone to circling light sources and may deplete their energy reserves and either die of exhaustion or be forced to land where they are at risk of depredation.

To reduce the risk of disturbance to migratory birds related to human-induced light, ECCC-CWS recommends implementation of the following beneficial management practices:

- The fewest number of site-illuminating light possible should be used in the project area. Only strobe lights should be used at night, at the lowest intensity and smallest number of flashes per minute allowable by Transport Canada.
- Lighting for the safety of the employees should be shielded down and only to where it is needed.
- LED lights should be used instead of other types of light where possible. LED light fixtures are less prone to light trespass (i.e., are better at directing light where it needs to be, and do not bleed light into the surrounding area), and this property reduces the incidence of migratory bird attraction.
- Lights should point downward with a shield to prevent bleeding into surrounding areas

Effects of Construction/Operations on Migratory Birds – Stranded Birds

Due to the propensity of seabirds from nearby colonies to be attracted to light, it is possible that migratory birds may be attracted to and potentially be stranded on the site. ECCC-CWS recommends that a site monitoring plan be developed for the migratory bird breeding season as well as the spring and fall migration periods and implemented while floodlights are being used during nighttime hours. A site monitoring plan could include protocols such as dusk and dawn site inspections to look for stranded birds that may have landed on site, and/or inclusion of migratory bird searches into standard occupational health and safety daily inspections, etc. ECCC-CWS recommends, at minimum, daily searches during early morning hours, particularly during early September to late November, to search for migratory birds that may become stranded on-site.

Should birds become stranded on the project site, both during construction and operations phases, the proponent is recommended to adhere to Procedures for handling and documenting stranded birds encountered on infrastructure offshore Atlantic Canada (attached; it should be noted that this reference document has been developed for offshore vessels and may require modification for use on an onshore facility). ECCC-CWS should be notified if bird stranding incidents occur. A seabird handling permit will be required to implement the instructions in this reference document and the proponent must be advised that such a permit would have to be in place prior to the initiation of proposed activities. Please note that MBCA permit applications can be obtained from ECCC-CWS via email at scf-atlpermis-cws-atlpermits@ec.gc.ca.

If any birds are found stranded on-site, the proponent should immediately contact ECCC-CWS for further instructions. The contact is Sabina Wilhelm (ECCC-CWS Marine

Issues Biologist) at sabina.wilhelm@ec.gc.ca or 709-764-1957.

Environmental Emergencies

ECCC's Environmental Emergencies Division (EED) encourages proponents to demonstrate, in their environmental assessment submission, how they have evaluated their project's environmental risks and what they have done to prepare for and mitigate spills or releases of hazardous or deleterious substances that are likely to result from unplanned accidents and malfunctions.

Hazardous materials (e.g. fuels, lubricants, hydraulic oil) and wastes (e.g. waste oil) should be managed so as to minimize the risk of chronic and/or accidental releases. For example, proponents are encouraged to undertake refueling and maintenance activities on level terrain, at a suitable distance from environmentally sensitive areas including watercourses, and on a prepared impermeable surface with a collection system.

Proponents are encouraged to prepare contingency plans that reflect a consideration of potential accidents and malfunctions and that take into account site-specific conditions and sensitivities. The Canadian Standards Association (CSA) publication, Emergency Preparedness and Response, CAN/CSA-Z731-03, is a useful reference for this.

All spills or leaks, such as those from machinery or storage tanks, should be promptly contained and cleaned up (sorbents and booms should be available for quick containment and recovery), and reported to the 24-hour environmental emergencies reporting system (709-772-2083 or Toll-free 1-800-563-9089 or 1-800-565-1633).

Fuel Leaks

The proponent must ensure that all precautions are taken by the contractors to prevent fuel leaks from equipment, and that a contingency plan in case of oil spills is prepared. Furthermore, the proponent should ensure that contractors are aware that under the MBCA, "*no person shall deposit or permit to be deposited oil, oil wastes or any substance harmful to migratory birds in any waters or any area frequented by migratory birds.*" Biodegradable alternatives to petroleum-based chainsaw bar oil and hydraulic for heavy machinery are commonly available from major manufacturers. Such biodegradable fluids should be considered for use in place of petroleum products whenever possible, as a standard for best practices. Fueling and servicing of equipment should not take place within 30 meters of environmentally sensitive areas, including shorelines and wetlands.

ECCC recommend incorporating a Wildlife Emergency Response Plan into emergency

response contingency plans for scenarios that may impact avifauna directly (injury or mortality e.g. polluting incident) or indirectly (collisions causing mortality, stranding due to light attraction).

For consideration in emergency response and contingency planning related to accidents and malfunctions, ECCC has prepared *Guidelines for Effective Wildlife Response Plans* (ECCC 2022) available online

at: <https://www.canada.ca/en/services/environment/wildlife-plants-species/national-wildlife-emergency-framework.html>. Plans should include:

- Measures to deter migratory birds from coming into contact with the oil or polluting substance;
- Measures undertaken if individuals of migratory birds and/or sensitive habitat become contaminated; and,
- The type, extent of monitoring, and reporting in relation to various spill events.

The proponent is responsible for ensuring that all precautions are taken by the contractors to prevent fuel leaks from equipment, and that a contingency plan is prepared in the case of spills. Furthermore, the proponent should ensure that contractors are aware of s.5.1 MBCA prohibitions.

Events involving a polluting substance should be reported to the 24-hour environmental emergencies reporting system: **1-800-565-1633**.

Bird mortality incidents of 10 or more birds in a single event, or an individual species at risk, should be reported via ECCC-CWS Main Office **(506) 364-5044** or via email to SCFATLEvaluationImpact-CWSATLImpactAssessment@ec.gc.ca.

Stockpiles

Certain species of migratory birds (e.g., Bank Swallows) may nest in large piles of soil left unattended/ unvegetated during the most critical period of breeding season (mid-April through late August). To discourage this, the proponent should consider measures to cover or to deter birds from these large piles of unattended soil during the breeding season. If migratory birds take up occupancy of these piles, any industrial activities (including hydroseeding) will cause disturbance to these migratory birds and inadvertently cause the destruction of nests and eggs. Alternate measures will then need to be taken to reduce potential erosion, and to ensure that nests are protected until chicks have fledged and left the area. For a species such as Bank Swallow, the period when the nests would be considered active would include not only the time when birds are incubating eggs or taking care of flightless chicks, but also a period of time

after chicks have learned to fly, because Bank Swallows return to their colony to roost.

For additional information on designing mitigation measures for Bank Swallow, refer to the following guidance: <https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/related-information/bank-swallow-sandpits-quarries.html>.

Invasive Species

Measures to diminish the risk of introducing invasive species should be developed and implemented during all project phases. These measures could include:

- Cleaning and inspecting construction equipment before transport from elsewhere to ensure that no vegetative matter is attached to the machinery (e.g., use of pressure water hose to clean vehicles before transport).
- Regularly inspecting equipment prior to, during and immediately following construction in areas found to support Purple Loosestrife or other invasive species to ensure that vegetative matter is not transported from one construction area to another.

Noise Disturbance

Anthropogenic noise produced by construction and human activity can have multiple impacts on birds, including causing stress responses, avoidance of certain important habitats, changes in foraging behavior and reproductive success, and interference with songs, calls, and communication. Activities that introduce loud and/or random noise into habitats with previously no to little levels of anthropogenic noise are particularly disruptive.

ECCC recommends the following best management practices:

- Develop mitigations for programs that introduce very loud and random noise disturbance (e.g., blasting programs) during the migratory bird breeding season for their region.
- Prioritize construction works in areas away from natural vegetation while working during the migratory bird breeding season. Conducting loud construction works adjacent to natural vegetation should be completed outside the migratory bird breeding season.
- Keep all construction equipment and vehicles in good working order and loud machinery should be muffled.

