NOVA SCOTIA
Environment and Climate Change

Comment Index

Goose Harbour Lake Wind Farm Project

Publication Date: March 20, 2023

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1	Sipekne'katik First Nation	February 12, 2023
2	Kwilmu'kw Maw-Klusuaqn Negotiation Office (KMKNO)	March 7, 2023

Public

Number	Source	Date Received
1	Anonymous	January 28, 2023
2	Anonymous	January 29, 2023
3	Anonymous	January 29, 2023
4	Ecology Action Centre	February 27, 2023
5	Maritime Aboriginal Peoples Council	February 27, 2023

Health Canada Santé Canada

Human Health Considerations in Environmental 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.)	Section 7.1.3 of *Health Canada. 2019. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Human Health Risk Assessment. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.* *https://publications.gc.ca/site/eng/9.870475/publication.html*

	• 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: o impacts to air quality (dust or fumes including $PM_{2.5}$, NO_x, SO_x, PAHs) o increased noise from construction or operations	*Health Canada. 2016. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.* http://publications.gc.ca/pub?id=9.832514&sl=0 *Health Canada. 2016. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Air. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.* http://publications.gc.ca/pub?id=9.802343&sl=0
	• 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 accidents or malfunctions, such as a fuel spill; by dust and	• 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.	*Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Water Quality. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.* http://publications.gc.ca/pub?id=9.832511&sl=0
	• 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.	

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.	• 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.	*Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Country Foods. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.* http://publications.gc.ca/pub?id=9.855584&sl=0

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

Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. http://publications.gc.ca/pub?id=9.832514&sl=0

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. 2016. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Air. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. http://publications.gc.ca/pub?id=9.802343&sl=0

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. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Water Quality. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. http://publications.gc.ca/pub?id=9.832511&sl=0

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. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Country Foods. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. http://publications.gc.ca/pub?id=9.855584&sl=0

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. 2019. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Human Health Risk Assessment. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. https://publications.gc.ca/site/eng/9.870475/publication.html

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.

Barrington Place
1903 Barrington Street
Suite 2085
Halifax, Nova Scotia
Canada B3J 2P8

NOVA SCOTIA
Environment and Climate Change

Date: **07-Feb-2023**

To: **Mark McInnis, Environmental Assessment Officer**

From: **Regional Engineer/ Environment Officer, NSECC ICE**

Subject: **Goose Harbour Lake Wind Fam Project, Guysborough County, Nova Scotia**

Scope of review:
This review focuses on the following mandate: General overview of the Goose Harbour Lake Wind Farm Project: Environmental Assessment Registration Document (not including the Appendices).

Technical Comments:

- Blasting may or may not require additional permits and approvals depending on its location and purpose. Additional information regarding the location and purpose should be provided to determine if an approval would be required under the *Activities Designation Regulation* or not.
- For Table 10.4 why was the data from the Charlottetown weather station used? Isn't there a closer station to the proposed project?
- Sound levels and impacts from blasting activities were not included in the noise assessment but they were previously mentioned as a possibility and are to be included in the EPP. They should've been included in this assessment.

Environment Officer Comments

- Site specific measures including but not limited to site specific contingency/ emergency plan should be implemented for work within the Town of Mulgrave water shed area(Section 7.3.1.3/ Drawing 7.6).

Summary of Recommendations: (provide in non-technical language)

- Watercourse and wetland alteration approvals or notifications will be required, and shall be completed prior to commencement of construction.
- The Sediment and Erosion Control Plan shall also follow the Nova Scotia Department of Environment's *Erosion and Sedimentation Control Handbook for Construction Sites*.

- Re-vegetation shall be limited to the use of native species, unless otherwise authorized in writing by the Department
- A preliminary decommissioning plan, including removal of infrastructure, shall be provided to the Department for review and acceptance prior to Operations, with a final decommissioning plan being provided to the Department for review and acceptance two (2) years prior to abandonment of the site.
- The EPP shall be submitted to the Department for review and acceptance prior to commencement of construction.
- Used oil shall not be used as a dust suppressant.
- A waste management plan shall be developed prior to commencement of construction. The plan shall follow the waste management hierarchy to minimize disposal.
- The Approval Holder shall ensure that noise emissions at the property boundaries do not contribute to an exceedance of the maximum permissible sound levels limits specified in the Nova Scotia Environment and Labour "Guidelines for Environmental Noise Measurement and Assessment" dated May 18, 2005, as amended from time to time.
- The Complaint Response Protocol shall be provided to the Department for review and acceptance prior to construction.

<u>Environment Officer Comments</u>

- Ensure existing sediment deposits reportedly observed at Watercourse alteration sites are not mobilized and redistributed downstream as a result of construction activities.
- The EPP should include additional measures for construction activities that are conducted within watershed areas that feed protected areas or proposed protected areas.

NOVA SCOTIA
Department of Municipal Affairs and Housing

Maritime Centre, Floor 8 North
1505 Barrington Street
PO Box 216
Halifax, NS B3J 2M4

Date: February 8, 2023

To: NS Department of Environment and Climate Change

From: Department of Municipal Affairs and Housing

Subject: **GOOSE HARBOUR LAKE WIND FARM PROJECT**

As requested, the Department of Municipal Affairs and Housing (DMAH) has reviewed the Registration Documents provided by Port Hawkesbury Paper Wind Limited Partnership for the environmental assessment of the Goose Harbour Lake Wind Farm Project. All components considered under DMAH's areas of mandate have been adequately addressed.

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

NOVA SCOTIA
Department of Municipal Affairs and Housing

Maritime Centre, Floor 8 North
1505 Barrington Street
PO Box 216
Halifax, NS B3J 2M4

Date: February 8, 2023

To: NS Department of Environment and Climate Change

From: Department of Municipal Affairs and Housing

Subject: **Goose Harbour Lake Wind Farm Project – Municipality of the District of Guysborough (MoDG)**

Scope of Review:

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

Technical Comments:

(Is the proponent aware of any relevant municipal zoning? Has the proponent met with the Municipality to discuss the project? Describe any potential impact to the Statements of Provincial Interest).

The proponent has included municipal approval, permit, notification and compliance requirements. They have carried out significant engagement with municipal councillors, staff and the public in MoDG.

Statements of Provincial Interest:

- Drinking Water: No anticipated impact; no drinking water sources identified near the project area.
- Agricultural Land: No anticipated impact, as there is no agricultural land in the project area. The wild blueberry fields a few kilometres away will not be affected.
- Flood Risk: No anticipated impact. The Project was designed to mitigate the risks of flooding by concentrating on the road and turbine layout in high elevation areas, designing roadside ditches next to all roads to encourage drainage of rainwater off the roads, and by maintaining vegetated roadsides to absorb excess water.
- Infrastructure: No anticipated impact; will not rely on municipal infrastructure. The Project is located approximately 12km southeast of Highway 4 at Monastery and 12km southwest of Highway 104 at Auld's Cove. Due to the relatively remote location and lack of inhabitants, as well as the relatively poor quality of the roads, there is very little traffic.
- Housing: No anticipated impact. There is no residential housing existing or proposed in the vicinity of the Project area, although there are a few cottages and camps near the periphery of the project area.

Summary of Recommendations (provide in non-technical language):

(Describe what outstanding information and/or conditions may be considered/required for the project.).

There is no outstanding information and/or conditions. All components considered under DMAH's areas of mandate have been adequately addressed.

From: MacQueen, Donald G
To: McInnis, Mark
Subject: RE: First Follow-Up Reminder - PHP Wind LP - Goose Harbour Lake Wind Farm Project - EA Registration
Date: February 16, 2023 3:02:38 PM

Hi Mark

No comments on this project.

Don

From: Drake, Carrie L
To: McInnis, Mark
Cc: Buckwold, Ben; Garden-Cole, Grace; Crandlemere, Tara J
Subject: RE: First Follow-Up Reminder - PHP Wind LP - Goose Harbour Lake Wind Farm Project - EA Registration
Date: February 16, 2023 4:11:38 PM

Hi Mark,

No provincial park or protected beaches program concerns.

Thanks,
Carrie

Barrington Place
1903 Barrington Street
Suite 2085
Halifax, Nova Scotia
Canada B3J 2P8

NOVA SCOTIA
Environment and Climate Change

Date: February 17, 2023

To: Mark McInnis, Environmental Assessment Officer

From: Neil Morehouse, Manager, Protected Areas and Ecosystems

Subject: **PHP Goose Harbour Lake Wind Farm Project**

Scope of review:
This review focuses on the following mandate: Protected Areas

Technical Comments:

No protected areas In vicinity of Project

Summary of Recommendations: (provide in non-technical language)

We have no comments on this project

Impact Assessment Agency of Canada
Agence d'évaluation d'impact du Canada

Suite 200
1801 Hollis Street
Halifax NS B3J 3N4

Bureau 200
1801 rue Hollis
Halifax, NE B3J 3N4

Date: February 24, 2023

To: Mark McInnis, Environmental Assessment Officer, Nova Scotia Department of Environment and Climate Change

From: Trevor Ford, A/Project Manager, Impact Assessment Agency of Canada

Subject: Goose Harbour Lake Wind Farm,

The federal environmental assessment process is set out in the *Impact Assessment Act* (IAA). The *Physical Activities Regulations* (the Regulations) under IAA set out a list of physical activities considered to be "designated projects." For designated projects listed in the Regulations, the proponent must provide the Agency with an Initial Description of a Designated Project that includes information prescribed by applicable regulations (*Information and Management of Time Limits Regulations*).

Based on the information submitted to the Province of Nova Scotia on the proposed Goose Harbour Lake Wind Farm, it does not appear to be described in the Regulations. Under such circumstances the proponent would not be required to submit an Initial Description of a Designated Project to the Agency. However, the proponent is advised to review the Regulations and contact the Agency if, in its view, the Regulations may apply to the proposed project.

The proponent is advised that under section 9(1) of the IAA, the Minister may, on request or on his or her own initiative, by order, designate a physical activity that is not prescribed by regulations made under paragraph 109(b) if, in his or her opinion, either the carrying out of that physical activity may cause adverse effects within federal jurisdiction or adverse direct or incidental effects, or public concerns related to those effects warrant the designation. Should the Agency receive a request for a project to be designated, the Agency would contact the proponent with further information.

The proposed project may be subject to sections 82-91 of IAA. Section 82 requires that, for any project occurring on federal lands, the federal authority responsible for administering those lands or for exercising any power to enable the project to proceed must make a determination regarding the significance of environmental effects of the project. The Agency is not involved in this process; it is the responsibility of the federal authority to make and document this determination.

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

Thank you,

Trevor Ford

A/Project Manager, Atlantic Regional Office
Impact Assessment Agency of Canada / Government of Canada
Trevor.Ford@iaac-aeic.gc.ca / Tel: 902-476-7635

I/Gestionnaire de projets, Bureau régional de l’Atlantique
Agence d’évaluation d’impact du Canada / Gouvernement du Canada
Trevor.Ford@iaac-aeic.gc.ca / Tél. : 902-476-7635

NOVA SCOTIA

Communities, Culture, Tourism and Heritage

1741 Brunswick Street
3rd Floor
P.O. Box 456
Halifax, NS
B3J 2R5

Date: February 24, 2023

To: Mark McInnis, Nova Scotia Environment & Climate Change

From: Coordinator Special Places, Culture and Heritage Development

Subject: PHP Wind LP - Goose Harbour Lake Wind Farm Project - EA Registration

Staff of the Department of Communities, Culture, Tourism, and Heritage has reviewed the PHP Wind LP - Goose Harbour Lake Wind Farm Project - EA Registration documents and have provided the following comments:

Archaeology

Staff reviewed the sections of the EA document pertaining to archaeology. It was noted that the ARIA is not in the list of Appendices as requested. The EA document reflects the findings in the HRP Report A2022NS033 submitted to CCTH. Seven areas of high archaeological potential are noted. One is to be avoided is redesign. If the other 6 cannot be avoided in future design of the development, a separate heritage research permit will be applied for to conduct shovel testing. This is an acceptable approach.

Botany

Staff reviewed the sections of the EA document pertaining to botany. The NSM would appreciate specimens of any rare plants or lichens that will be destroyed during the construction process. The current plan does not anticipate destruction of any rare plants or lichens.

On the carbon accounting, there's nothing about loss of carbon sequestration in the landscape to be developed, but this would be minimal compared to the overall GHG impacts, so it's probably fine.

The impacts of climate change on the project itself are not described in much detail, despite the 25-30 year anticipated lifespan of the project. There are no comments about whether designs have factored in expected changes by 2050 into project planning, in terms of flood potential, windspeed, and storm events.

Palaeontology

Staff have reviewed the sections of the EA document pertaining to palaeontology. When reviewing the proposal location, bedrock and surficial geology information, based on the identified geology, there is a low probability of encountering significant palaeontology resources.

Zoology

Zoology staff have reviewed the Goose Harbour Lake Wind Farm Project Environmental Assessment Registration Document. The document highlights several cases where there are SOCI/SAR species among several taxonomic groups that are within and/or immediately outside the study area. It appears to be a reasonable assessment of the zoological setting for the site and immediate-adjacent area.

In several areas of the assessment, it is outlined that SOCI/SAR are found within 100km of the study area, but non within the study area. Where possible, it would be informative for the evaluation of impacts to species to specify the distance from the study site for these records. A record 1km from the site has different implications than a record 99km from the site.

Please note the following errors in the Registration Document:
1. Section 7.4 “Three records of “Migratory Birds” relating to gray seals (*Halichoerus grypus*).”
2. Rana *clamitans* is an invalid scientific name for the green frog (now *Lithobates clamitans*)

It is recommended that if there is data on the specific locations or distances from the Study Area for SOCI/SAR records that these be specified in the registration document, and amend identified errors.

Fisheries and Oceans Canada | Pêches et Océans Canada

Bedford Institute of Oceanography
1 Challenger Drive
P.O. Box 1006, Station P510
Dartmouth, Nova Scotia, B2Y 4A2

Date: February 24, 2023

To: Mark McInnis, Environmental Assessment Officer

From: Laura Watkinson, Linear Development, Regulatory Review Biologist, Fish and Fish Habitat Protection Program; Sign-off by Leanda Delaney, Senior Biologist

Subject: Goose Harbour Lake Wind Farm Project, Guysborough County, Nova Scotia

Scope of review:
The Fish and Fish Habitat Protection Program of Fisheries and Oceans Canada (DFO-FFHPP) is responsible for administrating the fish and fish habitat protection provisions of the *Fisheries Act* (FA), the *Species at Risk Act* (SARA) for aquatic species at risk, and the *Aquatic Invasive Species Regulations*.

DFO-FFHPP review focused on the impacts of the works outlined in the Goose Harbour Lake Wind Farm Project Environmental Assessment Registration Document, to potentially result in:

- 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*.

Technical Comments:

Risk Assessment: Fish Presence/Absence Determination	
Identify Gap/Risk	Detailed fish and fish habitat assessments, and electrofishing methodology were conducted for 5 out of the 39 potentially impacted watercourses: WC7, WC11, WC20, WC30, WC36. (page 83 of the Environmental Assessment Registration Document, in section 7.3.2.4, and Appendix H of the Environmental Assessment Registration Document) Fish bearing potential for the remaining 34 watercourses, was determined using visual observations and desktop review, and less detailed information was provided. (page 83 of the Environmental Assessment Registration Document, in section 7.3.2.4, and Appendix F of the Environmental Assessment Registration Document)

	Potential barriers to fish passage were briefly identified for several watercourses, in determining potential for watercourses to be fish bearing, including existing culvert structures and upstream features. (Appendix F of the Environmental Assessment Registration Document) Supplementary measures such as netting, and/or trapping were not administered when conducting the fish and fish habitat assessments.
Can it be addressed in another permit/approval or with a T&C?	The identified gap can be addressed during the Nova Scotia Environment and Climate Change (NSECC) watercourse and/or wetland alteration approval process(es) and DFO-FFHPP regulatory review process.
Define/provide detail	Rationale should be provided for the determination of which watercourses were selected for more detailed assessment and for the use of electrofishing. Additional methods beyond visual observation and desktop review should be administered to correctly identify all fish bearing waterbodies to be potentially impacted by the project. Additional methodology can include electrofishing, netting, and/or trapping in varying combinations. Additional rationale should be provided regarding barriers along potentially impacted watercourses, to determine fish passage. Existing culverts may present current passage issues to upstream reaches, however, if the watercourse is fish bearing, any works, undertakings, and/or activities will still require DFO review. A Scientific License from DFO will be required prior to administering the assessment.
Risk Assessment: Wetland Assessment	
Identify Gap/Risk	Functional assessments of wetlands were completed for 10 wetlands, chosen as a representative set, out of the 44 potentially impacted wetlands. Limited information was provided for the determination of fish bearing status in wetlands (page 100 of the Environmental Assessment Registration Document, in section 7.3.3.4, and Appendix I of the Environmental Assessment Registration Document)
Can it be addressed in	The identified gap can be addressed during the NSECC watercourse and/or wetland alteration approval process(es) and DFO-FFHPP

another permit/approval or with a T&C?	regulatory review process. All works, undertakings, and/or activities, impacting fish bearing wetlands, or wetlands contiguous with fish bearing watercourses, will require DFO review, to address local and cumulative impacts to fish and fish habitat.
Define/provide detail	Additional information will be required as part of the DFO-FFHPP regulatory review process, including, but not limited to: final number of impacted fish bearing wetlands and/or wetlands contiguous with fish bearing watercourses, location and designs drawings for specific wetland alterations, site specific hydrological and fish habitat assessments, site specific impacts to fish and fish habitat including delineated footprint below the ordinary high water mark, cumulative impacts, site specific impacts to aquatic species at risk, and site specific impacts to riparian habitat.
Risk Assessment: Watercourse Crossing Designs:	
Identify Gap/Risk	Specifics related to proposed watercourse crossings are not yet determined. The risk of cumulative impacts from multiple crossings within the same watershed will require additional consideration once details are finalized.
Can it be addressed in another permit/approval or with a T&C?	The identified gap can be addressed during the NSECC watercourse and/or wetland alteration approval process(es) and DFO-FFHPP regulatory review process. All new watercourse crossings will require DFO review, to address local and cumulative impacts to fish and fish habitat, including potential impacts to aquatic species at risk.
Define/provide detail	Additional information will be required as part of the DFO-FFHPP regulatory review process, including, but not limited to: final number of proposed watercourse crossings (new and upgraded), location and designs drawings for specific watercourse crossings, rationale for crossing types, site specific hydrological and fish passage assessments, site specific impacts to fish and fish habitat including delineated footprint below the ordinary high water mark, cumulative impacts, site specific impacts to aquatic species at risk, and site specific impacts to riparian and contiguous wetland habitat.

Summary of Recommendations: (provide in non-technical language)

DFO-FFHPP recommends the proponent consider:

- Conducting additional field assessments beyond visual observations and desktop review to identify all fish bearing waterbodies to be potentially impacted by the project;

- Submitting detailed information on watercourse crossing and wetland alteration designs, and identifying potential impacts on fish and fish habitat (local and cumulative) in each watershed from each watercourse crossing, including potential impacts to aquatic species at risk; and

- Open bottom structures, such as clear span bridges and open bottom arch culverts for fish bearing watercourse crossings be used instead of closed bottom structures, where possible.