Dust Generation

Dust generated from construction activities, vehicle traffic, material handling, and

exposed soils may affect migratory birds and their habitats through dust deposition on vegetation, nesting areas, and surrounding habitat. Excessive dust generation may reduce habitat quality, alter foraging conditions, and contribute to disturbance or displacement of migratory birds using the area. Dust-generating activities occurring during the breeding season may also affect active nests if deposition occurs on nesting substrates or surrounding habitat, potentially contributing to nest disturbance or reduced nesting success.

ECCC-CWS recommends the following beneficial management practices to minimize dust-related impacts on migratory birds and their habitats:

- Implement dust suppression measures where practical (e.g., water application, reduced vehicle speeds, stabilization or covering of exposed soils and stockpiles, and use of dust collection systems where appropriate);
- Use shielding, barriers, or enclosures around dust-generating activities or materials where feasible to reduce off-site dust movement;
- Avoid or reduce dust-generating activities during periods of high winds where practical, particularly near suitable nesting habitat during the migratory bird breeding season; and
- Stabilize or revegetate disturbed areas as soon as practical to reduce prolonged sources of dust emissions.

Working near Waterbodies and Riparian Areas

ECCC-CWS has the following recommended beneficial management practices for working on/near waterbodies or riparian environments:

- Project staff should not approach concentrations of migratory birds (e.g., seabirds, shorebirds, waterfowl, etc.)
- Project staff should use the main navigation channels or access roads to get to and from the site; and should have well-muffled vessels and machinery.
- Project staff should undertake any measures that may minimize or eliminate discharge of oily waste into the marine or riparian environment.
- Food scraps and other garbage left near waterbodies or riparian environments can artificially enhance the populations of avian and mammalian predators of eggs and chicks. The proponent should ensure that no litter (including food waste) is left in coastal areas by their staff and/or contractors.
- If there is any noticeable change in migratory bird numbers or distribution at the location during operations, ECCC-CWS should be notified.

Please let me know if you have any questions regarding the above advice.

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Survey Protocol for Species at Risk Bats within Treed Habitats

Little Brown Myotis, Northern Myotis & Tri-Colored Bat

April 2017



Ontario Ministry of Natural Resources and Forestry

Guelph District



Introduction

This document describes Guelph District's recommended protocol for confirming presence/absence of Little Brown Myotis, Northern Myotis and Tri-colored Bat, where it is determined that suitable habitat for the establishment of maternity roosts is present.

This document replaces any previous versions of the survey protocol, and may be updated periodically as new information becomes available.

Note that those undertaking projects that may impact anthropogenic structures and isolated trees considered suitable habitat for bats should refer to Guelph District's *Survey Methodology for the Use of Buildings and Isolated Trees by Species at Risk (SAR) Bats*.

Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*) and Tri-colored Bat (*Perimyotis subflavus*) are listed as provincially endangered and receive species and general habitat protection under the *Endangered Species Act, 2007* (ESA).

Where the habitat of an endangered or threatened species is not prescribed by regulation, the ESA defines habitat as an area on which a species depends on, directly or indirectly, to carry out its life processes. Such processes include reproduction, rearing, hibernation, migration or feeding, as well as places being used by members of the species.

Throughout eastern North America, a disease known as white-nose syndrome (WNS), which is caused by the fungus *Pseudogymnoascus destructans*, is the primary cause of the decline of Little Brown Myotis, Northern Myotis and Tri-colored Bat populations. Where population numbers have significantly decreased due to WNS, the relative magnitude of other threats (e.g., habitat destruction) may increase. This is because the mortality or displacement of a small number of the remaining individuals can have a major impact on the survival of local populations and their recovery.

Many bat species are known to have high fidelity to their hibernacula and maternity roost sites. It is not uncommon for bats to return to the same roost tree or group of trees in successive years. Some bats switch roost trees periodically within the same treed area over the summer, likely to avoid predators or parasites or in search of a warmer or cooler roost.

Of the SAR bats species noted in this protocol, Little Brown Myotis is the most frequently encountered species in treed communities due to higher population numbers relative to other SAR bat species. Little Brown Myotis establishes maternity roosts within tree cavities and under loose or exfoliating bark, especially in wooded areas located near water. Foraging habitat includes over water and in open areas between water and forest. Favoured prey consists of aquatic insects (e.g., mayflies, midges, mosquitos and caddisflies). In agricultural environments, Little Brown Myotis tend to follow linear wooded features, such as hedgerows, for commuting and foraging.

Northern Myotis is less frequently encountered relative to Little Brown Myotis but selects similar maternity roost space. Northern Myotis roosts within tree crevices, hollows and under the bark of live and dead trees, particularly when trees are located within a forest gap. Northern Myotis switch roost trees more frequently compared to other SAR bat species (i.e., every 1-5 days) and are relatively

slow flyers. Northern Myotis is adapted to hunting in cluttered environments, such as within the forest along edges, where it gleans and hawks its prey (primarily moths).

Tri-coloured Bat establishes maternity roosts within live and dead foliage within or below the canopy. Oak is the preferred roost tree species, likely because oaks retain their leaves longer than other trees. Maples are also thought to be important for roosting, although maples are selected far less often compared to oaks. Some studies have shown that Tri-colored Bat prefers dead leaves over live leaves, especially if the dead leaves are situated on a live tree i.e., along a broken branch. Other documented roost sites include dogwood leaves, within accumulations of pine needles, in squirrel nests and in tree cavities. Within a forest, the location of maternity roost trees varies from dense woods to more open areas, although roosts are rarely found in deep woods. Although Tri-colored Bat switches roosts over the summer, this species has very high site fidelity to particular leaf clusters within a season. Foraging occurs along forested riparian corridors, over water (e.g., ponds and rivers) and within gaps in forest canopies. This species is an insect generalist, feeding on species such as leafhoppers, ground beetles, flies, moths and flying ants. The Tri-colored Bat is less frequently encountered compared to Little Brown Myotis and Northern Myotis. Unlike other SAR bats, Tri-colored Bat rarely roosts in buildings, and therefore relies heavily on treed areas for rearing its young.

Note: Confirmation of individual maternity roost trees is extremely challenging. Exit surveys are not always reliable, since SAR bats are known to periodically switch roost trees within a treed area over the summer. In addition, techniques used to confirm maternity roost trees, such as mist netting, are quite invasive and therefore not recommended.

The survey protocol that follows focuses on confirming presence/absence of Little Brown Myotis, Northern Myotis and Tri-colored Bat within treed habitats considered suitable for the establishment of maternity roosts, which is sufficient information to apply species and habitat protection under the ESA.

If an Ecological Land Classification (ELC) ecosite is determined to be suitable for the establishment of maternity roosts, trees with suitable attributes are present, and SAR bats are detected during the maternity roost season (June), it can be concluded with a high degree of certainty that the ELC ecosite represents the habitat most in use during the breeding season for roosting, feeding, rearing of young and resting.

Phase I: Bat Habitat Suitability Assessment

Little Brown Myotis, Northern Myotis and Tri-colored Bat establish maternity roosts in treed areas consisting of deciduous, coniferous or mixed tree species. For bats that roost under bark or within cracks, hollows or crevices, tree species is important only as it relates to its structural attributes. For example, trees that retain bark for longer periods or are more susceptible to fungal infections/attract cavity excavators are more likely to provide appropriate roosting space.

Following the completion of ELC mapping of a study area, any coniferous, deciduous or mixed wooded ecosite, including treed swamps, that includes trees at least 10cm diameter-at-breast height

(dbh) should be considered suitable maternity roost habitat. For cultural treed areas, such as plantations, consultation with the Ministry of Natural Resource and Forestry (MNRF) is recommended to determine if these habitats may be suitable for the species.

If suitable habitat is to be impacted by a proposed activity, project proponents should proceed to Phase II. It is recommended that the proponent contact the MNRF to discuss the need for additional work with respect to SAR bats.

Phase II: Identification of Suitable Maternity Roost Trees

As previously described, Tri-colored Bat primarily roosts in tree foliage (mainly oak), while Little Brown Myotis and Northern Myotis select loose bark, cracks and cavities. Because of these differences, two separate field data sheets should be completed by the proponent to identify and map suitable roost trees for Tri-colored Bat (Appendix A) and Little Brown Myotis/Northern Myotis (Appendix B). The data collected in Phase II will help inform the positioning of acoustic monitoring stations in Phase III.

The timing of field visits is important in order for an observer to be able to clearly identify tree attributes that are suitable for the establishment of maternity roosts:

- **Tri-colored Bat:** field visits should take place during the leaf-on season the same year that acoustic monitoring is to be conducted so that foliage characteristic (i.e., dead/dying leaves along a dead branch) can be observed.
- **Little Brown Myotis/Northern Myotis:** field visits should occur during the leaf-off period so that the view of tree attributes (hollows, cracks etc.) is not obscured by foliage.

Note that for large ecosites (e.g., >10 ha) where a thorough walk-through may not be possible or practical, the proponent should discuss the study design for Phase II with the MNRF prior to undertaking field work.

i) Tri-colored Bat

Leaf roosts are shaped like umbrellas with a “roof” and a hollow core where bats rest. Studies have shown that oak leaves are the preferred roost site. Maple leaves are also selected, although less commonly. It is thought that Tri-colored Bat may prefer roost trees in open woodlands, as opposed to deep woods.

Within each ecosite identified as suitable maternity roost habitat in Phase I, the following trees should be documented on the field data sheet (Appendix A)

- any oak tree $\geq 10\text{cm dbh}$
- any maple tree $\geq 10\text{cm dbh}$ IF the tree includes dead/dying leaf clusters
- any maple tree $\geq 25\text{cm dbh}$

ii) Little Brown Myotis and Northern Myotis

Within each ecosite identified as suitable maternity roost habitat in Phase I, all “snags” should be identified and relevant information recorded on the field data sheet provided in Appendix B.

For purposes of this exercise, a “snag” is any standing live or dead tree ≥ 10 cm dbh with cracks, crevices, hollows, cavities, and/or loose or naturally exfoliating bark.

During the field visit, the Decay Class should be noted for each snag (see Figure 1). Snags in an early stage of decay (which also includes healthy, live trees) may be preferred by Little Brown Myotis and Northern Myotis if suitable attributes for roost space are present. However, since SAR bats will also roost in snags outside of Class 1-3, any snag >10 cm dbh with suitable roost features should be documented. For trees with cavities, the entrance can be high or low (“chimney-like”) on the tree.

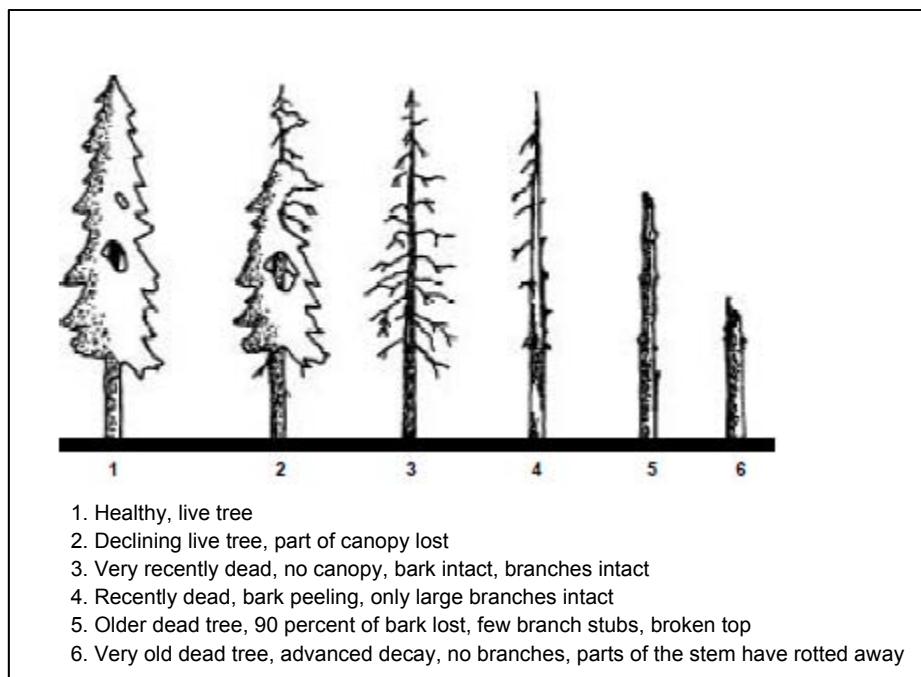


Figure 1: Snag classification (Decay Class 1-3 is considered an early decay stage)¹

In addition, proponents should be aware that some tree species, such as shagbark hickory, silver maple and yellow birch, have naturally exfoliating bark that may be suitable for establishing maternity roosts. Trees ≥ 10 cm dbh exhibiting these characteristics should be considered “snags” as per the definition above and included on the field data sheet provided in Appendix B.

Note: For efficiency (especially for larger ecosites e.g., >10 ha), a proponent may choose to undertake snag density surveys while conducting the work required in Phase II. For a detailed methodology, refer to Phase IV of this protocol.

¹ Watt, Robert and Caceres, M. 1999. Managing snags in the Boreal Forests of Northeastern Ontario. OMNR, Northeast Science & Technology. TN-016. 20p.

Phase III: Acoustic Surveys

Within each ELC ecosite determined to be suitable maternity roost habitat in Phase I, acoustic surveys are recommended to confirm presence/absence of Little Brown Myotis, Northern Myotis and Tri-colored Bat. As described below, acoustic detectors should be placed in the best possible locations in order to maximize the probability of detecting all three SAR bats species. The data collected in Phase II should be used to select optimal locations for monitoring. The trees to be targeted for acoustic monitoring will typically be a subset of the trees documented in Phase II.

Density and Optimal Location of Acoustic Monitoring Stations:

Multiple stations may be required to cover an ecosite adequately (see example in Figure 2). Based on the microphone range of most broadband acoustic detectors (20-30m), **4 stations/hectare** is needed for full coverage of an ELC ecosite.

Strategic placement of acoustic detectors is critical for the successful isolation of high-quality bat calls. Recommended positioning is to locate acoustic detectors **within 10m of the best potential maternity roost trees**. To increase the probability of detecting all three SAR bat species, detectors should be divided proportionally to target suitable roost trees (if present) for Tri-colored Bat and Little Brown Myotis/Northern Myotis.

Prior to undertaking acoustic surveys, it is recommended that the proponent discuss the proposed location of acoustic monitoring stations with the MNRF.

(i) Tri-colored Bat

Although Tri-colored Bat will roost within both live and dead foliage, it appears that reproductive females may prefer clusters of dead leaves, especially if they are situated on a live tree. Using the information collected on the field data sheet (Appendix A), the best suitable maternity roost trees for Tri-colored Bat should be selected according to the following criteria (in order of importance):

If oaks are present:

- Live oak with dead/dying leaf clusters
- Dead oak with retained dead leaf clusters
- Live oak (no dead leaf clusters) with the largest dbh (>25cm)
- Oak within a forest gap

If oaks are absent:

- Live maple with dead/dying leaf clusters
- Dead maple with retained dead leaf clusters
- Live maple (no dead leaf clusters) with the largest dbh (>25cm)
- Maple within a forest gap

Note that if a cluster of tree species with attributes preferred by Tri-colored Bat is present, this may be a good area to target acoustic monitoring.

(ii) Little Brown Myotis and Northern Myotis

Bats that roost under tree bark or within crevices or cavities frequently select the tallest and largest diameter snags, which often extend above the forest canopy. This is because larger snags better retain solar heat, which benefits the pups. Tall trees within a forest gap or along an edge may also have a less obstructed flight approach for bats.