This information can be provided through the NSECC watercourse and/or wetland alteration approval process(es) and/or through submission of a DFO Request for Review application to DFO, to conduct a regulatory review of the project, to identify potential impacts to fish and fish habitat and to determine if an authorization under the *Fisheries Act* and/or a *Species at Risk* permit is required.

Date: **February 27, 2023**

To: **Mark McInnis, Environmental Assessment Officer**

From: **Nova Scotia Office of L'nu Affairs – Consultation Division** *Reviewed by Beata Dera, Director of Consultation*

Subject: **Goose Harbour Lake Wind Fam Project, Guysborough County, Nova Scotia**

Scope of review:
The following review considers whether the information provided will assist the Province in assessing the potential of the proposed Project to adversely impact established and/or asserted Mi'kmaw Aboriginal and Treaty rights.

Technical Comments:

Page ii Table of Comments states "the mi'kmaq of nova scotia" in all lowercase letters. OLA advises updating this text to "The Mi'kmaq of Nova Scotia"

Summary of Recommendations: (provide in non-technical language)

5.2 Mi'kmaq Ecological Knowledge Study 14 interviews were undertaken for the Mi'kmaq Ecological Knowledge Study (MEKS), completed by Membertou Geomatics Solutions, to document traditional use within the Project Area. According to the MEKS, trout and salmon fishing as well as deer, partridge, and rabbit hunting were reported within the Project Area. No recommendations were provided in the MEKS. According to the MEKS, the Project is not expected to limit access to species, locations, use, availability, and frequency of use within the Study Area and the Proponent is committed to engaging and working with the Mi'kmaq of Nova Scotia throughout the duration of the Project. Although the EARD states that potential effects of the proposed project could be minimal, it is recommended that the proponent engages in discussions with the Mi'kmaq of Nova Scotia to address mitigation measures for potential impacts on traditional and current use activities within the project area. OLA advises the proponent to share the MEKS with the Mi'kmaq of Nova Scotia. 5.3.2 Ongoing Engagement According to the EARD, the proponent attempted to present project information to the Nova Scotia Assembly of Mi'kmaw Chiefs via the Kwilmu'kw Maw-klusuaqn Negotiations Office (KMKNO) in spring 2022 but meetings were delayed. The proponent states that they will continue to follow-up with KMKNO. The Province encourages continued engagement with KMKNO to share project information throughout the duration of the project.

Table 7.36: ACCDC Plant and Lichen SAR/SOCI Identified within the Study Area

According to the EARD and based on Atlantic Canada Conservation Data Centre (ACCDC) records, Black Ash was identified within the study area. According to the EARD, the location of this record within the Study Area is unknown. OLA is aware that Black Ash is a significant species for the Mi'kmaq of Nova Scotia. Potential impacts to Black Ash and its habitat may potentially adversely impact Aboriginal and/or Treaty rights. OLA recommends that engagement with the Mi'kmaq on mitigation measures for potential impacts on possible traditional and current use activities within the project area and adjacent to the project area, through a Mi'kmaq Communications Plan, be required if the EA is approved.

7.3.2.3
As identified by ACCDC, the EARD states that Atlantic salmon, American eel, and Brook trout have been identified within 100 km of the Mi'kmaq Ecological Knowledge study area. As identified by the MEKS (Appendix B), trout and salmon fishing were identified within the MEKS study area. OLA is aware that Atlantic salmon, American eel, and Brook trout are species of interest to the Mi'kmaq of Nova Scotia. Potential impacts to fish and their habitat may potentially adversely impact Aboriginal and/or Treaty rights. OLA recommends that engagement with the Mi'kmaq on mitigation measures for potential impacts on possible fishing activities within the project area and adjacent to the project area, through a Mi'kmaq Communications Plan, be required if the EA is approved. OLA further recommends that the proponent engage the Mi'kmaq of Nova Scotia by sharing draft mitigation and monitoring plans for input from the Mi'kmaq.

7.4.3.3. Desktop Review

As identified by the Nova Scotia Department of Natural Resources and Renewables (NSNRR) Significant Species and Habitat Database (2018), the EARD states that three records of moose were identified within 100km of the study area. As identified by NSNRR, there are no moose habitat records within the study area. As identified by NSNRR, the nearest record for moose is 35 km from the study area. OLA is aware that moose is a significant species for the Mi'kmaq of Nova Scotia. Potential impacts to moose and their habitat may potentially adversely impact Aboriginal and/or Treaty rights. OLA recommends that engagement with the Mi'kmaq on mitigation measures for potential impacts on possible traditional and current use activities within the project area and adjacent to the project area, through a Mi'kmaq Communications Plan, be required if the EA is approved. OLA further recommends that the proponent engage the Mi'kmaq of Nova Scotia by sharing draft moose mitigation and monitoring plans for input from the Mi'kmaq of Nova Scotia.

As identified by the Nova Scotia Department of Natural Resources and Renewables (NSNRR) Significant Species and Habitat Database (2018), the EARD states that there are 250 records of deer wintering related to white-tailed deer have been recorded within 100km from the study area. As identified by NSNRR, the nearest record of a deer wintering area is within 6 km from the study area. OLA is aware that hunting deer is a traditional activity for the Mi'kmaq of Nova Scotia. Potential impacts to deer and their habitat may potentially adversely impact Aboriginal and/or Treaty rights. OLA

recommends that engagement with the Mi'kmaq on mitigation measures for potential impacts on possible traditional and current use activities within the project area and adjacent to the project area, through a Mi'kmaq Communications Plan, be required if the EA is approved. OLA further recommends that the proponent engage the Mi'kmaq of Nova Scotia by sharing draft mitigation and monitoring plans for input from the Mi'kmaq of Nova Scotia.

NOVA SCOTIA
Public Works

Johnston Building
1672 Granville Street
Halifax, Nova Scotia
Canada B3J 2N2

Date: 23 February, 2023

To: Mark McInnis, Environmental Assessment Officer

From: Environmental Services, Nova Scotia Public Works

Subject: **Port Hawkesbury Paper Wind Limited Partnership's Goose Harbour Lake Wind Farm Project, Guysborough County, Nova Scotia**

Scope of review:
This review focuses on the following mandate: Traffic Engineering and Road Safety Impacts for the Goose Harbour Lake Wind Farm Project

Technical Comments:

1. Drawings 2.1, 2.2 and 7.12H indicate that site access will be from Trunk 16 (near the proposed location of Turbine 26) and Old Mulgrave Road (near the proposed location for Turbine 21). Any modifications to these intersections, as well as references in the report to removal of any guardrail (if they are on provincially owned roads), will require approval with the Working Within Highway Right of Way (WWHROW) Permit and compliance with the appropriate section of the Nova Scotia Temporary Workplace Traffic Control Manual. The proponent has indicated these requirements in Table 2.2 of the report.

2. Drawings 3.2 and 7.12A indicate Overhead Powerline Work on Old Mulgrave Road. Any necessary traffic control plans for both this work and any work required in point #1 (above) is the responsibility of the proponent and must be approved by the Local Traffic Authority. This includes references in the report to any speed limit changes on provincially owned roads. The local Area Manager will direct contact with the Local Traffic Authority as required.

3. For the wind turbine components, the proponent has identified a requirement for a Special Moves Permit in Table 2.2. The turbine specification information on page 9 should be included in this permit application. Additionally, the Transportation Route for the components must be specified, so any necessary route analysis can be completed. Some distances and routes are referenced in the Greenhouse Gas (GHG) calculations. Spring weight restrictions are noted in the report and will need to be adhered to as required.

4. The proponent has identified a requirement for blasting. In addition to the permit, any impacts on adjacent provincially owned roads may require traffic control or stopping traffic. Approved traffic control plans will be required and are the responsibility of the proponent as stated above, needing approval by the Local

Traffic Authority. Any potential road closures will need to be approved by the Nova Scotia Department of Public Works (NSDPW).

5. Page 8, Table 3.2 in the *Summary of Minimum Setback Distances and Separations* has listed the Municipality of the District of Guysborough (MODG) as the only relevant stakeholder under Public Roads. For transportation purposes, NSDPW should be listed as a stakeholder for provincially owned roads.

6. In Section 8.1 (Transportation), there is an erroneous reference to Highway 334 when transporting equipment, the correct route is Highway 344. A section of Route 344 is within the Town of Mulgrave Limits, contact with the town will be required for any work on their roads. There are also references to “moderate road upgrades around Mulgrave.” If the roads are owned by NSDPW, this will require Departmental approval. A transportation feasibility study is also referenced but there is no additional information provided on both items, other than referencing a need for further transportation studies for confirmation of access routes. The results of any further studies should be made available as soon as possible.

7. Mitigation measures for traffic given in the report (pages 205 and 247) appear to be sufficient. The necessary approvals for any items listed must be obtained as indicated above.

Summary of Recommendations: (provide in non-technical language)

1. Contact the Local Area Manager for any Working Within Highway Right of Way Permit that may be required. This is also the first contact for any issues to do with road closures, traffic related concerns or spring wright restrictions.

2. Any traffic control plans (as required) must be prepared by the proponent, follow the appropriate guidelines of the Nova Scotia Temporary Workplace Traffic Control Manual, and be approved by the Local Traffic Authority.

3. Once a Special Moves Permit is required, please contact the Departmental Contact for Special Moves: Manuel Abreu (Manuel.Abreu@novascotia.ca).

Guidance for Reviewers – Environmental Assessments

Environmental Assessment Branch, Environment and Climate Change

NOVA SCOTIA
Environment and Climate Change

Barrington Place
1903 Barrington Street
Suite 2085
Halifax, Nova Scotia
Canada B3J 2P8

Date: February 27, 2023

To: Mark McInnis, Environmental Assessment Officer

From: Climate Change Division Staff

Subject: Goose Harbour Lake Wind Fam Project, Guysborough County, Nova Scotia

Scope of review:
This review focuses on the following mandate: Climate Change - Adaptation and Mitigation

Technical Comments:

Adaptation

- The EA registration document includes a description of the local climate (Port Hawkesbury Climate Station) based on climate data from 2011-2021 (Section 6.1). The 'Guide to Considering Climate Change in Project Development in Nova Scotia' recommends 30 years of climate data to adequately assess climate variability.
- The EA registration document provides a very general identification of some potential adverse effects of climate change on the undertaking (e.g., heat, flooding, wildfire) and some general mitigative measures (Section 12). For example, the document indicates that the project layout will be concentrated in high elevation areas to minimize flood hazards. These effects are not assessed with reference to specific climate projections for the site and within a risk management framework, as recommended in the 'Guide to Considering Climate Change in Project Development in Nova Scotia'.
- Discussions of temperature (Section 12.1.1) states that "projected rising temperatures may impact many phases of the Project and on-site Personnel". The discussion focuses on impact to human health and does not discuss whether increases in high heat conditions could impact operations of the turbines or transmission.
- The EA registration document does not provide detailed design criteria to incorporate climate change projections into infrastructure design e.g., stormwater system, structural foundations, etc. (sections 12.2.1, Severe Weather Events and 13.1, Erosion and Sediment Control Failures).
- The EA registration document discusses the current wildfire conditions and proposes mitigation measures to limit the operations of the project from causing fires (sectioon12.2.3). The provincial climate change risk assessment indicates that by mid-century (2035-2065) under a high emissions scenario (RCP8.5, median values), wildfire will become a top ranked climate hazard, with a large

projected increase in conditions favourable for wildfires. The EA registration document does not discuss if this will cause increased risk to operations.

Mitigation

- Greenhouse gas sources and quantification.
  The proponent has extensively identified the potential sources of greenhouse gases during the construction and operation of the project. The proponent also estimates life cycle emissions associated with manufacturing and transportation of turbines to site. Although these are outside the scope of construction and operation, it provides a good background for future comparisons. The same can be said about the estimation of the potential greenhouse gas emissions avoided by comparing the emissions factor of a wind powered electricity to coal and oil powered electricity in Nova Scotia.

- Direct emissions from the proposed project are associated with concrete production and transportation 12,885.32 tonnes CO_2e and turbine annual maintenance at 1,726 tonnes CO_2e

- The quantification approach using emission factors and covering construction emissions based on the travelling distances and the quantity of concrete required for the project, leading to approximately 12,885.32 tonnes CO_2e is adequate and acceptable. The distances travelled by trucks could be reviewed when actual construction begins.

- The quantification approach used to estimate project operations and maintenance emissions is also adequate.

- Adequate and reasonable mitigation options for greenhouse gas emissions have been proposed for the construction and operation phases of the project.

Summary of Recommendations:

Adaptation

- The proponent should consider using 30 years of climate data to adequately assess climate variability and characterize the local climate as per the province's 'Guide to Considering Climate Change in Project Development in Nova Scotia'.
- The proponent should consider adopting a risk management framework as recommended in the 'Guide to Considering Climate Change in Project Development in Nova Scotia' to determine which impacts present the highest risks to the undertaking and to assist in the determination of priorities for implementing adaptation measures, where required.
- With high heat conditions becoming far more common with climate change, it would be useful to see an assessment of whether these temperatures could

potentially impact Project operations beyond requiring workers to stop work, take breaks and rehydrate.

- Section 12.2.1 should referencing section 13.1 regarding erosion control. During detailed design of project infrastructure components (e.g., structures, the overall project, the erosion and sediment control measures, etc.), the proponent should consider using current design guidance from Environment and Climate Change Canada and the latest available climate change projection data (e.g., CMIP6 will be released this year).
- The proponent should consider discussing if increased wildfires will have potential impacts on operations and transmission and if potential adaptation responses are possible.

Mitigation

- The proponent has sufficiently identified, quantified relevant greenhouse gas sources, and proposed mitigation measures for these sources. There are no further recommendations under this section.

NOVA SCOTIA

Agriculture

60 Research Drive
Suite A
Bible Hill, Nova Scotia
B6L 2R2

Date: February 27, 2023

To: Mark McInnis, Environmental Assessment Officer

From: Heather Hughes, Executive Director, Policy and Corporate Services, Nova Scotia Department of Agriculture

Subject: Goose Harbour Lake Wind Farm Project
Guysborough County, Nova Scotia

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

No agricultural impacts are anticipated given that:

- The Goose Harbour Lake Wind Farm Project is located primarily on class 7 soil, Canada Land Inventory, which is unsuitable for agriculture.
- There are no farms or agricultural land located within the study area.
- The closest registered farm is 7.5km from the nearest proposed wind turbine, and the closest agricultural land is 3km from the nearest wind turbine.
- The Manchester Community Pasture is 4.2km from the nearest wind turbine.

NOVA SCOTIA
Environment and Climate Change

Barrington Place
1903 Barrington Street
Suite 2085
Halifax, Nova Scotia
Canada B3J 2P8

Date: **February 27, 2023**

To: **Mark McInnis, Environmental Assessment Officer**

From: **Environmental Health**

Subject: **Goose Harbour Lake Wind Fam Project, Guysborough County, Nova Scotia**

Environmental Health is pleased to provide comments on the Goose Harbour Lake Wind Farm Project EA. The scope of the review was to assess the impacts of the project on public health. As such, the review focused specifically on 3 VEC's: shadow flicker ice throw**,** and sound.

Shadow Flicker

Section 10.3 on page 220 of the report discusses the impacts of shadow flicker on receptors located within 2 km of the project.

Worst-case scenario modelling was undertaken to predict the level of impact on receptors. Table 10.5 shows that a number of receptors exceeded the standard of 30 hours of shadow flicker per year and/or 30 minutes per day on the worst day.

Real-case scenario modelling was then undertaken, and after a comparison of the modelled results to the standard in Table 10.6, only 1 receptor exceeded the 30 hour per year standard, which turned out to be an apparent abandoned camp/cottage.

However, real-case modelling did not determine whether or not the 30 minute standard was met at all receptor sites. Under worst-case modelling, shadow flicker exceeded the 30 minute per day standard at 11 receptor sites; 6 of those sites contained seasonal cottages that were not seemed to be in disrepair. Appendix O also did not contain this data.

Conclusion: It remains undetermined whether or not impacts from shadow flicker meet the 30 minute standard at all receptor sites under the real-case modelling scenario.

Ice Throw

Section 10.1.2 page 214 of the EA discusses impacts of ice throw and ice fall. Seasonal and permanent receptors are not expected to be impacted from ice throw, as these

receptors are located greater than 600m from the project area. There is the potential for ice throw to impact recreational land users such as hunter, snowmobilers and ATV users.

The proponent has described technologies available within the wind turbine that limit the amount of ice build-up and the release of ice from turbines. The proponent has committed to educating recreational land users on the risk of ice throw, and the project will include signage at the site to warn land users of ice throw/fall risks.

Conclusions: The impacts of ice throw on public health is deemed to be negligible.

Sound

Section 10.5 page 227 discusses the impacts of sound related to the project. Modelling was undertaken to estimate sound impacts at 88 receptor sites located within 2 km of the project area. Predicted sound levels at receptor sites were compared to the NSECC guideline of 40 dBA.

Predicted sound impacts at all receptor sites were below 40dBA, except one, which was determined to be an abandoned and uninhabitable structure. The structure was appropriately dismissed as a receptor.

Conclusion: Sound modelling undertaken to assess impacts of noise on human receptors has demonstrated that noise impact associated with this project is deemed to be negligible.

Barrington Place
1903 Barrington Street
Suite 2085
Halifax, Nova Scotia
Canada B3J 2P8

NOVA SCOTIA
Environment and Climate Change

Date: **February 27th, 2023**

To: **Mark McInnis, Environmental Assessment Officer**

From: **Air Quality Protection Advisor, Air Quality Unit**

Subject: **Goose Harbour Lake Wind Fam Project, Guysborough County, Nova Scotia**

Scope of review:
This review focuses on the following mandate: Air Quality

Technical Comments:

Goose Harbour Lake Wind Farm is a proposed project to develop a 130.5MW wind farm in the County of Guysborough. The site is located on Crown land that is currently used for forestry and recreational activities. The wind farm would consist of twenty-nine turbines with a rating of 4.5MW each, although the EARD has assessed the impacts from the construction at thirty-two potential turbine locations. Each turbine has a hub height of 120m and a rotor diameter of 150m. The EARD reports that there are eighty-eight potential receptors within 2km of the proposed development. Of these, the nearest permanent receptor is reported to be 900m from the site.

The EARD contains an assessment of air quality impacts from construction and operation. These are qualitative impact assessments, noting that the construction phase is most likely to generate air pollutants due to the nature of the activities. The EARD reports that activities are most likely to generate dust (total suspended particles) through the work on upgrading the existing rounds, development of any new infrastructure, and the excavation and preparation of the turbine pads. Vehicles associated with access to the site and site activities will also contribute to air quality impacts, although these are likely to be a lower risk than dust generation.

The report confirms that an Air Quality and Dust Management plan will be developed, and that the approaches for managing dust may include the use of a dust suppressant.

With mitigation, the impacts from the site construction activities are considered by the proponent to be low to negligible and short term.

Summary of Recommendations: (provide in non-technical language)

If the project is approved, it is recommended that the proponent be required to provide a finalized copy of the Air Quality and Dust Management Plan (the Plan) for acceptance

by the Department before construction commences. If the methodologies include the use, or potential use, of a chemical dust suppressant, the Plan must identify the dust suppressant and the proposed protocol for use so that any potential impacts on the environment can be assessed.