Using the information collected on the field data sheet completed in Phase II, the best suitable maternity roost trees for Little Brown Myotis/Northern Myotis should be selected using the following criteria (in order of importance):

- Tallest snag
- Snag exhibits cavities/crevices often originating as cracks, scars, knot holes or woodpecker cavities
- Snag has the largest dbh (>25 cm)
- Snag is within the highest density of snags (e.g., cluster of snags)
- Snag has a large amount of loose, peeling bark (naturally occurring or due to decay)
- Cavity or crevice is high on the tree (>10 m) or is “chimney like” with a low entrance
- Tree is a species known to be rot resistant (e.g., black cherry, black locust)
- Tree species provides good cavity habitat (e.g., white pine, maple, aspen, ash, oak)
- Snag is located within an area where the canopy is more open
- Snag exhibits early stages of decay (Decay Class 1-3)

Note: The sole purpose of the above-listed criteria is to determine the best placement of acoustic monitors in order to maximize the probability of detecting Little Brown Myotis and Northern Myotis. The listed criteria are NOT intended for any type of snag “ranking”. Snags that do not include any of the above characteristics may still be used as a maternity roost site. For example, the absence of snags >25 cm dbh by no means indicates that there is no potential maternity roost habitat present on a site.

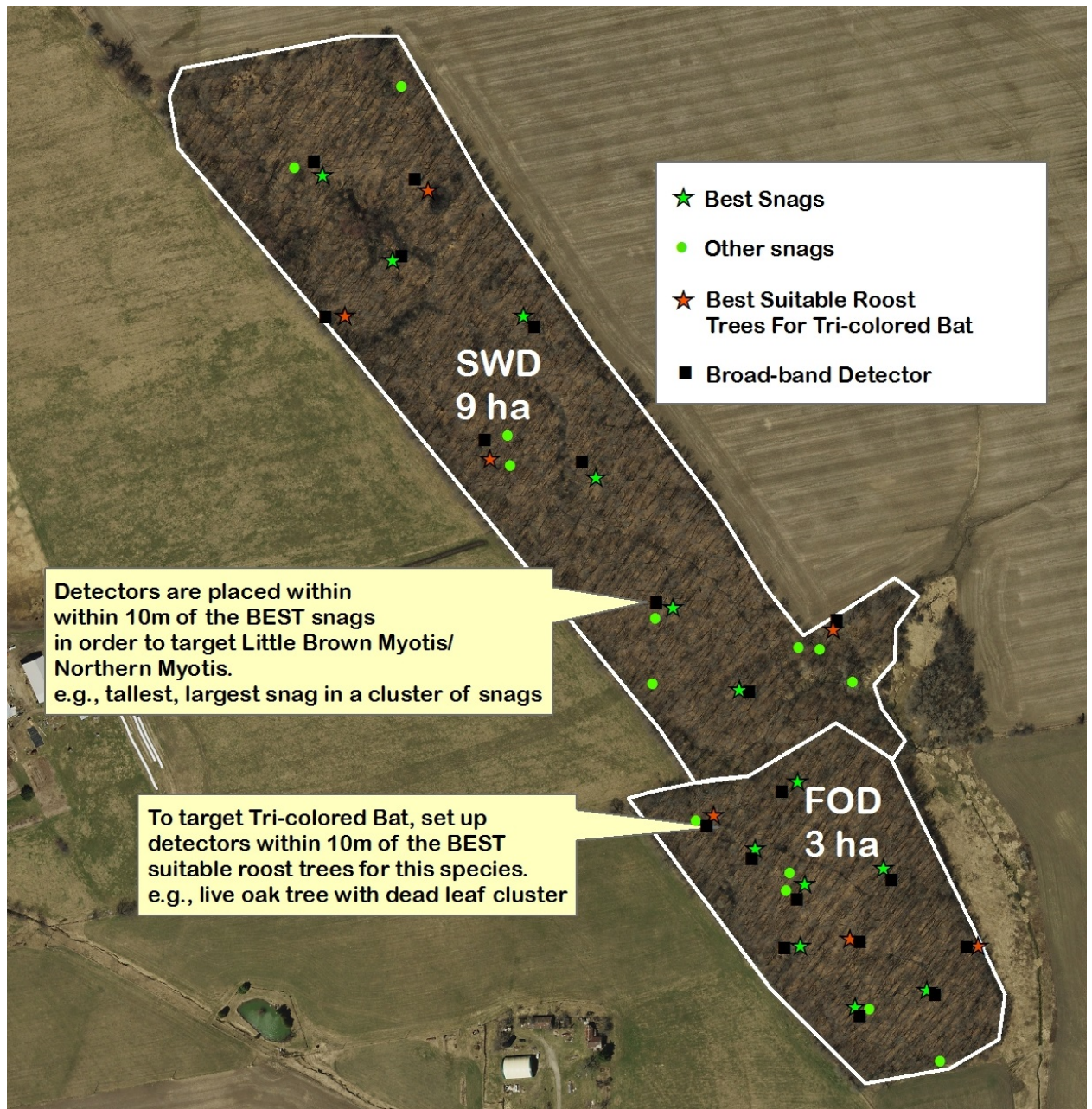


Figure 2: Hypothetical example illustrating the location and density of acoustic detectors i.e., 4/ha to a maximum of 10 per ELC ecosite.

Timing and Weather Conditions:

Acoustic surveys should take place on **evenings between June 1st and June 30th**, commencing **after dusk and continuing for 5 hours**.

Surveys should occur on warm/mild nights (i.e., ambient temperature >10°C) with low wind and no precipitation. At least 10 visits on nights that align with the above conditions where no SAR bat activity is detected are required to confirm absence.

Note that project proponents may cease survey work at any point once documentation of all three SAR bats species presence occurs.

Recommended Equipment Guidelines for Best Results:

- Broadband detectors (full spectrum) should be used. These may be automated systems in conjunction with computer software analysis packages or manual devices with condenser microphones.
- Acoustic monitoring systems should allow the observer to determine the signal to noise ratio of the recorded signal (e.g., from oscillograms or time-amplitude displays). These provide information about signal strength and increase quality and accuracy of the data being analysed.
- Microphones should be positioned to maximize bat detection i.e., situated away from nearby obstacles to allow for maximum range of detection and angled slightly away from prevailing wind to minimize wind noise.
- The same brand and/or model acoustic recording system should be used throughout the survey (if multiple devices are required), as the type of system may influence detection range/efficiency. If different systems are used, this variation should be quantified.
- Information on the equipment used should be recorded, including information on all adjustable settings (e.g., gain level), the position of the microphones, and dates and times for each station where recording was conducted.

Analysis:

Analytical software should be used to interpret bat calls and process results. Data should be analysed to the species level (as opposed to the genus level) in order to confirm presence/absence of SAR bats. Note that MNRF may request a copy of the raw acoustic data file when reviewing the results of the work completed in Phase III.

Additional Notes:

Project proponents should be aware that information about the number of bat passes detected in an area does not allow for an estimate of the number of bats present because there is not a 1:1 relationship between the number of passes and the number of bats responsible for those passes. It is not possible to distinguish between several bat passes made by a single bat flying repeatedly through the study area vs. several bats each making a single pass. Therefore, bat passes cannot provide a direct estimate of population densities.

Next Steps:

If Little Brown Myotis and/or Northern Myotis are detected, project proponents should proceed to Phase IV (Snag Density Survey). If only Tri-colored Bat is detected, snag density is not relevant and the proponent can proceed directly to Phase V (Complete an Information Gathering Form).

Phase IV: Snag Density Survey

Snag density information may be useful when the MNRF is considering the potential impact of a proposed activity on Little Brown Myotis and/or Northern Myotis. Snag density for each suitable ELC ecosite should be noted on the field data sheet provided in Appendix B. Surveys should take place during the leaf-off period so that the view of tree cavities, cracks and loose bark etc., is not obscured by foliage.

Snag density is a qualitative assessment of a treed ecosite, not a method of determining presence/absence of maternity roost habitat. There is no minimum threshold in terms of the number of snags/ha for an ELC ecosite to be considered suitable maternity roost habitat. However, an ELC with 10 or more snags/ha may be considered to be high quality potential maternity roost habitat. This information may be relevant when considering overall benefit in cases where a s.17(2)c permit under the ESA is required.

For smaller ecosites (e.g., <10 ha), snag density (# of snags/ha) can be calculated by dividing the number of snags mapped in Phase II by the total area of the ecosite.

Example:

ELC ecosite	Size (ha)	# of snags	Snag Density
WOD-M4	3.1	14	4.5 snags/ha
FOD-M2	0.8	9	11.25 snags/ha

For larger ecosites (e.g., >10 ha), sample plots can be used to estimate snag density within the suitable ELC ecosite, as follows:

- Select random plots across the represented ELC ecosite
- Survey fixed area 12.6m radius plots (equates to 0.05 ha)
- Survey a minimum of 10 plots for sites up to 10 ha, and add another plot for each additional ha up to a maximum of 35 plots
- Measure the number of suitable snags in each plot
- Use the formula πr^2 to calculate the number of snags/ha (where $r=12.6m$)
- Map the location of each snag density plot and record the UTM location using a GPS
- Calculate snag density for the ELC ecosite (snags/ha)

Example: ELC Ecosite FOD-M2 (12 ha)

# of sample plots	Total # of snags in sample plots	# of sample plots x r	Area of plots (πr^2)	Snag Density
12	48	12 x 12.6m = 151.2m	$3.14(12.6m)^2 = 71784.9m^2 = 7.18 \text{ ha}$	48 snags in 7.18 ha = 6.7 snags/ha

Phase V: Complete an Information Gathering Form

If SAR bats are detected during Phase III, the proponent should complete an Information Gathering Form (IGF) and submit it to the MNRF, Guelph District Office (esa.guelph@ontario.ca) for review.

The IGF is available by searching the form repository on the government of Ontario website:

<http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf>.

The MNRF will determine whether an activity is likely to kill, harm or harass a listed species and/or damage or destroy its habitat. The MNRF requires all of the necessary details and results from this survey protocol to be included on the IGF in order to make this determination.

For more information on overall benefit permits, including submission guidelines, process and timelines, please visit: <https://www.ontario.ca/page/species-risk-overall-benefit-permits>.

Appendix A – Suitable Maternity Roost Trees for Tri-colored Bat

Include all oak trees $\geq 10\text{cm}$ dbh (if present). If oaks are absent, include maples $\geq 10\text{cm}$ dbh IF dead/dying leaf clusters are present; and maples $>25\text{cm}$ dbh if no dead/dying leaf clusters are present.

Project Name:

Survey Date(s):

Site Name:

Observer(s):

ELC Ecosite:

Tree#	Tree Species ID	Tree Status (live/dead)	Dbh (cm)	Tree Structural & Locational Attributes (check all that apply)	Easting	Northing	Notes
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			
				☐ dead/dying leaf cluster ☐ cavity ☐ open area/forest gap ☐ forest edge ☐ interior ☐ preferred tree species within 10m?			

Appendix B – Suitable Maternity Roost Trees for Little Brown Myotis/Northern Myotis

Include all live and dead standing trees $\geq 10\text{cm}$ dbh with loose or naturally exfoliating bark, cavities, hollows or cracks.

Project Name:

Survey Date(s):

Site Name:

Observers(s):

ELC Ecosite:

Snag Density (snags/ha):

Tree #	Tree Species ID	dbh (cm)	Height Class ²	Snag attributes (check all that apply)	Easting	Northing	Notes
				☐ cavity ³ ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3? ⁴			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			
				☐ cavity ☐ loose bark ☐ crack ☐ knot hole ☐ other snag within 10m? ☐ Decay Class 1-3?			

² **Height Class:** 1 = Dominant (above canopy); 2 = Co-dominant (canopy height); 3 = Intermediate (just below canopy); 4 = suppressed (well below canopy)

³ The approx. height of the cavity should be noted. Note that cavities with an entrance near the ground may also be used by bats if they are "chimney-like".

⁴ **Decay Class:** 1 = Healthy, live tree; 2 = Declining live tree, part of canopy lost; 3 = Very recently dead, bark intact, branches intact

Date: July 29, 2026

To: Mark McInnis, Environmental Assessment Officer

From: Department of Natural Resources and Department of Energy

Subject: **Sturk Quarry Expansion, Kings County, Nova Scotia**

Scope of review:

This review focuses on the following mandates authorities and approvals required from the Department of Natural Resources (DNR) concerning Crown lands, wildlife species, Species at Risk, associated habitat including wetlands, Old Growth Forest, mineral exploration, health and safety, mineral development, and abandoned mine openings.

List of Documents Reviewed:

Department of Natural Resources

Land Strategy and Planning Branch

Land Administration Division (previously Crown Lands)

- Environmental Assessment Registration Document
- Appendices A-J
- Drawings 1-19
- GIS shapefiles

Land Use Planning Division (previously Habitat, Flora and Fauna)

- Sturk Quarry Expansion Project Environmental Assessment Registration Document and all applicable appendices
- GIS shapefiles

Geoscience and Mines Branch

- Sturk Quarry Expansion Environmental Assessment Registration Document
- Mineral Occurrence Database (MODB, Version 12, 2024)
- Provincial Geoscience Atlas
- Nova Scotia's Registry of Claims (NovaROC)
- White, C.E. 2019. Bedrock geology map of the central Annapolis Valley area, Nova Scotia; Nova Scotia Department of Energy and Mines, Geoscience and Mines Branch, Open File Map ME 2019-006, scale 1:50 000.
- Open File Illustration ME 2013-012

Details of Technical Review:

Department of Natural Resources: Land Strategy and Planning Branch

Land Administration Division

Based on the information provided, the Project is located on privately owned land (PIDs 55514392, 55518898 and 55146393) and it does not include Crown lands. PIDs 55146393 and 55514392 adjoin Crown lands currently identified as PID 55305890. PID 55518898 adjoins Crown lands currently identified as PIDs 55305890 and 55346464.

No authorities or approvals are required from the Land Strategy and Planning Branch unless the scope of the Project changes to include Crown lands. Should the proponent require expansion or modification of the Project which includes any adjoining Crown lands, DNR approvals will be required.

Land Strategy and Planning Branch:

The Sturk Quarry Expansion Project intends to expand the existing 4-hectare quarry by up to 52.9 hectares over a 40-year period for a total footprint area of 65.9 hectare (including roads and infrastructure). No increase in the scope or frequencies of current quarry activities is anticipated despite the larger footprint. Currently, blasting occurs for during April/May; crushing and processing occurs between June and December; hauling occurs year-round; and the quarry produces between 60,000 to 70,000 t of gravel and 10,000 to 15,000 t of asphalt annually.

The Environmental Assessment Registration Document and appendices detail a good understanding of both terrestrial and aquatic habitats. Fauna and flora surveys primarily targeted SAR and species of special concern included lichens, vascular plants, wood turtles, nighthawks, and forested songbirds. Survey results showed minimal presence by these species in the study area noting only 4 SAR bird species and no occurrences of SAR lichens, black ash or turtles. The study area does not overlap with any identified SAR critical or core habitat but does occur 4km upstream of wood turtle core and critical habitat. Stockpiles and vertical banks at pits and quarries can be quickly inhabited by bank swallows if not managed appropriately. Due to the proximity of bank swallow habitat, stockpiles and banks should be managed to maintain slopes of less than 70 degrees as a mitigative measure. Bat surveys were limited to a single maternity roost survey in December and no ARUs were deployed to assess bat activity in the study area. Additional surveys are required to determine the baseline presence of bats and associated habitats in the study area to inform required mitigation.

Avoidance should be the primary form of mitigation implemented to alleviate these effects followed by additional mitigative measures to reduce residual impacts. Consultation with DNR on effective forms of mitigation can identify options that work best for the situation including appropriate timing windows for vegetative clearing, blasting, and road construction activities, best management practices for maintaining stockpiles to avoid creating artificial habitat, light reduction strategies and appropriate response plan for wildlife encounters including species at risk.