Barrington Place
1903 Barrington Street
Suite 2085
Halifax, Nova Scotia
Canada B3J 2P8

NOVA SCOTIA
Environment and Climate Change

Date: **February 27th, 2023**

To: **Mark McInnis, Environmental Assessment Officer**

From: **Air Quality Protection Advisor, Air Quality Unit**

Subject: **Goose Harbour Lake Wind Fam Project, Guysborough County, Nova Scotia**

Scope of review:
This review focuses on the following mandate: Noise

Technical Comments:

The Department met with the project consultants on November 9th 2022, at their request, to discuss requirements for wind farm projects. The discussion included the proposed methodologies for noise, baseline noise, low frequency noise and tonal components.

Goose Harbour Lake Wind Farm is a proposed project to develop a 130.5MW wind farm in the County of Guysborough. The site is located on Crown land that is currently used for forestry and recreational activities. The wind farm would consist of twenty-nine turbines with a rating of 4.5MW each, although the EARD has assessed the impacts from the construction at thirty-two potential turbine locations. Each turbine has a hub height of 120m and a rotor diameter of 150m. The EARD reports that eighty-eight potential receptors were identified within 2km of the proposed development, using a desktop study approach. It was noted that some of these structures may not be true receptors. Of the eighty-eight potential receptors, the nearest permanent receptor is reported to be 900m from the site. Construction activities could occur between 7am and 10pm.

The proponent has considered Guide to Preparing an EA Registration Document for Wind Power Projects in Nova Scotia and the Guidelines for Environmental Noise Measurement and Assessment (GENMA), noting that the latter is under review. The Municipality of the District of Guysborough Noise Control By-Law was also reviewed. Although not required, no Federal guidance appears to have been considered.

The EARD (and Appendix P) contains an assessment of impacts from construction and operation. For construction, a list of potential pieces of equipment is reported along with operating noise levels. Next, three potential scenarios, labelled ‘minimum’, ‘median’ and ‘maximum’ were presented along with the predicted attenuation by distances (-6dBA assumed). From this assessment, it is likely that the permanent receptor that is located 900m from the site could experience noise levels above the current GENMA daytime and evening permissible sound limits under the ‘maximum’ scenario. A seasonal cabin, reported at 600m from the site, could experience noise levels above the current GENMA

daytime and evening permissible sound levels under the 'median' and 'maximum' scenarios. Note that the permissible sound levels under the current GENMA are higher than those being proposed for the GENMA update.

Additionally, none of the scenarios appear to include crushing or blasting. If a crusher is used on site (as mentioned in the EARD), noise levels could be significantly higher. The EARD notes that blasting may be required. If this is the case, the proponent must refer to relevant guidance.

To assess the impacts from the operation of the turbines, the proponent has used the WindPRO modelling system which is based on methods reported in international standard ISO 9613-2. This is a satisfactory approach for determining impacts. The proponent has included the predicted noise level from the operation at each identified receptor. Of the eighty-eight identified receptors, eight receptors are predicted to experience noise from the operation greater than 37dBA. This is notable as the proponent has not included any baseline noise data, and the addition of baseline to the predicted noise levels may indicate that the development could *cause sound levels to exceed 40 dBA* which would be in contravention of the Guide to Preparing an EA Registration Document for Wind Power Projects in Nova Scotia.

Contrary to the conclusions of the assessment, noise from the operation of the site may not be 'low magnitude' and may be 'significant'.

Summary of Recommendations: (provide in non-technical language)

The proponent needs to provide an assessment of the baseline noise levels. This can be completed by either using monitored baseline data from the site, or by using a surrogate, which needs to be accompanied by a justification for its use, followed by monitoring to confirm the baseline prior to the start of construction. The baseline noise level needs to be added to the predicted noise level from the operation of the site to determine cumulative noise levels.

If any cumulative noise levels exceed 40 dBA, the proponent can model based on the selection of twenty-nine turbine sites for more accurate potential impacts. Additionally, the proponent can determine if any of the eighty-eight identified receptors should be excluded from the assessment. Where any receptors are excluded in a further assessment, a justification for the exclusion should be provided. Neither of these approaches replace the requirement for reporting baseline noise levels.

PO Box 2223
Halifax, Nova Scotia
B3J 3C4

NOVA SCOTIA

Fisheries and Aquaculture

Date: February 27, 2023

To: Mark McInnis, Environmental Assessment Officer, Nova Scotia Environment and Climate Change

From: Lesley O'Brien-Latham, Executive Director, Policy and Corporate Services
Nova Scotia Department of Fisheries and Aquaculture

Subject: Goose Harbour Lake Wind Fam Project, Guysborough County, Nova Scotia – Environmental Assessment

Thank you for the opportunity to review the Goose Harbour Lake Wind Fam Project documents.

Based on the information you provided, the Department of Fisheries and Aquaculture has the following comments:

- The proposed development is not in close proximity to any commercial seafood processing operation, facility, or supporting infrastructure.

- There are no significant concerns about the long-term impacts on fish arising from this project. Upgrading the roads in the project area will positively benefit the Nova Scotia Department of Fisheries and Aquaculture's service recipients as it promotes access to this remote area where they can pursue recreational angling opportunities.

- There are four issued marine shellfish leases, one experimental shellfish lease, one finfish lease, and six proposed shellfish leases all within a 25km radius of the proposed operation.

NOVA SCOTIA
Environment and Climate Change

Barrington Place
1903 Barrington Street
Suite 2085
Halifax, Nova Scotia
Canada B3J 2P8

Date: February 27th, 2023

To: **Mark McInnis, Environmental Assessment Officer**

From: Water Resources Management Unit; Reviewed by Elizabeth Kennedy, Director, Sustainability and Applied Science Division

Subject: **Goose Harbour Lake Wind Fam Project, Guysborough County, Nova Scotia**

Scope of review:

This review from the Water Resources Management Unit with the Nova Scotia Environment and Climate Change (NSECC), Sustainability and Applied Science Division focuses on the following mandate:

- Surface water quantity and quality
- Wetlands
- Groundwater quantity and quality

Documents reviewed:

Port Hawkesbury Paper Wind - Goose Harbour Lake Wind Farm Project Environmental Assessment Registration (EARD), January 2023.

Comments:

See attached table below for details.

Summary of Review and Recommendations:

The information provided in the EARD does not follow the public-facing guidance (including the Guide to Preparing an EA Registration Document for Wind Power Projects in Nova Scotia) for assessing the function and characteristics of wetlands within the Assessment Area. Without function assessment and clear identification of wetlands affected by the project, it can not be determined whether the project is consistent with the Wetland Conservation Policy. Specific review and recommendations for wetlands, surface water and groundwater are provided in the table below based on gaps relative to the public facing guidance.

Topic	Issues/ Risks/Gaps	Recommendations
Surface water quantity and quality	The proponent has not characterized and assessed the potential impact to the hydrological conditions in the area. Fifty-four drainage features were stated as being identified in the field investigations but no further information was submitted. Additionally, it is unclear in the EARD whether the footprint of collector lines referenced in the document have been included in the assessment area. There is an unknown risk to the project construction changing local hydrology and creating direct or indirect impact to wetlands and watercourses. Description of local hydrological conditions with predicted effects quantified is important to support planning appropriate mitigations.	It is recommended that a surface water management plan be developed by a qualified professional engineer. This plan should include, but not be limited to discussion of local hydrology, sufficient detail identifying potential effects from road or other project element construction such as collector lines on local surface water drainage patterns, identification for avoidance or mitigation measures for the protection of the environment (e.g., wetlands and watercourses), and justifications for final proposed designs and operations. All determinations of surface water features should be made using the definitions provided by the Environment Act.
Surface water quantity and quality	Part of the Project area is within the Mulgrave Municipal Drinking Water Supply Watershed, however the assessment does not recognize this. No additional protective measures were proposed for Project work that occurs within the Mulgrave Municipal Drinking Water Supply Watershed.	Include specific considerations of environmental protection, including enhanced measures for pollution prevention, ESC practices, and spill response, into the stated Environmental Protection Plan for the portion of the Project area that occurs within the Mulgrave Municipal Drinking Water Supply Watershed.

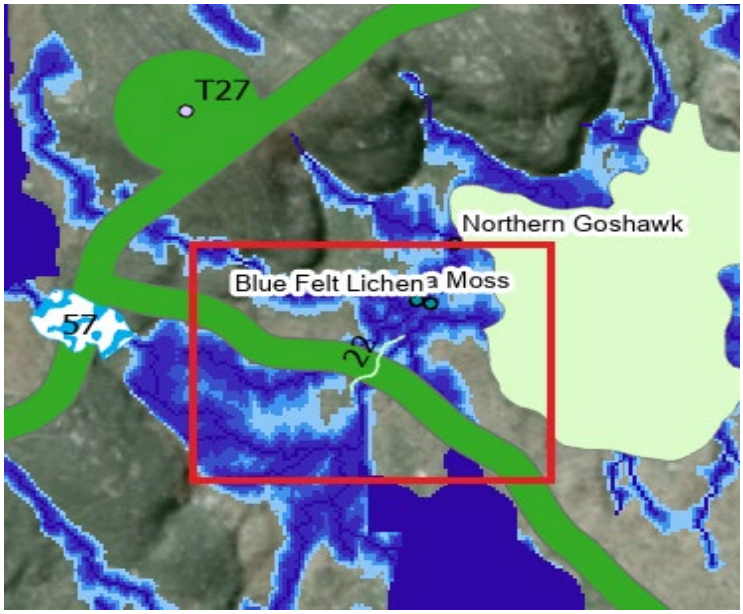
Wetlands	The proponent has not assessed the function and characteristics of wetlands within the Assessment Area according to public facing guidance. The EARD does not include a final layout of wetlands within the assessment or required wetland information, and so the impacts to wetlands from the Project cannot be assessed. Alterations to wetlands of special significance (WSS) are not allowable under the Wetland Conservation Policy except under certain conditions, and the assessment neither assesses wetlands to determine if they are WSS, nor clearly indicates which wetlands will be altered. In more detail,
	
	• *Functional Assessment information*
	  ○ Wetland functional assessments were not completed for all wetlands that have potential to be impacted by the Project (i.e., within the Assessment Area). The EARD only provided functional assessments on a subset of wetlands. It is unclear if there are functional WSS present within the Assessment Area as functional assessments were not completed for all wetlands.
	
	• *Incomplete Assessment of WSS within the Assessment Area*
	  ○ The Proponent states there are no WSS within the Assessment Area, however, there are two NS ECC mapped WSS being crossed by the Project. Furthermore, based on aerial imagery and GIS modelling it appears that several wetlands within the Assessment Area may be contiguous with mapped WSS outside the Assessment Area. See Appendix A below
		It is recommended to complete functional assessments for all wetlands within the Assessment Area and provide a summary of the Function and Benefits scores, prior to submission of a Wetland Alteration Approval Application. If a functional WSS is identified by WESP-AC, this should be identified in a map. The Proponent should demonstrate how they will avoid indirect and direct impacts to any identified functional WSS. This assessment should include,
		• Confirmation whether there is a wetland associated with watercourse 22 within the Assessment Area. If there is a wetland, provide supporting information that this wetland is not connected to the offsite WSS. Supporting information could include but is not limited to photographs, soil characteristics, vegetation, and hydrological characteristics;
		• Confirmation whether Wetland 90 and Wetland 91 are not contiguous with the WSS outside the Assessment Area. Supporting information could include but is not limited to photographs, soil characteristics, vegetation, and hydrological characteristics.
		• Details of the mapped WSS adjacent to Wetland 62. Information such as soil characteristics, vegetation, hydrology and photographs should be provided to demonstrate this area is not a wetland and therefore, does not warrant a WSS designation.
		• Sufficient information, supported with photographs, waypoints/tracks to demonstrate whether Wetland 69 is isolated from a mapped WSS.
		
		It is also recommended to submit Wetland Alteration

Topic	Issues/ Risks/Gaps	Recommendations
	for supplemental comments on Incomplete Assessment of WSS within the Assessment Area for more details.	Approval Application for any wetlands which are proposed to be directly or indirectly altered. As part of the Wetland Alteration Approval Application, compensation and monitoring will be required.
Groundwater	There is a potential for blasting to be required during construction. Mapping provided by the proponent shows some dwellings/buildings within the study area, but not all had wells corresponding to them from the well logs database.	Prior to any blasting, field truthing should be completed to ensure any non-identified water wells are captured in a pre-blast survey.

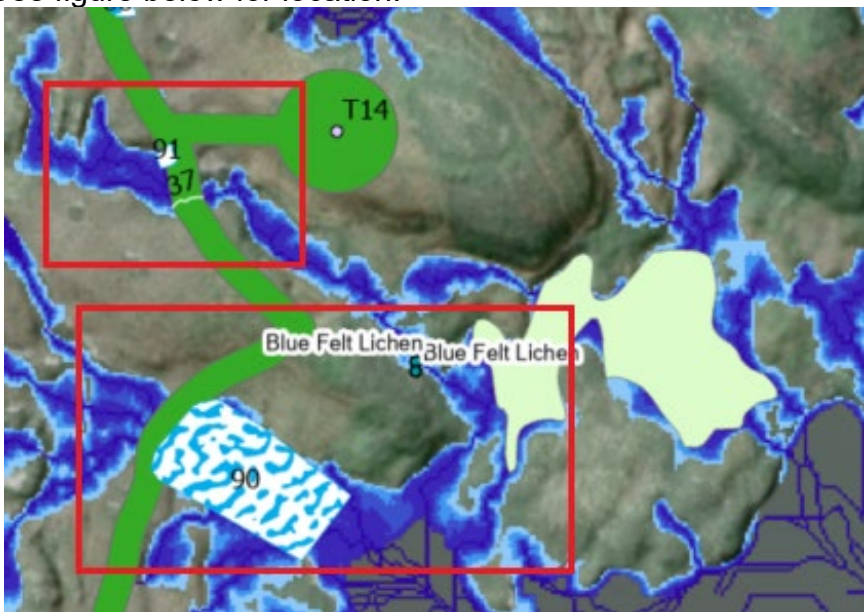
Appendix A

Supplemental Technical Information - *Incomplete Assessment of WSS within the Assessment Area - wetlands within the Assessment Area that may be contiguous with mapped WSS outside the Assessment Area*

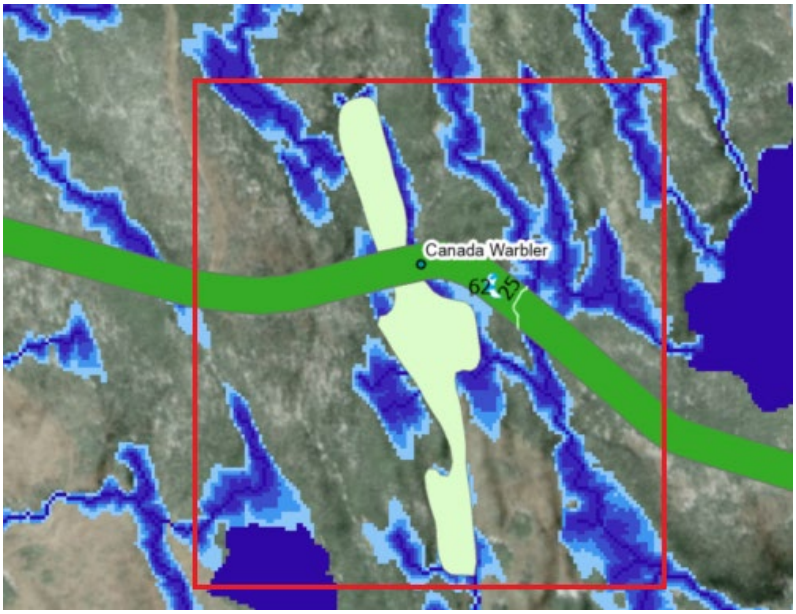
- Potential WSS crossing associated with watercourse crossing 22. Additionally, based on NSECC Predictive Wet Area Mapping (WAM), the access road Assessment Area crosses a potential wetland which may also be a WSS if wetland connectivity is present from the northern and southern portions of the wetland. See figure below for location:



- Potential WSS crossing identified in field delineated Wetland 90 and 91. Potential connectivity to an offsite mapped WSS with an observed blue felt lichen occurrence. If they are connected, and habitat is present, these wetlands would be considered WSS. See figure below for location:



- Crossing of a mapped NSECC WSS just east of Wetland 62 is observed. The EARD does not have this area mapped as a wetland. Canada warbler has been identified using this wetland by the ACCDC. See figure below for location:



- The EARD states that Canada warbler was observed adjacent to Wetland 69, and Canada warbler habitat is present. The EARD did not designate this wetland as a WSS because songs were heard outside the Assessment Area in the north in an unconnected wetland. According to aerial imagery, NSECC WAM and the WSS layer, Wetland 69 is contiguous with a mapped WSS. Further details are required to demonstrate Wetland 69 is not part of the large WSS complex observed in the mapping and aerial imagery. See figure below for location:

NOVA SCOTIA
Natural Resources and Renewables

1701 Hollis St.
PO Box 698
Halifax, NS B3J 2T9

Date: **February 27, 2023**

To: **Mark McInnis, Environmental Assessment Officer**

From: **Department of Natural Resources and Renewables**

Subject: **Goose Harbour Lake Wind Fam Project, Guysborough County, Nova Scotia**

Scope of review:
This review focuses on the following mandate: biodiversity, species at risk (SAR) status and recovery, wildlife species and habitat management and conservation, Old Growth Forest, Minerals Resource Act, Clean Energy, Land Services.

Technical Comments:

Biodiversity Branch:

- The Study area was established using PID rather than an ecologically significant buffer distance. As such, there are areas where the study area is <100m from proposed development. Wildlife/biodiversity studies should extend at an ecologically appropriate distance for SAR. For instance, lichen surveys should extend 200m from the closest area of clearing.
- The assessment area is 50m from the centerline of a road and 100m radius around each proposed turbine. This is small, especially noticeable with roads as it includes the already established right of way of existing roads. Many established buffer/set-back distances extend well beyond 25m (*i.e.*, nest buffers, all at-risk lichen buffers, wood turtle special management practice (SMP) requirements, etc.).
- The proposed project may require blasting. The locations requiring blasting are not identified. Blasting location information is necessary to ensure proper bat management as blasting poses a high risk to hibernacula.
- The registration document flagged the study area as low to medium risk for karst and assumed the risk as minimal. No support for this was given and no surveys were conducted to support this regarding wildlife, especially if blasting is required. Bat surveys focused on flyover activity rather than determining presence/absence of hibernacula.
- No bat surveys were conducted on the western extent of the study area. Furthermore, over half the study area does not have any survey effort for bats; this area is also the area flagged for higher karst potential (drawing 7.23, 7.8). More work is needed to determine the presence of SAR bats and understand potential impacts. This includes abandoned mine openings (AMO) known in the area to determine the presence of bat dwellings.

- Final turbine areas and pad shapes are not currently known, making review difficult for site specific SAR and other biodiversity SMP's and features.
- The proponent relied heavily throughout the document on the provincial Significant Habitat Database (SIGHAB). SIGHAB for some features is outdated and is not reliable indicator of SAR presence. Supplementing a desktop assessment with thorough field survey and assessment program, would enhance the EA registration.
- Desktop analysis for SAR/SOCC should consider NS Endangered Species Act (NS ESA) Core habitat and Species At Risk Act (SARA) Critical habitat layers.
- Wetland assessments were conducted inside the assessment area (disturbance footprint +/- 25m). Desktop methods were used to delineate wetland boundaries outside the assessment area. Desktop methods will under-estimate wetland size in most cases, potentially increasing disturbance to SAR habitat through wetland alteration.
- Wetland functional assessments were completed on 10 representative wetlands. Functional assessments are needed for each wetland that requires alteration.
- The document indicates there are no Wetlands of Special Significance (WSS) within the study area, however, it also indicates multiple SAR bird sightings. SAR birds rely on wetlands and wet areas for nesting/foraging. WSS is to be made by ECC, and there are several designated WSS in the study area.
- SAR bird surveys were completed using multiple methodologies. Only 1 season of bird counts was completed, and large portions of the study area were not surveyed via this methodology. Approximately 20km of roads and ~18 turbine sites were not surveyed (drawing 7.25), with adequate coverage needed to understand impacts and species composition. The level of information provided cannot determine the impacts on SAR birds, especially in the eastern and southern extent of the study area as these sites have no point count survey. Point counts were supplemented by other surveys (ARU, Radar) but more information would assist in making a decision.
- Multiple occurrences of Olive-sided flycatcher were noted during the breeding season but notes indicate there was no breeding activity. Presence indicates the species is breeding in the area and mitigations are required.
- Bird radar surveys were not well distributed through the study area (only 2 sites). Only one year of surveys for radar and acoustic monitoring was provided; NRR and ECCC-CWS recommends a minimum of two years of consecutive baseline pre-construction radar and acoustic monitoring. In addition, timing of radar and acoustic monitoring was temporally mismatched; radar was conducted in the spring and fall of 2022, while ARUs were deployed in the fall of 2021 and spring of 2022. Neither the radar nor ARU spring and fall survey timing was consistent with recommended guidance from NRR and ECCC-CWS for wind energy projects. Parameters of the radar and acoustic monitoring program (such as whether the full turbine sweep was assessed), data, analysis, and results require additional detail.
- The document outlines that 12km of new road are necessary. Road building is listed in multiple relevant species at risk recovery plans as a high-risk threat to survival and recovery.
- Port Hawkesbury Paper (the sister company to this proponent) collects data regarding SAR birds and at-risk lichens. This information was not included in the EARD, multiple occurrences of at-risk lichen and SAR bird occurrences (*e.g.,* 1

known Rusty blackbird occurrence) were missed. This data should be incorporated in addition to work to fill in survey gaps.

- One transect *(i.e*., a single pass of a Wood turtle stream) cannot rule out the presence of Wood turtle, additional surveys are needed during a more optimal time for turtle detection. NRR – Wildlife Division can provide survey guidance.
- Camera Trap (Trail camera) locations do not represent a very large portion of the study area, over 50% of the proposed area (drawing 7.21) was not surveyed. This corresponds to an area with many known wetlands (eastern extent) which could be suitable NS Mainland moose habitat.
- Table 11.1 indicated that the magnitude of effects on bats would be considered moderate, stating that *"these impacts will only be experienced by individuals rather than entire populations*". Three species of bats are considered at risk and protected by legislation under both the SARA and NS ESA. This is applicable to both individuals and populations. The loss of any individuals has the potential to detrimentally impact populations and will need to be addressed through monitoring and adaptive management programs.
- Section 11.2 Summary of Mitigation Measures. Specific mitigation measures for SARA have not been provided.

Geoscience and Mines Branch:

The Geoscience and Mines Branch (GMB) has reviewed considering the requirements of the *Mineral Resources Act* and has no comments.

Clean Energy Branch:

This project is proposed to proceed under 4AA of the Electricity Act which allows the Minister of Natural Resources and Renewables to issue contractual agreements for renewable low-impact electricity when doing so is determined to be in the best interest of rate payers. This project does not yet have a Power Purchase Agreement, but negotiations are underway.

Wind energy projects such as Goose Harbour Lake would help Nova Scotia transition its electricity system from the use of coal-fired generation that has direct negative impacts, including air pollution and greenhouse gas emissions.

The transition of our electricity system to renewable energy is part of the province's plans and commitments to climate change mitigation.

Wind energy is the lowest cost of energy world-wide and local deployment of wind energy is anticipated to save rate payers of Nova Scotia millions of dollars over the lifetime of their operation while also reducing the emissions and pollution intensity of the electricity system.

Wind energy will help the electricity system avoid output-based price compliance for greenhouse gas emissions in Nova Scotia resulting in less upward pressure on rate payers through fuel.

Transitioning the electricity system to renewable energy is the most cost effective and significant action the province can undertake to reduce its greenhouse gas emissions in the near term.

This project is in partnership with all 13 Mi'kmaq communities in Nova Scotia meeting the Departments mandate on inclusion in the transition of the electricity system.

Renewable energy projects such as wind projects will assist the province in achieving its goals in the *Electricity Act*, NRR mandate letter and business plan. It will also support Environment and Climate Change's Environmental Goals and *Climate Change Reduction Act* (EGCCRA), and the Climate Change Plan for Clean Growth (CCPCG).

Land Services Branch:

The Proponent will require authority (such as a lease, licence, letter of authority, or easement) from the Department of Natural Resources and Renewables for any activity on Crown land.

The Proponent may require further approvals or permits for water crossings or for changes to existing water crossings.

The Proponent may require further approvals or permits for new bridge construction or the repair of existing bridge structures.

Summary of Recommendations: (provide in non-technical language)

Biodiversity Branch:

The Registration document lacks detail regarding species at risk, wetlands, and road construction. The registration document does not include a complete SAR desktop assessment or field survey program. The proponent concluded a single year of point count data which does not cover large portions of the study area. Surveys for bats have been conducted but without determining the presence of roosts, maternity colonies or hibernacula which are protected features of the NS Endangered Species Act (ESA). At-risk lichen surveys have yet to be conducted but will be necessary before any clearing takes place. The results of these surveys could necessitate changes to proposed site locations.

Many of the field surveys for terrestrial species omit significant portions of the study area. The most southern and eastern extent of the study area have very little survey effort. The proponent draws risk conclusions regarding impact to species without a full understanding of species composition. No work around bats, birds, lichens or camera traps were done on immediately adjacent private land, sometimes <100m from proposed disturbance. The field studies completed do not have sufficient years nor spatial coverage to understand or to mitigate those impacts appropriately.

Much of the project disturbance is pre-existing, from historic industrial activities in the area. There is a vast road system already in place making this site suitable for the proposed activity. If proper mitigation is applied, increased risk to SAR is less likely during construction; however, the impact of the active wind farm regarding migrating species and bats is not well understood, nor well studied in the registration document.

Recommended Conditions

- Obtain all necessary permits as required under legislation related to wildlife and species at risk in order to undertake the project.
- Provide digital way points and/or shapefiles for all Species at Risk and Species of Conservation Concern to NRR (those species listed and/or assessed as at risk under the Species at Risk Act, Endangered Species Act, COSEWIC, as well as all S1, S2 and S3 species). Data should adhere to the format prescribed in the NRR Template for Species Submissions for EAs and is to be provided within two (2) months of collection.
- Desktop analyses to include PHP species data, core and critical habitat.
- Provide a minimum of two (2) years of consecutive baseline surveys, provided that at least one of these survey years is conducted prior to the construction phase of the project;
- Additional post-construction monitoring and adaptive management pending assessment of survey results and following review by NRR.
- Prior to the development of a Wildlife Management Plan (WMP), undertake field surveys to address information gaps that prevent a full risk assessment to SAR or SOCC. Methodology and timing to be approved by NRR. These include:
    - Surveys to identify the extent of all at-risk lichen as per the “At-risk lichen Special Management Plan”
    - Surveys to identify the extent of SAR Bat dwellings and habitually used habitats (roosts, maternity sites, hibernacula, swarming areas). Abandoned mine openings must be surveyed within 5km of the nearest turbine if blasting is required.
    - Surveys to identify the extent of all Species at Risk birds.
    - Surveys to identify the extent of all Species at Risk Turtles.
- Prior to commencement, develop a Wildlife Management Plan in consultation with NRR and ECCC and implement following approval. The WMP shall include:
    - Communication protocol with regulatory agencies;
    - General wildlife concerns (e.g., human-wildlife conflict avoidance);
    - Education plan for project personnel regarding wildlife and SAR on site;
    - Noise, dust and lighting mitigation;
    - Measures to protect and mitigate against adverse effects to migratory birds during construction and operation. This may include avoidance of certain activities (such as vegetation clearing) during the regional nesting period for most birds, buffer zones around discovered nests, limiting activities during the breeding season around active nests, and other best management practices.

    - Mitigation measures to avoid and/or protect SAR/SoCC and associated habitats discovered through survey work or have the potential to be found on site, including bats and their dwellings (e.g., hibernacula and impacts of blasting). Mitigation should be consistent with the NS ESA and recovery/management plans.
    - Details on monitoring and inspections to assess compliance with and the effectiveness of the WMP.
- Revegetate cleared areas using native vegetation or seed sources following consultation with NRR.
- Develop a plan to prevent the spread of invasives both on and off site. Implementation of the plan can only occur following approval from NRR.
- Develop a monitoring program to assess mortality for birds and bats in consultation with NRR and ECCC and implemented for a minimum of two (2) years post-construction during the operation stage of the project. Guidance on monitoring requirements will be provided by NRR. Reporting of the results of the monitoring program shall be on an annual basis to appropriate regulatory agencies. Pending review of results of the monitoring program, additional monitoring or mitigation measures may be required.
- Engage with NRR and ECCC to develop an adaptive management plan to inform decision-making related to adverse effects of the project on migratory bird and bat species. The plan shall be implemented following NRR approval.
- Additional surveys or mitigations may be required following a review of the effectiveness of the plan.
- As the proposed work is within identified Mainland Moose Core Habitat, conduct surveys for Mainland Moose for a minimum of two (2) years during the operation phase of the project, in a buffered zone of influence extending up to two (2) kms from the project footprint, to assess potential effects of disturbance.

Clean Energy Branch:

The EA process does not currently allow for the comparison and reflection on the climate change or environmental related benefits of transitioning the electricity system from fossil fuels to renewable energy. The long-term use of coal-fired generation for our electricity system has had significant cumulative negative impacts to the environment, climate, and human and animal health as a result of air pollution and other related pollutants from coal-fired generation. New renewable energy projects, such as wind energy, must be considered in comparison to the status quo and the benefits that result from the transition of the electricity sector to renewable energy. There are substantial benefits to the health and welfare of the ecosystem in Nova Scotia that is a result of switching coal-fired generation for new renewable energy resources.

Land Services Branch:

No further comments.

NOVA SCOTIA
Environment and Climate Change

Barrington Place
1903 Barrington Street
Suite 2085
Halifax, Nova Scotia
Canada B3J 2P8

(Change memo heading if you are not with ECC)

Date: **February 28, 2023**

To: **Mark McInnis, Environmental Assessment Officer**

From: **Melissa Ginn, Regional Environmental Advisor, Transport Canada**

Subject: **Goose Harbour Lake Wind Fam Project, Guysborough County, Nova Scotia**

Scope of review:
This review focuses on the following mandate: Navigation, aviation

(Examples: hydrology and surface water quantity; surface water quality; air quality; species at risk recovery; wildlife species and habitat conservation; contaminated sites, etc.)

Technical Comments:

(When completing this section, please consider the Guiding Questions for Technical Comments (attached), to inform your comments).

Transport Canada, Environmental Programs and Indigenous Relations, Atlantic Region has reviewed the registration document. We have determined the since the proposed project is not located on federal lands, a review pursuant to s.82 of the *Impact Assessment Act* (IAA) is not required.

The proponent will need to complete an Aeronautical Assessment Form (AAF) regarding the wind turbines, to assess for marking and lighting requirements as per:

Standard 621 - *Obstruction Marking and Lighting - Canadian Aviation Regulations (CARs)* (https://tc.canada.ca/en/corporate-services/acts-regulations/list-regulations/canadian-aviation-regulations-sor-96-433/standards/standard-621-obstruction-marking-lighting-canadian-aviation-regulations-cars).

The AAF is located in *Appendix C - Aeronautical Assessment Form for Obstruction Marking and Lighting* (Form 26-0427E).

Once the AAF information has been completed, please forward to: aviation.atl@tc.gc.ca.

Navigation Protection Program of Transport Canada can provide the following comments:

It is noted that the proposed project will involve project components including upgrades to existing roads with culverts/bridges and new water crossings during road construction.

The watercourse crossing upgrades, other infrastructure, and activities appear to have potential impact on non-scheduled waterways subject to the Canadian Navigable Waters Act, and the proponent will need to consider the following:

Under the Canadian Navigable Waters Act (CNWA), owners of works – (other than a minor work or a major work) - that are <u>located on navigable waterways not listed in the schedule</u>, which may interfere with navigation, have the option to:

1. **either apply to the Minister of Transport; (approval review process and advertising and 30 day registry public review)**

or

2. **seek authorization through the public resolution process, and deposit specific information regarding their proposed crossing works on the new Common Project Search (online registry) inviting any interested party to comment.**

(advertising and 30 day registry public review)

****Note however, that any <u>bridges with piers placed below the high water mark of a watercourse, as well as water control structures</u> always require an approval as outlined in the Major works Order. (an application for approval is required)**

Both the approval application process and the public resolution process on the Registry can be accessed at the following link:
<u>External Submission Site for the Navigation Protection Program</u>
(create an account first if needed)

Additional guidance information and links for the NPP regulatory process can be found here:

Canadian Navigable Waters Act
<u>https://www.tc.gc.ca/eng/programs-632.html</u>

<u>https://www.tc.gc.ca/eng/canadian-navigable-waters-act.html</u>

Navigation Protection Program, Transport Canada
<u>http://www.tc.gc.ca/eng/programs-621.html</u>

NPP Contact coordinates:

Navigation Protection Program | Programme de protection de la navigation

Transport Canada - Atlantic Region / Heritage Court, P.O. Box 42, 95 Foundry

Street, Moncton, N.B.
E1C 8K6 |
Transports Canada - Région de l'Atlantique / Place Héritage, C.P. 42, 95 rue Foundry, Moncton, N.-B.
E1C 8K6
Tel | Tél. : 506-851-3113 / Fax | Téléc. : 506-851-7542
Email / Courriel : NPPATL-PPNATL@tc.gc.ca

Summary of Recommendations: (provide in non-technical language)

(When completing this section, please consider the Guiding Questions for Summary of Recommendation (attached), to inform your comments).

The proponent will need to complete an Aeronautical Assessment Form (AAF) regarding the wind turbines, to assess for marking and lighting requirements.

Under the Canadian Navigable Waters Act (CNWA), owners of works – (other than a minor work or a major work) - that are located on navigable waterways not listed in the schedule, which may interfere with navigation, have the option to:

1. **either apply to the Minister of Transport; (approval review process and advertising and 30 day registry public review)**

or

2. **seek authorization through the public resolution process, and deposit specific information regarding their proposed crossing works on the new**

Common Project Search (online registry) inviting any interested party to comment.
(advertising and 30 day registry public review)

McInnis, Mark

From: Wade,Suzanne (ECCC) <suzanne.wade@ec.gc.ca>
Sent: February 28, 2023 9:42 AM
To: McInnis, Mark
Cc: Wade,Suzanne (ECCC); Hingston,Michael (il, lui | he, him) (ECCC); Worthman,Sydney (ECCC); Keeping,Brent (ECCC)
Subject: FW: PHP Wind LP - Goose Harbour Lake Wind Farm Project - EA Registration (EAS# 23-NS-001)
Attachments: CWS Atlantic Guidance Update for Wind Energy and Migratory Birds - April 2022.pdf; Survey Protocol for SAR bats within Treed Habitats_Ontario_2017 (003).pdf; Operational Framework for Use of Conservation Allowances_2012.pdf; 7_NWER_GuidelinesForWildlifeResponsePlans_EN_ECCC_2022.pdf; 8_NWER_WildlifeEmergencyResponsePlanTemplate_EN_ECCC2022.docx

Hi Mark,

Environment and Climate Change Canada has reviewed the proposed Goose Harbour Lake Wind Farm Project, submitted by PHP Wind LP Inc. and PHP Wind GP Inc., and we offer the following comments:

Wildlife

Please note that the following documents are attached to this email:

- Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS) – *Wind Energy & Birds Environmental Assessment Guidance Update* (April, 2022) (not available online). Note: This document does not replace the Environment Canada 2007(a) *Wind Turbines and Birds: A Guidance Document for Environmental Assessment* and 2007(b) *Recommended Protocols for Monitoring Impacts of Wind Turbines on Birds* (available online) which are referenced in the 2022 ECCC-CWS-ATL Guidance Update (attached). The 2022 update elaborates on recommendations provided ECCC 2007(a)(b), primarily related to radar and acoustic studies for proposed projects using larger turbines (>150m), and outlines expectations for pre and post-construction surveys and monitoring.
- Ontario Ministry of Natural Resources and Forestry. 2017. Survey Protocol for Species at Risk Bats within Treed Habitats Little Brown Myotis, Northern Myotis and Tri-colored Bat.
- Environment Canada. 2012. Operational Framework for the Use of Conservation Allowances.
- Environment and Climate Change Canada. 2021. Guidelines for effective wildlife response plans.
- Editable template Appendix A to accompany "Guidelines for effective Wildlife Response Plans".

Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS) notes that in the "Draft Generic EA Mitigations Wind" provided with the review request, the Wildlife Section includes the statement "*Contact NRR to discuss required actions should nesting birds or their young, or any species-at-risk, be encountered on site during construction"*. ECCC-CWS is responsible for the management and conservation of migratory birds, and protection of SARA listed species at risk and their habitats. The "Draft Generic EA Mitigations Wind – Wildlife" should be updated to clarify that ECCC-CWS should be contacted for advice related to migratory birds and migratory bird species at risk, and compliance with MBCA and SARA.

Specific Comments:

1. Table 6.1; Quote (page 24) "*June 2019 - Email correspondence regarding the review and feedback on the Proposed Avian Assessment Plan…"*

ECCC-CWS notes that we do not have any records from June 2019 indicating that our experts reviewed an Avian Assessment Plan for this project (Goose Harbour Lake). However, our experts did review a project in a similar location: Pirate Cove, although the project description is different). It is not clear to ECCC-CWS whether these are the same projects or not. The proponent should provide clarification on this point.

Additionally, ECCC-CWS notes that "CWS" has been included under the "Provincial Government" columns, which is not accurate. Canadian Wildlife Service is a branch of Environment and Climate Change Canada (a federal department), and this should be update accordingly.

2. If the project proceeds, the proponent should be advised that provincial conditions of approval do not supersede their responsibility to ensure that activities comply with the MBCA and associated regulations. For all activities and during all Project phases, the Proponent must take measures to avoid the disturbance or harm of migratory birds, nests, and eggs.