Department of Natural Resources: Geoscience and Mines Branch

A preliminary review of the Sturk Quarry Expansion Project has been completed. The review notes that the bedrock geological characterization provided for the proposed site is appropriate. The proposed expansion area is underlain entirely by the Cambrian Goldenville Group, transitioning from the Tupper Lake Brook Formation in the current quarry footprint to the Church Point Formation within the proposed expansion area (OFM 2019-006).

The expansion area lies predominantly within the Church Point Formation, which consists of

thickly bedded metasandstone with minor metasilstone and slate.

While the current quarry footprint overlies the Tupper Lake Brook Formation, which has been identified as having moderate acid rock drainage (ARD) potential (OFI 2013-012), the proposed expansion extends into the Church Point Formation, which is expected to be non-acid generating. It is recommended that the Proponent use detailed site-scale bedrock geology mapping to support project-specific interpretations where available, as provincial-scale mapping does not provide sufficient detail for project-level determinations.

The Proponent lists the underlying geology as low risk for karst topography. Proposed mitigation measures should geohazards be encountered for ARD and erosion and sedimentation are in place.

Mineral Occurrences

Based on the 2009 mineral potential model, the proposed Project Area is considered to have moderate mineral and aggregate potential, with numerous historical surficial resources identified nearby. One manganese prospect occurs within 1 km of the proposed site, and the expansion area overlaps Exploration License 57136. Due to the mineral rights held within the proposed area, consideration should be given to concurrent mineral exploration activities.

Key Considerations: (provide in non-technical language)

Department of Natural Resources

Land Strategy and Planning Branch

Land Administration Division

No comment

Land Use Planning Division

Additional wildlife surveys, planning, and mitigation measures are required to establish baseline data, minimize impacts and comply with provincial and federal legislation.

Additional Surveys and Data

- Conduct bat surveys using Automatic Recording Units (ARUs) during the active season to determine baseline information on bat presence within the study area and associated habitats including foraging and maternal roosting sites.
- Continue to provide precise locations and data for all flora and fauna observations including species at risk to DNR.
- Submit all survey results and survey efforts (including location, transect lines and spatial coverage) to the DNR.

Wildlife Management Planning

- Develop a Wildlife Management Plan in consultation with DNR.
- Include Species at Risk monitoring programs and response procedures.
- Implement mitigative measures to reduce impacts on wildlife and habitat including timing windows for vegetative clearing, blasting and road construction, best management practices for stockpile (slopes less than 70 degrees) and sediment control, operational practices to reduce external lighting and artificial habitat impacts, and establish appropriate buffers/setbacks for identified values for bats from additional surveys noted above as well as any other values identified during construction or operational activities including any bird or turtle nests.

- Consider the need for public signage if hunting and trapping is not compatible within the project footprint.
- Include details for decommissioning and site reclamation that support restoration to pre-existing conditions including natural vegetation and prevention of invasive species.

Legal Requirements

Obtain all necessary permits and authorizations as required under provincial legislation, regulations and policy related to habitat, wildlife and species risk.

It is the responsibility of the proponent to ensure compliance with federal and provincial legislation, regulations and policy regarding resident, migratory and at-risk species and associated habitat.

Geoscience and Mines Branch

No comment.



Newfoundland and Labrador Office
901- 10 Barter's Hill
St. John's NL A1C 6M1

Bureau de Terre-Neuve-et-Labrador
901- 10 Barter's Hill
St. John's (Terre-Neuve-et-Labrador) A1C 6M1

July 29, 2026

Mark McInnis
Environmental Assessment Officer
Policy Division, EA Branch
Government of Nova Scotia
Mark.McInnis@novascotia.ca

SUBJECT : Sturk Quarry Expansion Project

Dear Mark McInnis:

Thank you for the opportunity to review the registration document for the Sturk Quarry Expansion project (the project), received on June 30, 2026.

The federal environmental assessment process is set out in the [Impact Assessment Act](#) (the IAA). The [Physical Activities Regulations](#) (the Regulations) set out a list of physical activities considered to be "designated projects" under the IAA.

IAAC reviewed the Regulations and notes that item 19(f) is relevant for this type of project:

19(f) The expansion of an existing mine, mill, quarry or sand or gravel pit, in the case of an existing stone quarry or sand or gravel pit if the expansion would result in an increase in the area of mining operations of 50% or more and the total production capacity would be 3 500 000 t/year or more after the expansion.

Although the proposed project would increase the area of mining operations by more than 50%, the proponent indicates that the quarry's planned annual production would remain approximately 60 000 to 70 000 t of gravel and 10 000 to 15 000 t of asphalt. The registration document also states that no increase in the scope or frequency of activities is expected compared with current operations. On that basis, IAAC understands that the quarry's total production capacity following the expansion would remain below the regulatory threshold of 3 500 000 t/year. IAAC has requested written confirmation of the total production capacity from the proponent but has not yet received a response.

While it is the responsibility of proponents to determine whether their proposed project includes physical activities described in the Regulations, based on the information currently available, the Impact Assessment Agency of Canada (IAAC) is of the opinion that the proposed Sturk Quarry Expansion Project does not appear to be described in the Regulations. As such, the proponent would not be expected to submit an Initial Project Description for a designated project. Should the proponent provide additional information indicating that the quarry's total production capacity after the expansion would be 3 500 000 t/year or more, or should the project otherwise change from what is described in the provincial registration, the proponent is advised to contact IAAC.

The proponent is advised that under section 9(1) of the IAA, the Minister may, on request or on the Minister's own initiative, by order, designate a physical activity that is not prescribed by regulations made under the Regulations if, in the Minister's opinion, the carrying out of that physical activity may cause adverse effects within federal jurisdiction or direct or incidental adverse effects. Should IAAC receive a request for a project to be designated, IAAC would contact the proponent with further information.

Please note that for physical activities not described in the Regulations, should the project be carried out in whole or in part on federal lands, section 82 of the IAA would apply if any federal authority is required to exercise a power, duty or function under an Act other than IAA in order for the project to proceed, or if a federal authority is providing financial assistance for the purpose of enabling the project to be carried out. In that case, that federal authority must ensure that any project assessment requirements under the applicable sections of the IAA are satisfied.

We also note that in proceeding with the project, the proponent may still be required to obtain or seek amendment to other federal regulatory permits, authorizations and/or licences.

The proponent is encouraged to contact IAAC at (902) 426-0564 if it has additional information that may be relevant to IAAC or if it has any questions or concerns related to the above matters.

Kevin Cassell

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Agence d'évaluation d'impact du Canada / Gouvernement du Canada
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Kwilmu'kw Maw-klusuaqn Negotiation Office

Mi'kmaq Rights Initiative

Our Rights. Our Future.

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August 13, 2026

Mark McInnis
Environmental Assessment Officer
Nova Scotia Environment and Climate Change, EA Branch

RE: Consultation with the Mi'kmaq of Nova Scotia on the Sturk Quarry Expansion Project, Kings County, NS

Mx. McInnis

I write in response to your letter dated July 7, 2026, initiating consultation under the *Terms of Reference for a Mi'kmaq-Nova Scotia-Canada Consultation Process (ToR)* as ratified on August 31, 2010, on the above noted project. We wish to proceed with consultation.

EA Review

Our team at Kwilmu'kw Maw-klusuaqn (KMK) has reviewed the EA registration, Sturk Quarry Expansion Project Environmental Assessment Registration document and has determined that concerns have not fully been addressed.

3.4 Decommissioning and Reclamation

It is expected that the reclamation plan be developed with the Mi'kmaq of Nova Scotia to implement Traditional Knowledge. It is suggested that this is incorporated into the Terms and Conditions of any approval issued.

7.0 Atmospheric Environment

7.1 Atmosphere and Air Quality

Contamination of food sources for fauna and Mi'kmaq harvesters is a major concern with particulate. How can the proponent and the province guarantee the food sources will not become contaminated? It is concerning that no additional monitoring is recommended at this time. Dustfall sample jars are an affordable and effective means of measuring particulate. It's recommended that these sample collection methods be deployed at key locations surrounding the project area. There are concerns with cumulative effects of particulate over the 40 year lifespan of the project. The Mi'kmaq expect to be included in the development of a monitoring plan through comment and review.

It is recommended that monitoring locations be established for PM, NO_x and SO₂.

7.3 Sound

Have there been any studies conducted to assess how noise will affect local wildlife? If so, please provide those for our review. Particular attention should be paid to fish and fish habitat.

9.0 Freshwater Aquatic Environment

9.1.3

The Registration Document notes that the CMAR Wild Salmon River assessment database identified the Annapolis River as having medium significance for supporting the long term viability of Atlantic Salmon. The Annapolis River is approximately 6.7 km from the study area and may have connectivity with watercourses within the Study Area. Furthermore, it states that the Factorydale Power Dam is currently identified as a barrier to fish passage, as there is no fish passage installed. How does the proponent intend to protect potential future salmon runs into the study area should the power dam have fish passage installed during the 40 year life of the project?

Any effects to fish and fish habitat are effects to Mi'kmaq rights, it is encouraged to set the boundary at 50 metres from the watercourse rather than the regulated 30 metres.

Is a *Fisheries Act* Authorization application anticipated for this project?

The Mi'kmaq expect to be involved in the development of the Contingency and Blast Management Plans through comment and review.

9.2 Wetlands

Wetlands support thousands of aquatic, terrestrial, and flora species. In addition to playing an important role for Mi'kmaw who inhabited and steward the forest since time immemorial, they are essential for maintaining a healthy biodiversity within and over arching ecosystem. It is expected that a Wetland Monitoring and Compensation Plan will be developed with input from the Mi'kmaq through review and comment.

Has there been any investigation of the hydrological connection between the proposed pit and surrounding wetlands?

10.0 Terrestrial Environment

10.1 Terrestrial Vegetation Communities and Flora

It is expected that the Vegetation Management Plan will be developed with input from the Mi'kmaq through review and comment.

Dust Deposition

Please see comments under 9.1.3 above.

Invasive Species

Ensuring the survival of Indigenous species is paramount to the Mi'kmaq. The mitigation measures outlined in the EA registration document are acceptable.

10.2 Terrestrial Fauna

It is expected that the Wildlife Management Plan will be developed with input from the Mi'kmaq through review and comment.

Mainland Moose are a significant concern for the M'kmaq particularly with the study area being identified 800m north of core mainland moose habitat. It is expected that special attention be paid in the development of monitoring and mitigation within the Wildlife Management Plan. How will the proponent protect/enhance mainland moose habitat during the development of this project?

We look forward to reviewing the wood turtle monitoring and mitigation plan within the Wildlife Management Plan.

10.3 Avifauna

Sensory Disturbance

Over 70% of avian species are active at night, with 30% relying solely on an undisrupted nighttime ecology. In addition to this, over half of the insect population is nocturnal. Lighting in remote areas significantly and negatively alters the performance of the night ecology in that area. It is recommended that night lighting be limited and/ or amber or red lighting be used.

12.0 Archaeological Resources

Prospect Industrial Equipment Sales and Rentals Limited is proposing to expand the existing Sturk Quarry in Morristown, Kings County. Boreas Heritage Consulting Inc. completed an Archaeological Resource Impact Assessment (ARIA A2025NS130) for the Project in September 2025. The ARIA, which included background research and a field reconnaissance, identified two areas of high archaeological potential (HPA-01 and HPA-02) and recommended that these areas be avoided during development and/or ground disturbance activities. Where avoidance is not possible, a programme of systematic subsurface shovel testing has been recommended. The remainder of the Project area was determined to exhibit low potential for encountering archaeological resources, and the ARIA report recommended that it be cleared of requirement for further archaeological investigation.

KMK's Archaeology Research Division (ARD) has reviewed ARIA A2025NS130 and is supportive of the recommendation that HPA-01 and HPA-02 be subject to strategic shovel testing in advance of any disturbance. However, KMK-ARD has consistently recommended that subsurface testing be undertaken in all areas for which significant alteration is proposed, regardless of classifications of low archaeological potential. Negative tests, and negative evidence, are considered relevant and important data.

The Maw-lukutijik Saqmaq (Assembly of Nova Scotia Mi'kmaw Chiefs) expects a high level of archaeological diligence, with evidence-based decisions grounded in an understanding of

subsurface environmental data adequate to eliminate concern for the presence, protection, and management of Mi'kmaw archaeological and cultural heritage. Mi'kmaw archaeological sites have developed since time immemorial and may not be identified from the surface character of the current landscape. One cannot conclusively eliminate potential for Mi'kmaw archaeological heritage without subsurface testing.

Additional Questions and Comments

- Given the project's 40-year lifespan, how does the province intend to ensure that any approvals are progressively updated to reflect future environmental standards?
- It is expected that the proponent shall meet and develop a consistent working relationship with Annapolis Valley First Nation. Our office is available to coordinate meetings and working groups.

Finally, the Mi'kmaw Nation in Nova Scotia has a general interest in all lands, waters and resources in Nova Scotia as the Mi'kmaq have never surrendered, ceded, or sold the Aboriginal Title to any of its lands in Nova Scotia. The Mi'kmaq have a Title claim to all of Nova Scotia and as co-owners of the land and its resources it is expected that any potential impacts to Rights and Title shall be addressed.

Yours in Recognition of Mi'kmaw Rights and Title,

Director of Consultation
Kwilmu'kw Maw-Klusuaqn

CC:

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Maritime Aboriginal Peoples Council



The Maritime Regional Aboriginal Leaders
Intergovernmental Council of Aboriginal Peoples
Continuing to Reside on Traditional Ancestral Homelands

Forums

- ☐ Leaders Congress
- ☐ MAPC Commissions/Projects
- ☐ MAARS Secretariate
- ☐ MAPC Administration

MAPC Regional Administrative Office

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August 12th, 2026

Environmental Assessment Branch

P.O. Box 442
Halifax, Nova Scotia
B3J 2P8

RE: Sturk Quarry Expansion Project

To Whom It May Concern,

On behalf of the Native Council of Nova Scotia (NCNS), the Maritime Aboriginal Aquatic Resources Secretariate (MAARS) is providing comments to the Environmental Assessment Branch of the Nova Scotia Department of Environment and Climate Change regarding the Environmental Assessment Registration Document (EARD) for the Sturk Quarry Expansion Project being undertaken by Prospect Industrial Equipment Sales and Rentals Limited.

We raise concerns that despite a water balance analysis being completed (Appendix C), there still has not been any hydrogeological assessment completed for this project and the proponent has only installed one pre-development monitoring well. In accordance with the *Guide to Preparing an EA Registration Document for Pit and Quarry Developments in Nova Scotia*, Section 6.1.3, the proponent must complete pre-development well water surveys to obtain baseline conditions across seasonal fluctuations before this project can be approved. A comprehensive water quality monitoring program, including detailed sampling protocols and designated monitoring well locations, as outlined in the above-mentioned NS Guide, has not yet been provided. MAARS would request that the proponent complete regular, random sampling, with a minimum of 12 samples per year, equivalent to at least one sample per month, and complete monitoring well sampling following any blasting events or significant rainstorms.

Given the presence of at least one well within 800 metres, along with several that fall within 2km of the area, it is recommended that the proponent complete well monitoring both within the pit,

as above-mentioned, and complete both baseline and compliance monitoring of all wells within a 2km radius of the project area. While there is no literature readily available to support testing outside of the 800m, we would recommend this be done to address any concerns from the public around water quality impacts from blasting.