3. The proponent should retain raw data (e.g., information on individual tracks) until appropriate data standards have been developed. Proponents are encouraged to share and store data with:
    a. The Atlantic Canada Conservation Data Center (http://accdc.com/en/contribute.html), and,
    b. The Canadian Wind Energy Association (CanWEA) database (https://canwea.ca/) (Birds Canada 2022).

Section 7.4.5 - Terrestrial Environment – Avifauna

4. Section 7.4.5.3; Quote (page 169-170) "*Of the 106 recorded species within 100 km, nine SAR with provincial or national designations under their respective legislation were recorded within the Study Area during field surveys: Barn Swallow, Bay-breasted Warbler, Canada Warbler, Chimney Swift, Common Nighthawk, Evening Grosbeak, Olive-sided Flycatcher, Peregrine Falcon, Rusty Blackbird"*

    Per the First and Second Maritime Breeding Bird Atlas (including records for 2021), Bank Swallow, Eastern Wood-Peewee and Bobolink were observed in the Study Area and should be added to the list of bird species at risk (SAR) potentially affected by the proposed Project.

5. Section 7.4.5.6; Quote (page 172) "*Avian radar assessments were undertaken during two monitoring campaigns times to coincide with the spring (April 15 to June 15 2022) and fall (August 15 to October 15, 2022) migratory bird seasons. Avian radar systems were deployed from April 12 to June 10, 2022 for the spring 2022 monitoring campaign, and from July 27 to October 31, 2022 for the fall monitoring campaign."*

    ECCC-CWS recommends a minimum of two years consecutive baseline data be collected in order to understand variance in flight height (i.e., bird movements) in relation to weather conditions. ECCC-CWS recommends that monitoring be conducted early and pre-construction to quantify risk and inform the EIA. However, if provincial EIA processes don't require this level of baseline prior to decision, year 2 pre-construction monitoring could be started during the construction year to determine the need for additional mitigation measures and inform post-construction monitoring and adaptive management plans.

6. Section 7.4.5.6; Quote (page 173) "*Avian radar assessment results were processed using the radR platform (R-Forge, 2023) – an open-source platform designed for the processing of radar data for biological applications – and outputs were analysed using Microsoft Excel"*

    Section 7.4.5.9; Quote (page 182) "*Figure 7.5 (Appendix M14) shows that the horizontal radar mode identified 43,636 BTs during the spring 2022 monitoring campaign. Most of these BTs…were detected on May 5, which was possibly an avian migration event. The next largest migration event…occurred on*

April 13. No BTs were detected after May 5…Unlike the spring, there was a relatively consistent number of observed BTs, with a peak observed on September 8 and 9…No observations were made after October 7, 2022".

ECCC-CWS notes that while the proponent was able to detect bird movement through the Project Area, and has provided a summary of this information, it would be useful if the proponent also provided the time of day/night that birds were detected in their summaries. It would be useful to observe whether movements and heights (Altitude to ground level (AGL)) differ during different periods of the day/night, especially during migration periods, and would help ECCC-CWS to assess how birds are using this area.

7. Section 7.4.5.6; Quote (page 173) "*The acoustic data was initially processed using Wildlife Acoustic Kaleidoscope's cluster analysis capabilities. The dataset was restricted to only assess data between 8 pm and 5 am with the goal of finding night flight calls (NFCs). The cluster analysis was done using bait files in conjunction with the raw acoustic data. The bait files included sample audio from 91 SOCI bird species for Kaleidoscope to create clusters around avian acoustics."*

   Section 7.4.5.6; Quote (page 176) "*The signal parameters used for this analysis included:…0.1 – 7.5 s length of detection"*

   ECCC-CWS notes that the default parameters used in Kaleidoscope Pro seek out noises from the Acoustic Recording Unit (ARU) files between 0.1 and 7.5 seconds in length, however, the night flight calls of most species are very short and are not like the songs/calls that are normally heard from these species (e.g. rarely exceeding half a second and in many cases less than 0.1 seconds for some species). Night flight calls of landbird species tend to be extremely brief (as short as 40 milliseconds for a handful of species, see attached graphic).

   In terms of Kaleidoscope settings, 0.1 seconds is equal to 100 milliseconds, and any calls that are less than 0.1 seconds would not be recognized by the software. As a result, the chosen analysis technique could have missed many (or possible most) of the night flight calls of landbirds. ECCC-CWS recommends redoing the analysis using a lower call duration standard on the bottom end to address this concern.

8. Section 7.4.5.9; Table 7.61 (page 185)

   Section 7.4.5.10, Quote (page 193) "*The results of the fall 2022 radar monitoring program indicates that migratory bird activity was highest in the 250-500 m and 500-1000 m height bins, which suggests that most of the migratory bird activity would occur above the height of the wind turbines. Based on these findings, the number of bird strikes and level of avian mortalities from the Project is expected to be low, which is consistent with other studies that examined interactions between wind turbines and avifauna"*

   ECCC acknowledges that from the proponent's results, it appears that the majority of birds are moving through the Project Area at a height above ground level in excess of the turbine rotor swept area (i.e. >250 m). However the target density value presented for the 100-150 m height AGL should also be considered during the effects assessment and provided for review.

   ECCC-CWS recommends that the proponent consider additional mitigation measures related to rotor operations (e.g. reducing cut-in speeds or altering the pitch/feathering of blades, etc.) at times of optimal migration conditions/periods of high risk for collisions, particularly in the fall.

9. Section 7.4.5.10; Quote (page 191) "*Habitat modelling (Drawings 7.29, 7.30, 7.31) suggests that there is abundant habitat availability for each of those species [(Canada Warbler, Evening Grosbeak, Olive-sided Flycatcher and Common Nighthawk)] within the Study Area.*

ECCC-CWS notes that this statement does not take into account the consideration of the cumulative effect of multiple disturbances on migratory birds and species at risk, which is a concern for the current and planned future development in the Study Area. ECCC-CWS recommends that the proponent assess and describe the cumulative impact of their project (and others in the area, as well as future developments).

10. Section 7.4.5.10; Quote (page 192) "*As such, most interactions between the turbines and avifauna are expected to be within migratory birds passing through the rotor sweep area of the turbines, not with seabirds and waterfowl moving through the Strait of Canso.*"

    ECCC-CWS notes that there are a number of seabird colonies (hosting Common/Arctic Tern, Great Blue Heron, Double-crested Cormorant, and various gull species) within a 30 km radius of the approximate centroid of the proposed wind farm (see attached), most of which are in the southwestern area of the Strait of Canso. These should be noted in the assessment as potential sensitive areas that should be avoided.

11. ECCC-CWS notes that a Pileated Woodpecker was detected during the 2021 breeding bird point count survey. ECCC-CWS notes that the nests of Pileated Woodpecker are listed on Schedule 1 of the amended Migratory Bird Regulations (2022) and continue to have year-round nest protection, unless they have been shown to be abandoned.

    For more information on the amended nest protections, frequently asked questions on how these protections apply to migratory birds, including Pileated Woodpecker, and responsibilities for reporting abandoned nests, please visit Fact Sheet Nest Protection Under the Migratory Birds Regulations, 2022 and Frequently Asked Question, Migratory Birds Regulations, 2022. Information on Pileated Woodpecker nest cavities can be found on ECCC's website: Pileated Woodpecker Cavity identification Guide, Damage or Danger Permits for Nest Destruction: Pileated Woodpecker nesting cavities - Canada.ca and Damage to the Use of the Land: Pileated Woodpecker nesting cavities - Canada.ca

Section 7.3.3 - Wetlands

12. It should be clarified if federal funding is being sought or provided for the proposed project. If so, the *Federal Policy on Wetland Conservation in Canada* (FPWC) may apply. As the federal department responsible for promoting the FPWC, ECCC-CWS requests the opportunity to review a draft Wetland Compensation Plan (WCP) prior to finalization to ensure the goals of the FPWC are being met.

13. Section 7.3.3.6; Quote (page 109) "*The results of the desktop analysis and field assessments indicate that a total of 11.89 ha of delineated wetland habitat that may be directly altered by Project developments…only 44 of the 95 delineated wetlands may require alteration, and 26 of those 44 wetland alterations would be from upgrades to existing roads.*"

    ECCC-CWS notes that delineated wetlands (95 totaling ~1,630 ha) were identified, including treed and shrub swamps, with lesser areas of bogs and marshes. The environmental assessment registration document (section 7.3.3.6 – Effects Assessment) should clarify how field surveys informed plans to avoid effects (direct and indirect) to wetlands, including wetlands used by avian species at risk such as Canada Warbler, Olive-sided Flycatcher and Rusty Blackbird. Additionally, ECCC-CWS notes that the proponent has not provided sufficient information on how they intend to mitigate the effects (direct and indirect) to wetlands in the Project Area, beyond reducing the overall "new" disturbed footprint in wetlands.

    Where effects to wetlands are deemed unavoidable, ECCC-CWS recommends including a discussion of why avoidance was not possible, as well as a wetland compensation plan, which considers conservation allowances for the loss of wetland habitat used by bird species at risk (SAR) and species of conservation concern (SOCC).

14. Section 7.1.2.4; Quote (page 47) "*Another source of methane can also be released due to disturbances of wetlands (which act as methane sinks).*"

    ECCC-CWS notes that this statement is inaccurate - wetlands will release **carbon dioxide** when drained and altered.

Section 7.4.2 - Terrestrial Environment – Flora

15. ECCC-CWS recommends that the proponent contact the Province of Nova Scotia's Department of Natural Resources and Renewables for technical expertise and advice on SAR plants and lichen (e.g. Blue Felt Lichen, Boreal Felt Lichen, Frosted Glass-whiskers, and Eastern Waterfan Lichen).

16. ECCC-CWS notes that Black Ash is currently COSEWIC-assessed as Threatened is under consideration for listing under the *Species at Risk Act*. The Project Area is located within the Province of Nova Scotia's Black Ash core habitat, and the proposed activities could potentially alter or destroy this core habitat.

    ECCC-CWS recommends that the proponent contact the Province of Nova Scotia's Department of Natural Resources and Renewables for technical expertise and advice on Black Ash.

Section 7.4.3 - Terrestrial Environment – Fauna

17. Section 7.4.3.4; Quote (page 137) "*Targeted wood turtle surveys were conducted on June 8, 2022, before temperatures became too high…No records of wood turtles within 5 km of the Study Area were identified, and so survey locations were selected based on presence of appropriate habitat…*"

    ECCC-CWS acknowledges that the proponent completed a survey for Wood Turtle in 2022 and appropriate methods were used. However, ECCC-CWS notes that the detection rate of Wood Turtle (and other turtle species) during surveys can be low, and determining the presence/absence of individuals from a single survey can be challenging.

    ECCC-CWS recommends that the proponent adopt a precautionary approach with respect to avoiding potential impacts to Wood Turtle and other turtle species, particularly with respect to the construction of the road network(s). Impacts to turtles include increased mortality risk from wildlife-vehicle collisions, increased predation risk along corridors, and creation of sink habitats for female turtles. The *Recovery Strategy for the Wood Turtle (Glyptemys insculpta) in Canada* lists accidental mortality (roads) as threats that could impact individual wood turtles, which are vulnerable given their slow travel speed and how far they range from aquatic habitats in summer.

    ECCC-CWS recommends the development of mitigation measures to avoid effects on individuals potentially found nesting, and/or travelling to nesting, foraging areas in the forest and overwintering habitats encountered during vegetation clearing activities and operations. ECCC-CWS recommends that the proponent establish riparian buffers around natural waterbodies and watercourses, avoid construction parallel to watercourses and in habitat that is suitable for turtles (including Wood Turtle, Snapping Turtle and Eastern Painted Turtle).

    ECCC-CWS recommends that the proponent include mitigation measures in their site wildlife plan on what actions they would take if any SAR reptiles are found within the Study Area during all stages of the Project.

ECCC-CWS recommends that the proponent contact the Province of Nova Scotia's Department of Natural Resources and Renewables for technical expertise and advice on Wood Turtle to ensure that mitigations are aligned with the Province of NS' turtle special management practices.

18. Section 7.4.3.4; Quote (page 138) "*Targeted surveys for butterfly and Odonates species were not conducted; however, any incidental observations of butterfly and Odonates SAR/SOCI during other field surveys were documented".*

    Section 7.4.3.5; Quote (page 141) "*The monarch was observed along a road during the migratory period (late summer/early fall) amongst hairy flat-top white aster…purple-stemmed aster…and Canada goldenrod…"*

    ECCC-CWS notes that there is suitable habitat for Monarch in the Project Area, including Common Milkweed (which is included in the proponent's plant list).

    ECCC-CWS recommends that the proponent contact the Province of Nova Scotia's Department of Natural Resources and Renewables for technical expertise and advice on Monarch.

Section 7.4.4 - Terrestrial Environment – Bats

19. ECCC-CWS recommends that the proponent consult provincial SAR biologists at the Nova Scotia Department of Natural Resources and Renewables for technical expertise and advice on bat SAR under their responsibility and jurisdiction (contact: Donna Hurlburt at: Donna.Hurlburt@novascotia.ca and Pam Mills at: pamela.mills@novascotia.ca).

20. Section 7.4.4.1; Quote (page 150) "*Objectives were as follows: Assess observations, species diversity and habitat utilization of bats within the Study Area during the active bat periods (spring to fall); Assess nearby hibernacula for bat activity; Assess for summer roosting activity in the suitable areas of the Study Area (e.g. mature hardwood forests); Use the information collected to inform and refine the Project design (i.e. avoid impacts to SOCI and their habitats…;Use the information collected to inform mitigation and management practices".*

    Section 7.4.4.3; Quote (page 153) "*There are several recorded abandoned mine openings located within/near the Study Area, concentrated towards the northwest region…These recorded abandoned mine openings are listed as shafts, open cuts or pits…"*

    ECCC-CWS acknowledges that the proponent's objectives include the assessment of known hibernacula locations, but do not include the assessment of potential/unknown hibernacula (i.e. both natural and anthropogenic, such as old mines, caves, etc.) that may be in the Study Area.

    The proponent has referenced "Abandoned Mine Openings", and acknowledges that there are many located within/near the Study Area, but they did not investigate these openings for potential overwintering activity, nor did they complete surveys to assess maternity roosts in anthropogenic habitats. ECCC-CWS notes that the proponent needs to ensure that turbine locations be sited away from important bat habitat/features. ECCC-CWS recommends that the proponent assess anthropogenic structures in the Study Area for potential overwintering and roosting activity.

21. ECCC-CWS notes that the proponent has referred to Little Brown Myotis, Northern Myotis, and Tri-coloured Bat as non-migratory species, although this is not accurate. These three species exhibit radiative (rather than latitudinal) migration and can move long distances (hundreds of kilometres) between overwintering and summering areas. This has potential implications of optimal site selection for turbines.

22. Section 7.4.4.4; Quote (page 155) "*Incidental observations of significant bat habitat features were recorded throughout the 2021 and 2022 field assessments conducted within the Study Area."*

    ECCC-CWS notes that the proponent did not conduct dedicated habitat surveys and recommends that the proponent complete a bat-specific habitat assessment of the Study Area to ensure that turbine locations are chosen appropriately.

    Given the size of the Study Area, ECCC-CWS recommends that the proponent follow the steps identified in the Ontario Ministry of Natural Resources and Forestry (2017) *Survey Protocol for Species at Risk Bats within Treed Habitats Little Brown Myotis, Northern Myotis and Tri-Colored Bat* to identify forested habitats in the project area and look for large diameter potential maternity roosting trees within those areas.

    For the proponent's consideration when conducting the surveys outlined in the OMNRF protocols (2017), exit surveys are a good source of supplemental information, but given that bats exhibit roost switching behaviour, multiple (e.g. 10 or more) nights of acoustic recording is preferable (rather than one visit), in order to confirm the presence/absence of a maternity roost.

23. Section 7.4.4.4; Quote (page 156) "*Passive acoustic bat monitoring was conducted for 173 consecutive days within the Study Area between the dates of May 31 and November 19, 2021; encompassing spring, summer, and fall active bat seasons. Four detectors were deployed in habitats representative of the Study Area…"*

    ECCC-CWS notes a number of concerns with the acoustic bat monitoring:
    - The proponent did not define the objective for the acoustic sampling – passive acoustic monitoring provides a baseline of bat activity in the area sampled, but it does not provide much insight beyond that bats are using the area.
    - The proponent likely started their acoustic bat monitoring too late in the spring (beginning of May is generally the recommendation for this region).
    - The use of only four detectors, which notably are absent from the entire eastern half of the Study Area) provides minimal coverage of the Study Area. Detectors will detect a bat up to 30 m away under optimal conditions (low clutter, low noise, good equipment and set-up), but regardless, a portion of the Study Area remains unmonitored.
    - Only one year of acoustic monitoring was completed.

    ECCC-CWS recommends that the acoustic bat monitoring program be designed/implemented in a targeted manner to confirm/validate maternity roosts, swarming and/or hibernacula, following targeted habitat assessment (see Comment 9 above). Additionally, the proponent should conduct an additional year of monitoring (as per ECCC-CWS Atlantic recommendation for avifauna monitoring).

    Finally, to facilitate the analysis of results, ECCC-CWS recommends that the proponent present the data for each detector location throughout the sampling period in the report. Additionally, ECCC-CWS recommends that the proponent provide a figure displaying bat passes/night for each species (or species group) at each detector location.

24. ECCC-CWS notes that the proponent has not included mitigations such as reducing cut-in speeds or altering the pitch/feathering of blades during high risk collision periods (e.g. during migration or swarming) or when wind velocities are low.

25. Section 7.4.4.6; Quote (page 163) "*Results are characterized as moderate magnitude, within the LAA, medium duration, intermittent, reversible, and not significant."*

    ECCC-CWS notes that although the proponent's results demonstrate potentially low bat activity in the Study Area, based on the identified information gaps ECCC-CWS disagrees with the proponent's conclusion.

ECCC-CWS has been conducting research in collaboration with the University of Waterloo in Nova Scotia that is showing low numbers of Northern Myotis and Tri-colored Bat on this landscape, so the loss of individuals, maternity roosts, and/or hibernacula may jeopardize the recovery of these species in Nova Scotia.

Additionally, it is important for the proponent to be aware that the three species of migratory bats (Hoary Bats, Silver-haired Bats, and Eastern Red Bats) identified by the proponent as being more vulnerable to mortality from wind turbines are currently undergoing assessment by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). ECCC recommends that monitoring, mitigation measures and adaptive management plans consider species of conservation concern (SOCC) as though they are species at risk, in the event that they become listed throughout the lifetime of the Project.

Finally, ECCC is of the opinion that any additive mortality of the SARA listed bat species in White-nose Syndrome (WNS) affected areas, including mortality at wind turbines, has the potential to be biologically-important. The mortality of even a small number of remaining individuals, particularly breeding adults, or disturbance to maternity roosts, 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.

General Comments:

Migratory Birds

Migratory birds, their eggs, nests, and young are protected under the *Migratory Birds Convention Act* (MBCA). Migratory birds protected by the MBCA generally include all seabirds (except for cormorants and pelicans), all waterfowl, all shorebirds, and most landbirds (birds with principally terrestrial life cycles). The list of species protected by the MBCA can be found at https://www.canada.ca/en/environment-climate-change/services/migratory-birds-legal-protection/convention-act.html. Bird species not listed may be protected under other legislation.