Additionally, there is no mention within the Geophysical Effects Assessment (Section 8.5) about the proponent providing alternative drinking water sources should the blasting within the Project Development Area (PDA) result in changes in water quality or quantity. Given that the PDA is located in an area that is medium to high risk for arsenic, and high risk for manganese, MAARS requests that the proponent provide further details on measures that will be taken should nearby well water undergo changes in quality or quantity.

The Water Balance Assessment (Section 5.5.4.2) predicts 8.56% change in water flow for Watershed B. While this is below the 10% threshold typically considered “significant,” it remains noteworthy. Similarly, a 6.2% increase in the change in annual filtration can have a more pronounced impact on smaller waterbodies and should therefore be considered a contributing factor to the overall impact potential. A low probability of impact does not equate to no impact, and this should be clearly acknowledged in the assessment.

Wetland habitats are known to provide important ecosystem functions, as well as habitat for numerous aquatic, terrestrial, and plant species. As such, any impact to the functions of these habitats can have significant effects on the ecosystem. Within the area there is a total of approximately 1.6 hectares, or 11 wetlands, which are expected to be directly impacted because of this project. Given the importance of these habitats, MAARS requests to review the wetland compensation plans when they are available.

Additionally, of the delineated wetlands within the PDA, one of the wetlands was identified as a potential Wetland of Special Significance due to observations of Olive-sided Flycatcher (*Contopus cooperi*), within suitable breeding habitat. While this wetland (WL5) is not expected to be directly impacted, impacts to wetland function within the PDA can result in significant ecological effects extending beyond the footprint of the development itself. MAARS expects the proponent to make all reasonable efforts to avoid and provide a buffer to preserve this habitat for a species at risk.

For contextual purposes

We would like to take this opportunity to reiterate that it is important for all proponents of projects to understand that the Off-Reserve Aboriginal Community represented by the NCNS is included within the definition of the word “Indian” of Section 91(24) of the *Constitution Act*, 1982. The Supreme Court of Canada in a landmark decision in *Daniels v. Canada (Indian Affairs and Northern Development)*, 2016 SCC 12, declared that “the exclusive Legislative Authority of the Parliament of Canada extends to all Indians, and Lands reserved for the Indians” and that the word “Indians” in s.91(24) includes the Métis and non-Status Indians¹. Since 2004, in multiple decisions

¹ Daniels v. Canada (Indian Affairs and Northern Development), 2016 SCC 12, [2016] 1 S.C.R. 99

passed by the Supreme Court of Canada: *Haida Nation*², *Taku River Tlingit First Nation*³, and *Mikisew Cree First Nation*⁴, has established that,

“Where accommodation is required in decision making that may adversely affect as yet unproven Aboriginal Rights and title claims, the Crown must balance Aboriginal concerns reasonably with the potential impact of the decision on the asserted right or title and with other societal interests.”

Further, both the Government of Nova Scotia and the Government of Canada are aware that the “Made in Nova Scotia Process” and the *Mi’kmaq-Nova Scotia-Canada Consultation Terms of Reference* does not circumvent the Provincial Government’s responsibility to hold consultations with other organizations in Nova Scotia that represent Indigenous Peoples of Nova Scotia. While the proponent may have to engage with the thirteen Mi’kmaq First Nations through the Assembly of Nova Scotia Mi’kmaq Chiefs, represented by the Kwilmu’kw Maw-klusuaqn Negotiation Office (KMKNO), the KMKNO does not represent the Off-Reserve Aboriginal Community who have elected to be represented by the NCNS since 1974.

We assert that the Off-Reserve Aboriginal Communities, as 91(24) Indians, are undeniably heirs to Treaty Rights and beneficiaries of Aboriginal Rights as substantiated by Canada’s own Supreme Court jurisprudence. As such, there is absolutely an obligation to consult with the Off-Reserve Community through their elected representative body of the NCNS. The Crown’s duty is to consult with all Indians, not only the Indian Act Bands.

For over forty years, the three Native Council partners of the Maritime Aboriginal People’s Council (MAPC) have continued to be the Aboriginal Peoples Representative Organizations representing and advocating for the Rights and issues of the Mi’kmaq/Wolastoqiyik/Peskotomuhkati/Section 91 (24) Indians, both Status and non-Status, continuing to reside on their unceded Traditional Ancestral Homelands. In the early 1970s, the communities recognized the need for representation and advocacy for the Rights and Interests of the off-Reserve community of Aboriginal Peoples, “the forgotten Indian”. Women and men self-organized themselves to be the “voice to the councils of government” for tens of thousands of community members left unrepresented by Indian Act-created Band Councils and Chiefs. Based on the Aboriginal Identity question, Statistics Canada (2021 Census - 25% sample) enumerate 25,415 off-Reserve Aboriginal Persons in New Brunswick, 42,580 in Nova Scotia, and 2,865 in Prince Edward Island.

Each Native Council in their respective province asserts Treaty Rights, Aboriginal Rights, with Interest in Other Rights confirmed in court decisions, recognized as existing Aboriginal and Treaty Rights of the Aboriginal Peoples of Canada in Part II of the Constitution Act of Canada, 1982. Each Native Council has established and maintains Natural Harvesting Regimes, and each have a co-management arrangement with DFO for Food, Social, and Ceremonial use of aquatic species, through the: Najiwsgetaq Nomehs (NBAPC), the Netukulimkewe’l Commission (NCNS), and the Kelewatl Commission (NCPEI).

² *Haida Nation v. British Columbia (Minister of Forests)*, (2004), 2 S.C.R. 511

³ *Taku River Tlingit First Nation v. British Columbia (Project Assessment Director)*, (2004), 3 S.C.R. 550

⁴ *Mikisew Cree First Nations v. Canada (Minister of Canadian Heritage)*, (2005), 3 S.C.R. 388

The Native Council of Nova Scotia was organized in 1974 and represents the interests, needs, and rights of Off-Reserve Status and Non-Status Section 91(24) Indians/Mi'kmaq/Aboriginal Peoples continuing to live on our Traditional Ancestral Homelands throughout Nova Scotia as Heirs to Treaty Rights, Beneficiaries of Aboriginal Rights, with Interests to Other Rights, including Land Claim Rights.

The Native Council of Nova Scotia (NCNS) Community of Off-Reserve Status and Non-Status Indians/Mi'kmaq/Aboriginal Peoples supports projects, works, activities and undertakings which do not significantly alter, destroy, impact, or affect the sustainable natural life ecosystems or natural eco-scapes formed as hills, mountains, wetlands, meadows, woodlands, shores, beaches, coasts, brooks, streams, rivers, lakes, bays, inland waters, and the near-shore, mid-shore and off-shore waters, to list a few, with their multitude of in-situ biodiversity. Our NCNS Community has continued to access and use the natural life within those ecosystems and eco-scapes where the equitable sharing of benefits arising from projects and undertakings serve a beneficial purpose towards progress in general and demonstrate the sustainable use of the natural wealth of Mother Earth, with respect for the Constitutional Treaty Rights, Aboriginal Rights, and Other Rights of the Native Council of Nova Scotia Community continuing throughout our Traditional Ancestral Homeland in the part of Mi'kma'ki now known as Nova Scotia.

We would appreciate an opportunity to engage on the Sturk Quarry Expansion Project with the proponent, Prospect Industrial Equipment Sales and Rentals Limited, directly. We respectfully request that these concerns be addressed in full and that further engagement with the Native Council of Nova Scotia and local communities be prioritized as this project moves forward. We look forward to further dialogue as we continue to advocate for the rights of Off-Reserve Status and Section 91(24) Indians/Mi'kmaq/Aboriginal Peoples of Nova Scotia.

Advancing Aboriginal Fisheries and Oceans Entities
Best Practices, Management, and Decision-making

Habitat Impact Advisor, MAARS

Executive Director, MAARS & MAPC Projects

CC:

Chief & President, NCNS
Commissioner, Netukulimkewe'l Commission, NCNS