Under Section 5(1) of the *Migratory Bird Regulations, 2022* (MBR), it is forbidden to capture, kill, take, injure or harass a migratory bird; or damage, destroy or take a nest or egg of a migratory bird, excluding under the exceptions listed in 5(2) of the MBRs, or under the authority of a permit. It is important to note that under the MBR, no permits can be issued for the harm of migratory birds caused by development projects or other economic activities.

Furthermore, 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."

It is the responsibility of the proponent to ensure that activities are managed so as to ensure compliance with the MBCA and associated regulations.

Vegetation Clearing

Clearing vegetation may cause disturbance to migratory birds, and may inadvertently cause the destruction of their nests and eggs. Most migratory bird species construct nests in trees (sometimes in tree cavities) and

shrubs, but 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. In developing mitigation measures, it is incumbent on the proponent to identify the best approach, based on the circumstances, to complying with the MBCA. The following should be considered during project planning:

- Avoid scheduling high disturbance activities, such as vegetation clearing, during the regional nesting period for migratory birds. Information regarding regional nesting periods can be found at: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods.html. Some species protected under the MBCA may nest *outside* these timeframes.

- The risk of impacting active nests or birds caring for pre-fledged chicks discovered during project activities *outside* of the regional nesting period can be minimized by 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.

- In developing and implementing a wildlife management plan, preventative measures to minimize the risk of impacts on migratory birds should be considered (see "Avoiding harm to migratory birds: guidelines to reduce the risk to migratory birds" at https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/reduce-risk-migratory-birds.html).

Nest Searches

ECCC-CWS generally does not recommend nest searches or sweeps in vegetation prior to clearing during the breeding season. Nests in complex habitat 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, harm to migratory birds is still likely to occur even when active nest searches are conducted prior to development activities, except when the nests searched are known to be easy to locate without disturbance (e.g. previously cleared area, simple habitats, low vegetation).

Some ground nesting species of migratory birds, including the threatened Common Nighthawk, may be attracted to previously cleared areas for nesting in the spring and summer if there is a delay between clearing activities (e.g. clearing conducted in the fall/winter and construction scheduled in the spring and summer).

Nest surveys may be carried out successfully by experienced observers using scientific methodology in the event that activities would take place in simple habitats (often in human-made settings) with only a few likely nesting areas or a small community of migratory birds. Examples of simple habitats include:

- An urban park consisting mostly of lawns with a few isolated trees;
- A vacant lot with few possible nest sites;
- A previously cleared area where there is a lag between clearing and construction activities and where ground nesters may have been attracted to nest in cleared areas or in stockpiles of soil; or,
- A structure such as a bridge, a beacon, a tower or a building (often chosen as a nesting spot by robins, swallows, phoebes, Common Nighthawk, gulls and others).

Nest searches can also be considered when looking for:

- Conspicuous nest structures (such as nests of Great Blue Herons, Bank Swallows, Chimney Swifts);
- Cavity nesters in snags (such as woodpeckers, goldeneyes, nuthatches); or,
- Colonial-breeding species that can be located from a distance (such as a colony of terns or gulls).

Should any nests or unfledged chicks be discovered, protection with an appropriate-sized buffer is expected. Note: Nests should not be marked using flagging tape or other similar material as this increases the risk of nest predation. ECCC CWS can be contacted for further advice on bird monitoring and/or mitigation if a nest is found.

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 MBR, “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.

Provisions for wildlife response activities should be identified in the Oil Spill Prevention and Response Plan to ensure that pollution incidents affecting Wildlife are effectively and consistently mitigated. The document “Guidelines for Effective Wildlife Response Plans” (ECCC, 2021) is attached and is provided to offer guidance on the development of wildlife response activities.

The following information should be included in any Oil Spill Prevention and Response Plan:

- Mitigation measures to deter migratory birds from coming into contact with the oil.
- Mitigation measures to be undertaken if migratory birds and/or sensitive habitat becomes contaminated with the oil.
- The type and extent of monitoring that would be conducted in relation to various spill events.

Revegetation

A variety of species of plants native to the general project area should be used in revegetation efforts. Should seed mixes for herbaceous native species for the area not be available, it should be ensured that plants used in revegetation efforts are not known to be invasive.

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 prior to transport from elsewhere to ensure that no vegetative matter is attached to the machinery (e.g., use of pressure water hose to clean vehicles prior to transport).
- Regularly inspecting equipment prior to, during and immediately following construction in areas found to support Purple Loosestrife 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-CWS recommends the following best management practices:

- The proponent should 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.
- The proponent should, where possible, 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 completed outside the migratory bird breeding season.

- The proponent should keep all construction equipment and vehicles in good working order and loud machinery should be muffled if possible.

Lighting Attraction and Migratory Birds

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

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

- Use the minimum amount of pilot, warning and obstruction lighting needed on tall structures. Warning lights should flash and completely turn off between flashes.
- Use the fewest number of site-illuminating lights possible in the project area. Only use strobe lights at night, at the lowest intensity and the smallest number of flashes per minute allowable by Transport Canada.
- Reduce lighting levels during severe weather events that may force migratory birds to land to prevent birds from landing in areas that would cause injury, harm, or death.
- Avoid or restrict the time of operation of exterior decorative lights such as spotlights and floodlights whose function is to highlight features of buildings or to illuminate an entire building. These lights, especially on humid, foggy or rainy nights, can draw birds from far away. Turn off these lights during the migratory season when the risk to birds is highest and during periods when birds are dispersing from their nests or colonies.
- Shield safety lighting so that the illumination shines down. Only install safety lighting where it is needed, without compromising safety.
- Shield street and parking lot lighting so that little escapes into the sky, and it falls where it is required. Consider using LED lighting fixtures as they are generally less prone to light trespass.
- The proponent should make all reasonable attempts to limit construction activities to the day and avoid illuminating the habitat adjacent to the worksite.

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 Permi.atl@ec.gc.ca.

Transmission lines

Transmission lines have the potential to harm, injure, or kill migratory birds through increasing risks of collision and electrocution. The proposed placement of above-ground transmission lines should consider areas used as flight paths by migratory birds (e.g., during migration; travelling from nesting to foraging areas, along streams

used by waterfowl). ECCC-CWS recommends the following beneficial management practices to avoid potential harm to migratory birds associated with transmission lines:

- Avoid building transmission or distribution lines over, adjacent, or near areas where birds are known to congregate or move, including:
    - Important breeding, staging, moulting areas;
    - Breeding colonies; and
    - Between breeding and foraging areas.
- Design "avian-safe" configurations to reduce the risk of electrocutions, including:
    - Providing sufficient separation between energized phase conductors and between phases and grounded hardware;
    - Insulating exposed surfaces in high-risk areas;
    - Installing perch-management (e.g. perch guard) devices on poles; and
    - Removing or minimizing vegetation around poles and lines.
- Install measures on lines that reduce the risk of collisions:
    - Provide minimal vertical separation between lines;
    - Use self-supporting structures to reduce the number of guy wires; and
    - Use line-marking devices to increase the visibility of the lines.

Infrastructure, Buildings and Bridges

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-CWS recommends the following beneficial management practices:

- The proponent should ensure that project staff are aware of the potential of migratory bird bests on infrastructure, buildings, and bridges, if applicable.
- If a nest is discovered, the proponent should conduct no activities around the nest that 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. mesh netting, chicken wire fencing, etc.) before any nest attempts are made.

Species at Risk

The section 32 of 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 species at risk (SAR);
- 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 SAR, this prohibition immediately applies on all lands or waters (federal, provincial, territorial and private) in which the species occurs.
In federal environmental assessment (EA), ss.79(2) of SARA requires that person(s) responsible for an EA to: 1) identify adverse effects on all listed species 2) if the project is carried out, ensure that measures are taken to avoid or lessen those effects; and, 3) monitor them. *While there is not a federal EA for this project, ECCC advocates a similar approach for the provincial EIA*.

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.

Avian species at risk:

The following avian species at risk (as listed on Schedule 1 of the *Species at Risk Act*) may occur within the study area: Bank Swallow (Threatened), Barn Swallow (Threatened), Bobolink (Threatened), Canada Warbler (Threatened), Chimney Swift (Threatened), Common Nighthawk (Threatened), Eastern Meadowlark (Threatened), Eastern Whip-poor-Will (Threatened), Olive-sided Flycatcher (Threatened), Eastern Wood-Pewee (Special Concern), Evening Grosbeak (Special Concern), Rusty Blackbird (Special Concern). ECCC-CWS requests that any species at risk sightings be reported to ECCC-CWS. SAR observations should also be submitted to the Atlantic Canada Conservation Data Centre, directions on how to contribute data can be found at: http://accdc.com/en/contribute.html.

Non-avian species at risk:

The following non-avian species at risk (listed on Schedule 1 of the *Species at Risk Act* or assessed as "at risk" by COSEWIC) may occur within the study area: Little Brown Myotis (Endangered), Northern Myotis (Endangered), Tri-Colored Bat (Endangered), Wood Turtle (Threatened), Blue Felt Lichen (Special Concern), Frosted Glass-Whiskers Lichen (Special Concern), Eastern Painted Turtle (Special Concern), Monarch (Special Concern), Snapping Turtle (Special Concern), and Black Ash (COSEWIC-assessed Threated). ECCC-CWS requests that any species at risk sightings be reported to ECCC-CWS. SAR observations should also be submitted to the Atlantic Canada Conservation Data Centre, directions on how to contribute data can be found at: http://accdc.com/en/contribute.html.

- Bats
  The Government of Canada published factsheets providing information on the Emergency Listing Order, the disease threatening bats, the requirements of SARA, and ways to protect and preserve bat populations. The factsheet "Factsheet on the Emergency Listing Order for the Little Brown Myotis, the Northern Myotis and the Tri-Colored Bat" is available on the SARA registry at: Factsheet on the Emergency Listing Order for the Little Brown Myotis, the Northern Myotis and the Tri-colored Bat - Document search - Species at risk registry (canada.ca).
  - The factsheet "*WIND ENERGY and the Emergency Listing Order for the Little Brown Myotis (Myotis lucifugus), the Northern Myotis (Myotis septentrionalis) and the Tri-colored Bat (Perimyotis subflavus)"* (2014), including best management practices, is available on the SARA Registry at: https://species-registry.canada.ca/index-en.html#/documents/1371
  - ECCC-CWS recommends that the proponent consult the Province of Nova Scotia's Department of Natural Resources and Renewables regarding mitigations and management for this species.

Wetlands

ECCC-CWS recommends that the project proponent follow the mitigation options outlined in the Federal Policy on Wetland Conservation (FPWC). The FPWC was introduced "to promote the conservation of Canada's wetlands to sustain their ecological and socio-economic functions, now and in the future". The policy recognizes the importance of wetlands to the environment, the economy and human health and promotes a goal of No Net Loss of Wetland Function as a result of the Government of Canada exercising a duty, function, or power in areas of Canada where wetland loss has reached critical levels. In support of this goal, the FPWC and related implementation guidance identify the importance of planning siting and designing a project in a manner that accommodates a consideration of mitigation options in a hierarchical sequence – avoidance, minimization, and as a last resort, conservation allowances (i.e. compensation). A copy of the FPWC can be found at: http://publications.gc.ca/site/eng/9.686114/publication.html.

While the Federal Policy on Wetland Conservation does not appear to apply to this project, ECCC advocates for the conservation of wetlands in areas where wetland losses have already reached critical levels and regionally important wetlands. ECCC-CWS recommends that project effects on wetlands be avoided. Where they cannot be avoided they should be minimized, and for residual impacts there should be compensation to mitigate the effects. ECCC recommends the development of a Wetland Compensation Plan that fully describes the mitigation hierarchy, including:

- Identification of wetlands potentially affected by the project,
- A detailed description of potential effects, and the reasons why avoidance and minimization of impacts were determined to be not possible, and
- Identification and justification of proposed offset ratios.

As a mitigation measure to compensate for the lost habitat function for wetland associated landbird species at risk and species of conservation concern, in instances where such habitat cannot be avoided, ECCC-CWS recommends the use of conservation allowances as a third step in the mitigation hierarchy of avoidance, mitigation and compensation.

- General Beneficial Management Practices

  In order to promote wetland conservation, ECCC-CWS recommends the following general beneficial management practices:
  - Developments on wetlands should be avoided.
  - Where development does occur in the vicinity of wetlands, a minimum vegetation buffer zone of 30 metres should be maintained around existing wetlands areas.
  - Hydrological function of the wetland should be maintained.
  - Runoff from development should be directed away from wetlands.
  - The use of a 30 metre buffer from the high water mark of any water body (1:100 Flood Zone) in order to maintain 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 for further information concerning buffer zones.

Water Quality

Pollution prevention and control provisions of the *Fisheries Act* are administered and enforced by ECCC. Subsection 36(3) of the *Fisheries Act* prohibits “anyone from depositing or permitting the deposit of a deleterious substance of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter such water”.

It is the responsibility of the proponent to ensure that activities are managed so as to prevent the release of substances deleterious to fish. 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 here: https://www.canada.ca/en/environment-climate-change/services/managing-pollution/effluent-regulations-fisheries-act/frequently-asked-questions.html

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, the proponent should encourage contractors and staff 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.

The proponent is 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 publication, *Emergency Preparedness and Response,* CAN/CSA-Z731-03, reaffirmed 2014), is a useful reference.

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 (Maritime Provinces 1-800-565-1633)

Please direct any further correspondence to ECCC's environmental assessment window for coordination at: FCR_Tracker@ec.gc.ca.

If you have any questions, please let me know.

Suzanne Wade

Environmental Assessment Analyst, Environmental Stewardship Branch
Environment and Climate Change Canada/Government of Canada
Suzanne.Wade@ec.gc.ca / Tel: 902 426-5035

Analyste d'évaluation environnementale, Direction générale de l'intendance Environnementale
Environnement et Changement climatique Canada / Gouvernement du Canada
Suzanne.Wade@ec.gc.ca / Tél: 902 426-5035

Appendix 1

Excerpt from the Draft ECCC-CWS Residence Description Little Brown Myotis and Tri-colored Bat

Any place used as a maternity roost by Little Brown Myotis is considered a residence. A maternity roost site may be a natural site, such as a cavity in a tree, a rock crevice, a cave or the underside of loose bark, or an anthropogenic site such as the underside of a bridge, an attic in a building or other structures (Fenton and Barclay 1980; Coleman and Barclay 2011). Little Brown Myotis is one of the few bat species that uses buildings and other anthropogenic structures to roost. Females are thought to select a quality maternity roost at the expense of travelling longer distances to forage possibly indicative of a limited number of suitable maternity roosting sites in foraging areas (Broders et al. 2006, Randall et al. 2014).

Maternity roosts in trees are often associated with natural holes, holes made by cavity excavators (*e.g.,* woodpeckers) or holes resulting from broken limbs or under loose bark. Typically, maternity roost sites are located in tall, large-diameter trees (DBH >30 cm), within forests (Kalcounis-Ruepell et al. 2005; Olson 2011; Olson and Barclay 2013) and older forest stands are preferred over younger forest stands (Barclay and Brigham 1996; Crampton and Barclay 1996; Jung et al. 1999). A larger tree size will usually house a larger number of bats (Olson 2011). Broders and Forbes (2004) found a preference for deciduous trees (Sugar Maple, Yellow Birch, and American Beech) and attributed this preference to deciduous trees' susceptibility to limb breakage and decay (creating available habitat for roosting), long-lived characteristics (permitting repeated use by bats), and their upland habitats with increased solar radiation (reducing energy costs to maintain the bat's body temperature).

Maternity roosts located in buildings tend to be located in warm but uninhabited areas of the building or in abandoned ones. Attics in older buildings are commonly used.

Tri-colored Bat

Little is known about maternity roosts of Tri-colored Bat. However, this species is known to roost in clumps of dead tree foliage, lichens and broken branches in coniferous and deciduous tree species (Veilleux et al. 2003, Perry and Thill 2007, Poissant et al. 2010). Tri-colored Bats also use barns and other human-made structures for maternity roosts, and may use tree cavities, broken branches on trees, caves and rock crevices (Fujita and Kunz 1984). In Nova Scotia, a local population of Tri-colored Bat roosted solely in clumps of *Usnea* lichen and mostly within spruce trees (Poissant et al. 2010).

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Environment and Climate Change Canada's Canadian Wildlife Service (Atlantic Region) - Wind Energy & Birds Environmental Assessment Guidance Update

Background

Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS) is charged with the administration of the *Migratory Birds Convention Act* (MBCA) and *Species at Risk Act* (SARA), responsible for the management and conservation of migratory birds and protection of SARA listed species at risk and their habitats; ECCC-CWS Atlantic (ATL) provides expert advice for these species for wind energy impact assessments, upon request. ECCC-CWS published two guidance documents in 2007 for assessing the risk of wind energy developments on migratory birds:

- *Wind Turbines and Birds: A Guidance Document for Environmental Assessment*" (Environment Canada 2007a)
- *Recommended Protocols for Monitoring Impacts of Wind Turbines on Birds*" (Environment Canada 2007b)

Recent advancements in technology for wind energy production include taller turbines with increased energy generating capacity. As a result, in 2018, ECCC-CWS-ATL provided an advice update related to radar and acoustic monitoring recommended for monitoring particular factors of concern (e.g. migration corridors, passage rate and flight altitudes of nocturnal migrants in relation to the height of proposed turbines – larger scale) (s.8.2 CWS 2007a and CWS2007b protocols).

ECCC-CWS-ATL has prepared this guidance update to replace the 2018 advice; this guidance update provides minimum standards and best approaches for pre- and post-construction monitoring related to wind energy developments in Atlantic Canada. It is incumbent on the proponent to identify the best approach, based on the circumstances, to comply with the *Migratory Birds Convention Act* and *Species at Risk Act*.

Determining Site Sensitivity

ECCC-CWS-ATL recommends that wind energy sites proposing building turbines > 150m (thus placing turbine height places the rotor sweep within songbird nocturnal flight corridors (i.e., 150 – 600 m, Horton *et al.* 2016)) in total height be considered 'Very High' site sensitivity (i.e., Category 4, Environment Canada 2007a).

Minimum Standard

Pre-Construction Monitoring

There is little available data and associated studies on the latest larger scale turbine technologies and risk to migratory birds. Therefore, proponents should assess the potential risk of Category 4 level sites to understand and characterize nocturnal avian flight paths around proposed sites. ECCC-CWS-ATL recommends using radar and acoustic monitoring during the spring and fall migrations, in addition to standard avian surveys (Environment Canada 2007a).

Although much of the bird migration is above turbine heights and rotor sweep areas, there are accounts of both songbird migration, and localized migratory bird population seasonal movements, occurring within the turbine altitudinal zone (Richardson 1972, Horton et al. 2016). Therefore, monitoring should also characterize potential

localized lower-level movements of birds. For example, Bank Swallows move between coastal bank colonies and inland roost sites; shorebirds move overland from foraging to roosting sites during pre-migration recruitment flights; sea ducks are low altitude nocturnal migrants.

The use of acoustic autonomous recording units (ARUs) complements radar data and can support conclusions in the final analysis. ARUs have a maximum detection distance of approximately 200-250m above ground level, similar to the height of proposed wind turbines and can assist in evaluating species composition of nocturnal migrants, especially important in understanding the potential risk to species at risk.

Study Design

ECCC-CWS-ATL recommends, at minimum, monitoring early in the project-planning phase (pre-construction) to ensure that the proponent completes a minimum of 2 years (consecutive) of monitoring. The 2-year minimum standard supports analyses of bird flight height by capturing the variance in weather conditions present. In addition, ECCC-CWS-ATL recommends pre-construction monitoring to quantify the risk at a proposed site **before** approval. This also provides baseline information to assess post-construction impacts and mortality on migratory bird populations. Data should be collected under various types of weather conditions.

Spring migration recommended monitoring window is **March 15 - June 7**, and fall migration is **July 15 – November 30**. These extended monitoring windows allow the proponent to assess landbirds, waterfowl/sea duck and shorebird migration movements, especially important in coastal areas or along known migration routes (e.g., Bay of Fundy, Tantramar Marsh, Strait of Canso, and Cape Sable Region).

The breeding season window in Atlantic Canada varies from region to region (i.e. nesting zones) which have corresponding nesting calendars showing variation in nesting intensity by habitat type. Information regarding regional nesting periods can be found at ECCC's General Nesting Periods – Avoiding Harm To Migratory Birds. Each site should be visited at least twice during this time to establish which species are breeding in the area and to determine if there are any migratory bird species at risk and/or species that have aerial mating displays.

If provincial regulatory processes do not require pre-construction monitoring, the proponent should initiate monitoring as soon as possible (for a minimum 2-year period). Although not ideal, monitoring could start during the construction year to assess impacts on migratory bird populations and determine the need for additional mitigation and/or inform future guidance.

Data Analysis

Data analysis guidance is available in the 2007 national guidance (Environment Canada 2007a, Environment Canada 2007b). ECCC-CWS-ATL recommends consolidating site-specific avian baseline and habitat assessment with radar and acoustic monitoring data into one report. In addition, this report should include and detail an overall assessment of the risk to migratory birds.

The report should include, at minimum, the following:

- List of potential breeding birds (following breeding bird atlas protocols)
- Volume estimates of birds (i.e. targets) at a fine scale of altitudinal resolution on a nightly basis;
- Altitudinal information;
- Time period monitored (note: monitoring should take place at the same time every day);
- Weather data;
- Tidal and lunar cycles (note: shorebird movements increase during bright nights);
- Summary of overall bird activity, including how bird activity:
    - changed through the night and the season.
    - changed across the study area.

Post-Construction Monitoring

ECCC-CWS-ATL recommends that post-construction mortality surveys (Environment Canada 2007b) and radar and acoustic monitoring be consistent with baseline pre-construction methods. The proponent (for any approved project) should complete a minimum of 2 years (consecutive) of monitoring. ECCC-CWS-ATL may recommend additional monitoring based on reported findings.

The mortality survey data should be paired with radar and acoustic monitoring to provide context for the localized impacts on birds. Additionally, the proponent should compare the pre-construction and post-construction results to assess and quantify any changes in migratory bird species assemblage, density, and behaviours.

Permits are required to handle or collect any dead birds or bats found during post-construction monitoring activities (e.g. carcass searches or used as part of observer efficiency or scavenging trials) (ECCC, s.10.4 2007). Under the Migratory Bird Regulations, a scientific permit is required for the collection of a migratory bird (dead or alive), feathers, or part of a migratory bird, as defined in the MBCA (contact: Permi.Atl@ec.gc.ca). Proponents should also contact the appropriate provincial territorial wildlife department for information related to requirement to collect species under provincial jurisdiction (bats and bird species such as raptors not covered by the MBCA). Proponents should review and carefully note the conditions in permits, including annual reporting and mortality incident reporting. Proponents will need to ensure they remain in compliance with all permitting conditions and requirements.

Data and Report Submission

Please provide ECC-CWS-ATL with the monitoring reports. Reports must be provided to CWS by December 31 of the same calendar year in which monitoring took place. Submit reports ECCC's environmental assessment window for coordination at: FCR_Tracker@ec.gc.ca.

ECCC-CWS-ATL recommends that the proponent submit all wind energy monitoring (migratory birds and bats) data to the Wind Energy Bird & Bat Monitoring Database (Birds Canada 2022). The proponent should retain raw data (e.g., information on individual tracks) until appropriate data standards have been developed.

Best Approach

ECCC-CWS-ATL considers the best approach to be a regional BACI (Before-After/Control Impact) study design (i.e., paired-site design) or an impact-gradient design for smaller developments. The BACI design is designed to help isolate the potential effect of development from natural variability. Proposed turbine sites should be paired with similar reference sites to provide comparative assessments. This comparative site assessment should compare bird density, flight height variance/altitude levels, activity patterns, timing, consistency of movements, habitat variables between control (reference) and treatment (turbines) sites during the breeding period and during migration. Data should be collected under various types of weather conditions.

Reference sites should be located at minimum 500m from proposed turbine sites. These reference sites should be placed in habitats similar to the paired turbine site. ECCC-CWS-ATL recommends that this approach be factored into the pre-construction and post-construction monitoring designs. All study design recommendations presented above should be used for this approach (e.g., pre-construction monitoring should be completed before site approval, be done for two years, etc.). Additionally, all sampling considerations (e.g., migration timing windows, data collection, reporting) should be consistent with the minimum standard.

Bats

Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*) are small, insectivorous bats that are listed as Endangered (Species at Risk Act, Schedule 1). ECCC-CWS-ATL recommends that the proponents consider bats in their pre-construction and post-construction monitoring and their data and report submissions. However, the proponent should contact Provincial representatives for additional information on bats and wind energy developments, as they are the jurisdiction responsible for the conservation and protection of bat species.

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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

Ontario

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 *Pseudogmnoascus 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)

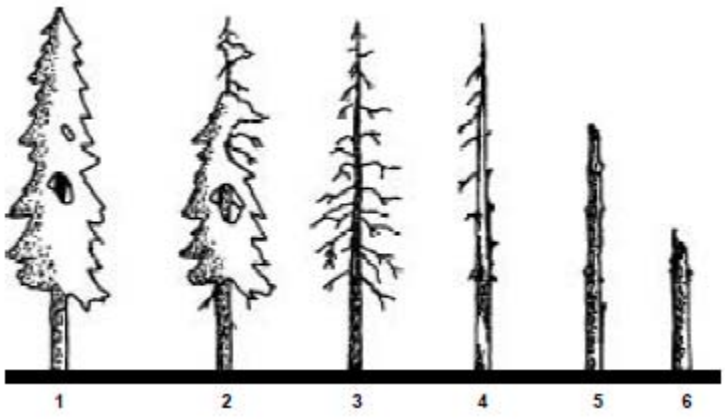
- any oak tree ≥10cm dbh
- any maple tree ≥10cm dbh IF the tree includes dead/dying leaf clusters
- any maple tree ≥25cm dbh

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 ≥10cm 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 >10cm dbh with suitable roost features should be documented. For trees with cavities, the entrance can be high or low ("chimney-like") on the tree.



1. Healthy, live tree
2. Declining live tree, part of canopy lost
3. Very recently dead, no canopy, bark intact, branches intact
4. Recently dead, bark peeling, only large branches intact
5. Older dead tree, 90 percent of bark lost, few branch stubs, broken top
6. Very old dead tree, advanced decay, no branches, parts of the stem have rotted away

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 ≥10cm 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.

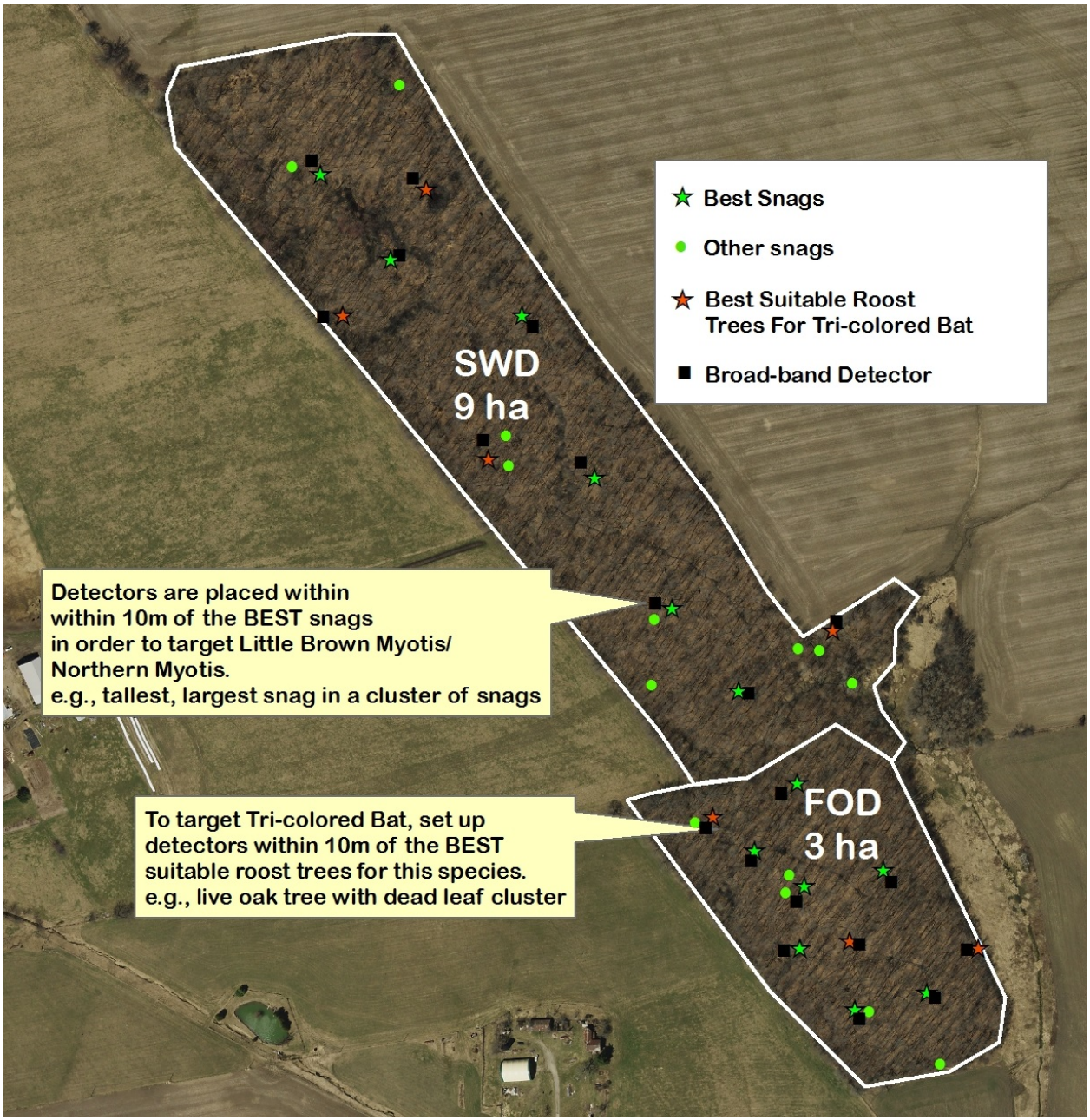


Figure 2: Hypothetical example illustrating the location and density of acoustic detectors i.e., 4/ha to a maximum of 10 per ELC ecosite.

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	$3.14(151.2m)^{2} =$ $71784.9m^2$ = 7.18 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 ≥10cm dbh (if present). If oaks are absent, include maples ≥10cm dbh IF dead/dying leaf clusters are present; and maples >25cm 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 <u>live and dead</u> standing trees >10cm 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] **<u>Height Class</u>**: 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] **<u>Decay Class</u>**: 1 = Healthy, live tree; 2 = Declining live tree, part of canopy lost; 3 = Very recently dead, bark intact, branches intact

Environment Canada Environnement Canada

Operational Framework for Use of Conservation Allowances

Canada

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Operational Framework for Use of Conservation Allowances

This framework sets the parameters, based on existing legislated authorities, practice and policy, for how and when conservation allowances should be used or recommended by Environment Canada. Conservation allowances are the third step of the mitigation hierarchy, a three-step approach that first examines options to avoid and minimize environmental impacts. The framework applies where Environment Canada has a role related to the review or approval of proposed land- or resource-use activities, including those that occur on federal lands or waters, projects, or activities that are subject to federal legislation, actions that would affect Aboriginal and/or treaty rights, or when Environment Canada has environmental protection or conservation objectives that would be affected by the proposed activity.

The use of conservation allowances by Environment Canada under this framework will be monitored and the results, including both demonstrated ecological success and other indicators (e.g. percent of proponents who successfully meet all the provisions of their allowance agreement) will be tracked. These allowances will be reviewed in the context of periodic evaluations of departmental programs and initiatives that employ them.

To support the framework, Environment Canada will develop implementation guidance for Environment Canada practitioners on the use of conservation allowances. This guidance would address the specific goals and objectives of legislation and policy, as well as specific issues related to the nature of the biological element (e.g. wetlands versus species at risk).

1. Background

Conservation allowances (also referred to as conservation offsets) provide measurable conservation outcomes through implementation of project-based actions. Conservation allowances provide a balancing effect by establishing new environmental features (such as habitat or ecosystem types) to compensate for those that have been impacted. Conservation allowances address the “residual impacts” that remain after measures to avoid and minimize are adopted.

The goal of conservation allowances is to achieve environmentally responsible development by replacing ecosystem functions that would be lost as a result of proposed land- or resource-use activities. When used effectively, conservation allowances help to conserve and protect important environmental resources. For example, a conservation allowance could entail securing and preserving high-quality replacement habitat to compensate for the loss of species’ habitat due to a land- or resource-use activity.

2. Current Practice Internationally and in Canada

Conservation allowances have long been used in Canada and internationally to achieve conservation objectives for wetlands, biodiversity, endangered species and other valued ecosystem components.

Most Government of Canada experience with conservation allowances has been gained through two policies:

- The Policy for the Management of Fish Habitat, which was developed and administered by the Department of Fisheries and Oceans, and supported the former habitat protection provisions of the *Fisheries Act*;
- Canada's Federal Policy on Wetland Conservation (FPWC), which provides a framework for undertaking measures such as conservation allowances to address impacts on wetlands in relation to the federal environmental assessment process.

In addition to federal government experience, a number of provinces, including British Columbia, Alberta, Nova Scotia, New Brunswick and Prince Edward Island, also have experience with or are developing approaches to the use of measures such as allowances.

Internationally, the U.S. Wetland Mitigation program is one of the longest-standing programs for conservation allowances (referred to in their policy and legislation as offsets). As described in section 404 of the U.S. *Clean Water Act*, adverse impacts on wetlands, streams and other aquatic resources must be avoided and minimized to the extent practicable. For impacts that cannot be avoided, compensatory mitigation is required to replace the loss of wetland and resource functions within the watershed. Also in the U.S., conservation banking for endangered species was first undertaken in the early 1990s and is enabled by the U.S. *Endangered Species Act*, which requires federal agencies to ensure that their actions do not jeopardize listed species.

Australia, New Zealand and the EU also have experience in the use of measures such as conservation allowances.

3. Environment Canada's Authorities Related to Conservation Allowances

Opportunities for the consideration of conservation allowances may arise through processes administered under the *Migratory Birds Convention Act, 1994* (MBCA), the *Species at Risk Act* (SARA), the *Canadian Wildlife Act* (CWA) and *Canadian Environmental Assessment Act, 2012* (CEAA 2012) that could allow Environment Canada to consider a proposal for conservation allowances as a means of mitigating residual environmental effects. However, each case will have to be determined on its own set of facts to see whether the proposal is consistent with the purposes of the Act in question and effectively addresses the environmental effect.

Under CEAA 2012, the Minister of the Environment, the National Energy Board and the Canadian Nuclear Safety Commission may consider in the environmental assessment process any mitigation measures that the decision maker considers appropriate for the "elimination, reduction or control of the adverse environmental effects of a designated project", including "restitution for any damage to the environment caused by those effects through replacement, restoration, compensation or any other means." Such mitigation measures may include a range of possible actions, including conservation allowances.

When used in relation to authorities provided by MBCA or CWA, conservation allowances could involve de-listing an identified portion of a sanctuary or wildlife area and, at the same time, adding a new portion of land (the allowance area) to the listed area. This provides Environment Canada with a means of dealing with allowance proposals involving federal lands or, in the case of the CWA, public lands as defined under the Act, where appropriate. The decision to list or de-list a migratory bird sanctuary or a wildlife area will be subject to the discretion of the Governor in Council upon recommendation of the Minister and will require clear justification for why it should be adopted. For example, if a third-party proponent requests the ability to conduct activities on an area within an existing National Wildlife Area, the boundaries could be amended to exclude the area proposed for impact and to include a new area that has been deemed an acceptable replacement. Once the new allowance area is added to a listed protected area, it would be subject to the enforcement provisions either for migratory bird sanctuaries under MBCA or wildlife areas under CWA.

In limited cases, allowance proposals can be considered under SARA, provided the permitting requirements under section 73 are met and the allowance helps meet the goals of the Act. Section 73 of SARA enables the government to enter into an agreement or to issue a permit authorizing a person to engage in an activity affecting a listed wildlife species, any part of its critical habitat or the residences of its individuals provided that all reasonable alternatives have been considered and the best solution adopted, all feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of its individuals, and the activity will not jeopardize the survival or recovery of the species. In cases where an allowance activity is aligned with SARA's goals, Environment Canada could include an allowance as part of permit conditions to further protect the species in order to make that proposed impact acceptable.

The use of conservation allowances could also be established through agreements under the *Department of Environment Act* (DOE Act). Under the DOE Act, the Minister of Environment has authority to enter into agreements (which could include conservation allowances) for issues concerning the mandate of the Department, as long as the agreement is not contrary to or inconsistent with the purposes of other statutes falling within the Minister's mandate.

Lastly, the FPWC, established in 1991, provides a framework for mitigating proposed impacts to wetlands that are connected to federal actions and provides Environment Canada with some of its earliest ongoing experience in the application of conservation allowances. The FPWC commits all federal departments to the overall goal of no net loss of wetland functions (1) on federal lands and waters, (2) in areas affected by the implementation of federal programs where the continuing loss or degradation of wetlands has reached critical levels, and (3) where federal activities affect wetlands designated as ecologically or socio-ecologically important to a region.

4. Key Participants

***Environment Canada*:** As administrator of the framework, Environment Canada's role includes evaluation of the appropriate application of conservation allowances within the mitigation hierarchy, review of proposed allowances, entry into allowance agreements or approval of permits, providing advice to other federal departments or provincial authorities, review of monitoring reports and compliance promotion activities.

***Allowance proponent*:** The allowance proponent is the entity responsible for the undertaking of a land- or resource-use activity expected to have adverse impacts on the environment. In most cases, the proponent will also be responsible for the development of the conservation allowances, including developing and submitting a proposal to Environment Canada or the responsible authority. Allowance proponents may work with third-party organizations to undertake any part of the allowance proposal or development, implementation or monitoring.

***Other government departments*:** The Framework is an Environment Canada document, but partnering with other government departments will be necessary in many cases. For example, partnering with Aboriginal Affairs and Northern Development Canada will be sought for some activities located in the North. Where impact avoidance is not possible, the Framework's approach to determining the appropriate design and use of conservation allowances could be used to contribute to increased consistency in consultation and accommodation for impacts on s.35 or treaty rights.

Similarly, collaboration with the Department of Fisheries and Oceans will be sought for conservation allowances and activities with impacts related to the mandates of both departments. In cases where other federal departments are involved, Environment Canada would provide advice to and work with the regulatory authority, as required.

***Other levels of government*:** While other levels of government are not bound by this framework, their partnership will be essential in areas of shared or overlapping jurisdiction. The most frequent partnering is expected with provincial governments for activities being undertaken on provincial Crown lands or privately owned lands not under federal jurisdiction. Where there is overlap in federal and provincial conservation allowance programs, a single conservation allowance may suffice if it meets the criteria of both jurisdictions.

Environment Canada will consult and work with Aboriginal governments when conservation allowances are contemplated for impacts from proposed land- and resource-use activities that would affect Aboriginal and/or treaty rights or lands and when a proposal is made for an allowance activity to be situated on Aboriginal lands.

5. Determining whether to use conservation allowances

Conservation allowances are the last step of the mitigation hierarchy, a conceptual framework that, in its basic form, has three steps:

- Avoid proposed impacts;
- Minimize proposed impacts; and
- Address any residual environmental effects that cannot be avoided or sufficiently minimized with the use of conservation allowances.

For each of these steps, all alternatives should be considered, with the "best practicable option(s)" being applied in each case. The best practicable option means the best method for preventing or minimizing the proposed adverse effects of a land- or resource-use activity on the environment having regard, among other things, to:

- The nature of the proposed impact and the sensitivity of the receiving environment to adverse effects;
- The financial implications, and the effects on the environment, of that option when compared with other options;
- The current state of technical knowledge and the likelihood that the option can be successfully applied; and
- The ability to successfully mitigate the effects, for example, by replacing the affected habitat with a new area performing similar ecological functions to those that were lost.

The options considered should include the possibility of not proceeding with the land- or resource-use activity.

Consideration of whether to use conservation allowances should be undertaken as early as possible for a planned land- or resource-use activity when it is apparent that there will be residual effects after all practicable avoidance and minimization measures have been adopted. The analysis of alternatives should be documented, and the level of effort devoted to the analysis should be commensurate with the risks associated with the proposed land- or resource-use activity.

Applying the mitigation hierarchy

- ***Identify all potential adverse impacts*** *– including direct, indirect and cumulative.* Include not only physical impacts but also other effects on species, individuals or functional habitat such as increases in noise or predators.
- ***Determine whether potential impacts can be avoided.*** The viability of avoidance and mitigation options should be examined with respect to ecological risk, whether ecological features are replaceable, economic viability, land ownership, technological feasibility and logistics in light of the overall project. A relatively high cost of an alternative may not necessarily make it "impracticable."
- ***Determine whether potential impacts can be minimized.*** This should consider modifications such as changes to engineering designs, alternative construction techniques, contingency planning, timing considerations and location considerations.

- ***Determine whether residual effects may still be expected.*** After all avoidance and minimization options have been fully considered, determine whether conservation allowances would be an appropriate means to address residual environmental effects.

Other considerations regarding the appropriate use of conservation allowances
Once the avoidance and minimization steps of the mitigation hierarchy have been applied, the decision on whether to implement a conservation allowance will also be influenced by a number of other factors:

- The proposed plan for providing allowances must meet the legislative authorities of any relevant Act and, in certain circumstances, informed by the conservation objectives of Environment Canada. Conservation allowances will not be automatically required for every residual impact.
- The proposed conservation allowance must have a high probability of ecological success.
- Where the proponent is not able to secure full ownership of an ecologically and geographically appropriate tract of land, it should be ascertained whether the proponent has sufficient capacity to deliver allowances that will provide for the desired conservation benefits, or whether another approach to mitigation is needed.
- Another jurisdiction may have established a conservation or land-use plan that adequately addresses the proposed impact. The measures put in place by the other jurisdiction would need to be reviewed carefully to ensure that Environment Canada's allowance criteria are addressed. For example, a provincial or regional land-use plan may contemplate expected land- or resource-use activities and set aside protected areas ahead of time in anticipation of the adverse environmental impacts associated with these expected activities. In this case, the protected area could function as a "habitat bank" from which future allowances could be obtained.

6. Allowance Design Elements

The following allowance design elements reflect international best practices for conservation allowances and are to be used as the starting point in the development of a conservation allowance. The design elements should be applied case-by-case based on the legislative framework under which the allowance is being applied, potential environmental impacts of the proposed land- or resource-use activity and desired socio-ecological outcomes as well as consideration of Canada's unique conservation goals and needs.

The allowance design elements are:

Equivalency: ***Conservation allowance projects should compensate for adverse impacts by protecting, enhancing or restoring equivalent ecological function at another site.***
Ecological functions are processes (such as nutrient cycling or seed dispersal) that are carried out or enabled by an ecosystem and that are necessary for the self-maintenance of that ecosystem. Analysis of equivalency should consider both quality (provision of similar or dissimilar ecological function) and quantity of ecological functions in the context of conservation priorities. Provision of similar habitat types or ecosystem functions provide a starting point for the design of a conservation allowance.

In some cases, a conservation allowance may be designed to provide greater than equivalent ecological functions in order to account for identified risks, such as that the allowance will not be fully successful. Whatever the unit of measurement, the ratio of the conservation allowance habitat area to impacted habitat should be greater than 1:1 in all cases, and normally at least 2:1. There will be instances where much higher ratios are appropriate; for example, experience in other jurisdictions in North America shows use of ratios ranging from 3:1 to 40:1. The choice of ratio for each allowance will be case-specific, based on an assessment of a number of factors (e.g. impact type, severity and duration, site characteristics, existing regional mitigation ratios, uncertainties).

Additionality: ***Conservation allowances should provide ecological protection beyond what would be provided under a business-as-usual scenario.*** "Additionality" ensures that the new ecological feature(s) provided by the conservation allowance replace what has been lost through land or resource development, providing an overall balance between what is lost and what is gained. The following criteria should be assessed in order to establish whether an allowance is additional:

- *Does the allowance result in incremental conservation benefits?* (E.g. actions to create, enhance, restore or rehabilitate habitat, or measures to preserve existing habitat that is under threat.)
- For allowances that propose to preserve existing habitat*, is that existing habitat under identified threat and does the proposed allowance extend effective legal protection that responds to that threat?* This may be achieved, for example, through land trust ownership and management.
- *Can proponents demonstrate that the proposed allowance is additional to existing legislation, regulations, programs, land-use plans and funding?* If the allowance action has already received funding, been incentivized or is required, does it build upon the existing actions in a clearly identified way?
    - If no legislative or funding commitment has been put in place to implement an existing conservation program or land-use plan, an allowance designed to implement some aspect of that plan may still be considered additional if it meets federal conservation allowance criteria.
    - Where there is overlap in the allowance requirements of two jurisdictions, a single allowance may suffice in some cases. However, the measures put in place by another level of government or federal department would need to be reviewed carefully.
    - In addition, a single allowance may be proposed to meet the conservation allowance requirements related to more than one federal act or policy. For example, an environmental assessment may consider a proposed impact to a migratory bird sanctuary on federal lands, and the allowance design could account for both CEAA objectives and MBCA objectives.

Location: ***The location of a conservation allowance should have comparable ecosystem values, such as species composition and habitat structure, and should be determined based on an assessment of the relevant species and habitat/ecosystem context.*** Where information to make the above assessments is unavailable, the default location of a conservation allowance should be as close to the original site of impact as possible.

However, in some cases it may be most ecologically appropriate to undertake an allowance at a site that is distant from the site of impact. For example, a more distant allowance site may be appropriate if it is able to provide greater ecological benefit to the affected species.

Timing: ***The preference is for conservation allowances that can be implemented before the adverse impacts of proposed development occur.*** In cases where implementing compensatory measures prior to impact is not feasible, the next best solution would be to implement the compensatory measures at the same time as the land- or resource-use activity. Establishing the conservation allowance agreement after the land- and resource-use activity has commenced is not considered appropriate.

Duration: ***The positive effects of the conservation allowance should last an appropriate amount of time to compensate for the duration of the ecological loss resulting from the project.*** A conservation allowance should be actively maintained until it is self-sustaining or it has met predetermined performance standards. While conservation outcomes should ideally be guaranteed until the adverse impacts of a land- or resource-use activity cease to exist, the duration of allowance activities may be limited by the legislative authority, including the ability to enforce the provisions of a supporting agreement. Conservation allowances that are maintained only as long as the land- or resource-use activity's adverse impacts endure are appropriate where the impacts of the activity are short-term and reversible.

Accountability: ***Conservation allowances should be formalized through written documentation, such as an agreement between Environment Canada and the allowance proponent (and, where appropriate, other partners, such as provincial or Aboriginal governments), or, where possible, formalized through permitting or other conditions***. The form of the documentation (referred to in this document generically as an "agreement") could take many forms.

It could be in the form of a letter of agreement, a memorandum of understanding, or other formal agreement such as an agreement under the DOE Act (described in more detail in Section 3 above).

Alternatively, it could also be a condition within a Decision Statement issued under CEAA 2012. Likewise, in certain circumstances, it may be possible to include elements of an allowance agreement in the terms and conditions of a permit or agreement under section 73 or through a section 11 conservation agreement under SARA. Each proposal would need to be examined on a case-by-case basis to see whether it respects the purposes of SARA. If the full details of the conservation allowance are not covered by the permit or conservation agreement, there may still be a need for an allowance agreement.

There may also be cases where it is appropriate to undertake a conservation allowance through an approach such as the transfer of title or by applying land-use restrictions to relevant land. The terms of the allowance could also be included in provincial permits or authorizations where those permits or authorizations are able to account for off-site measures.

An allowance agreement should include key elements such as the amount and nature of the allowance, timing, duration, monitoring procedures, milestones and consequences for non-performance. The content and detail of an allowance plan will be greater for land- or resource-use projects of greater scale or complexity, such as those identified as designated projects under CEAA 2012.

The enforceability of allowance agreements depends on the nature of the instrument through which they are implemented. For example, if a conservation agreement was included as a condition in a Decision Statement issued under CEAA 2012, that condition would become subject to enforcement provisions contained within the Act. Allowance requirements contained in the terms and conditions of a section 73 SARA permit could also be subject to enforcement conditions, including permit withdrawal.

Where allowances are provided under an agreement, then the agreement should include clauses that set out the consequences if there is failure by the proponent to complete the conservation allowance appropriately. These clauses could include:

- Payment of damages equivalent to the harm caused by the failure to complete the conservation allowance;
- Payout of a letter of credit;
- Provisions, including written agreement by a third-party landowner where necessary, to allow the Minister or a third party access to the site to complete the conservation allowance, if it is not satisfactorily completed by the proponent; and/or
- The commitment of a province to undertake regulatory action, for example environmental protection orders.

Other Design Considerations: Some jurisdictions have established conservation areas called “banks” from which developers can purchase “credits” representing a particular species or ecosystem type. In Canada, a proactive, proponent-led approach might be possible where one or more proponents or a third party would acquire and set aside an area of land that they would be able to draw upon to mitigate future impacts. The conserved area would be established prior to approval of any land- or resource-use activities. The conserved area would have to be administered in a transparent manner that would ensure that no portion of the conserved area would be used more than once for a conservation allowance. It would be determined on a case-by-case basis whether the conserved area (or some portion of it) would qualify as an allowance for a specific impact, and whether the provision of the allowance could constitute compliance with particular legislative or other obligations.

7. Conclusion

This framework allows for flexibility, so that each conservation allowance can be tailored according to the different types and scales of land- and resource-use activities and their potential impacts. Each allowance must be developed in consideration of the facts of the specific case and the purpose of the relevant legislative authority. The aim is to ensure that all allowances are supported by formal written agreements or other documentation such as permitting conditions, which will allow for better enforceability, monitoring and tracking of results.

Annex A

Environment Canada Experience with Conservation Allowances

In Canada, conservation allowances are currently being used at the federal and provincial levels to achieve statutory and policy objectives. This annex provides a description of Environment Canada's experience to date with conservation allowances. This experience reflects a range of approaches, based on the different contexts within which the allowance activities have been applied.

Conservation allowances under the Federal Policy on Wetland Conservation

In accordance with the FPWC, Environment Canada has provided recommendations for measures such as conservation allowances in environmental assessment processes. For example, allowances were recommended to help compensate for 4 ha of wetlands that were displaced during construction of the Canadian Museum of Nature's Aylmer Consolidation Facility. Prior to construction, an initial environmental screening report completed under the *Canadian Environmental Assessment Act* in November 1995 found that 15 ha of the 17 ha building site were wetlands. The report recommended that the construction project still go ahead because it was expected that the project would stimulate the local and regional economy and that the functions of the wetland did not have a significant role either in the ecosystem or in the economy. It was determined that "targeted mitigation measures" including stewardship conservation of wetland not impacted by construction and the transfer of additional land to the Canadian Museum of Nature for ongoing stewardship would be sufficient to compensate for the expected impacts to the wetland.

Subsequent to the start of construction at the site, in February 1996 the Minister of Canadian Heritage called for an independent panel to review the environmental screening report. The independent panel determined that the suggested mitigation measures were not sufficient compensation for the loss of 4 ha of wetland, since all areas slated for conservation stewardship as part of the mitigation measures were already wetlands and already federal lands subject to the FPWC and thus already protected by the policy for the long term. In order to strengthen the mitigation measures and fully comply with the "no net loss" provision of the FPWC, it was recommended that the federal government either restore former wetlands or construct new wetlands on federal lands near the construction site, with a replacement ratio of at least 2:1. Environment Canada advised that site selection should emphasize the ability of the allowance site to replace specific wetland functions lost on the 4 ha of impacted wetland rather than simply aiming to replace the lost area acre-for-acre.[1]

Wetland conservation allowances can also be undertaken in accordance with the FPWC by allowing a third party to arrange for an offsite allowance for an approved impact on a wetland. An example of the application of this approach to mitigation is provided by the

[1] Example adapted from: Lynch-Stewart, Pauline. "Canadian Museum of Nature Aylmer Consolidation Facility: Important Lessons About Applying the *Federal Policy on Wetland Conservation*". In Cox, K,W,, Grose, A. (eds.) (2000) Wetland Mitigation in Canada: a framework for application. Sustaining Wetlands Issues Paper 2000-1. North American Wetlands Conservation Council (Canada), Ottawa.

compensation undertaken for impacts on wetlands during the construction of a new bus terminal at Lewis Estates in the City of Edmonton. The proposed wetland impact required approval from Environment Canada. Ducks Unlimited Canada (DUC) was the third party that received funds from the City of Edmonton to undertake this activity. In order to meet Environment Canada's expectations, DUC committed to restoring an existing wetland rather than creating a new one, since restored wetlands tend to be more successful than those that are created. DUC agreed to secure a restoration site within an agreed-upon area in order to ensure the allowance site would be relatively close to the site of impact. The terminal construction impacted a total of 1.31 ha of wetland, thus requiring 3.93 ha of restored wetland to replace it, based on the agreed 3:1 allowance ratio. The funds provided by the City of Edmonton for this conservation allowance enabled partial restoration of an 11.32-ha wetland basin. Other compensation approvals funded the outstanding restoration needs, and the construction required to complete the restoration of this wetland basin is now complete.

Environment Canada has also sought conservation allowances for impacts on wetlands in cooperation with other federal departments. A good example of this is provided by the Vancouver Airport expansion in the early 1990s, which resulted in impacts to 350 ha of wetland and upland habitat. Avoidance and minimization options were considered during the 1989 Environmental Assessment Review Process for the proposed project; however, compensation was deemed necessary for residual effects to 350 ha of habitat. Environment Canada took the lead in developing a Compensation Strategy that would compensate for these residual effects. Compensation included transfer from Transport Canada to Environment Canada of 171 ha of ecologically important land for protection as well as monetary compensation of $9 million to pay for the outstanding 178 ha of impacted land. The dollar value of monetary compensation provided was calculated based on a 1:1 ratio and "fair market value" for non-commercial upland delta lands. Environment Canada manages the transferred parcels of land as the Sea Island Conservation Area and as part of the Alaksen National Wildlife Area. The $9 million has been used to secure new protected lands, enhance habitat quality on existing protected lands and provide an endowment to implement a private land-stewardship program.

Other examples of the application of conservation allowances for wetlands include the CP Edmonton Intermodal Facility and the Anthony Henday South East Extension ring road, also in Edmonton. Both projects replaced impacted wetlands at a 3:1 compensation ratio.

Conservation allowances as part of *Species At Risk Act* section 73 permits

Environment Canada has experience issuing permits that require the use of habitat compensation measures such as conservation allowances under SARA. For example, Environment Canada recently issued a permit for the cutting of 9 Butternut trees for the construction of a highway in Quebec. Prior to issuing the permit, all feasible measures were considered to avoid and minimize the impact of the project on the Butternut trees, but none were found. Since the project will not jeopardize the survival or recovery of the Butternut tree, whose populations have been mostly impacted by disease, the use of measures such as a conservation allowance was accepted as an appropriate approach to compensate for

the impact. A 2:1 ratio was required for the allowance (18 trees will be planted in place of the 9 cut). The exact location of the replacement plantation will be determined according to expert recommendations, and a five-year monitoring program will be implemented to monitor the health status of the planted trees. Adaptive management requires replacement of any trees that die.

Conservation allowances as amendments to boundaries of existing National Wildlife Areas and Migratory Bird Sanctuaries

Past management of the Cape Jourimain National Wildlife Area (NWA) provides an example of the application of conservation allowances in an NWA. The road approaching the bridge linking New Brunswick and Prince Edward Island runs through the Cape Jourimain NWA. The opening of the bridge in 1997 resulted in increased traffic congestion along an upgraded road right-of-way (originally built in the 1960s) located in the NWA. Significant safety concerns arose as a result of the increase in traffic and the New Brunswick Department of Transportation requested release and use of 3.7 ha of the NWA in order to construct off-ramps that would address these safety concerns. An adjacent 1.2 ha parcel of land was also proposed for de-listing in order to accommodate future plans to build a parking lot for the proposed Cape Jourimain Nature Centre. The total 4.9 ha proposed for de-listing had no uncommon biological communities, being comprised of second-growth mixed woods and old pasture land. In exchange, 75.8 ha of biologically significant lands were added to the NWA as follows:

- The Department of Public Works and Government Services Canada transferred 11.8 ha of biologically important land adjacent to the NWA from its land holdings to Environment Canada. This strip of land was identified as providing an important songbird migration corridor and valuable riparian habitat.
- Strait Crossing Development Incorporated purchased and transferred into Environment Canada's inventory 64 ha of privately held wetland and associated upland adjacent to the NWA.

These changes to the boundaries of the Cape Jourimain NWA required an amendment of the CWA's *Wildlife Area Regulations*, which provide detailed boundaries for each listed NWA, by the Governor in Council. The regulatory amendment was final on May 26, 1999.[2] Decisions regarding the quality and quantity of the required allowance were based on the professional judgment of Environment Canada staff, who negotiated the required quantity of conservation allowances with the project proponent.[3]

Similar to the Cape Jourimain NWA example, Environment Canada has also recommended the use of terrestrial conservation allowances for proposed impacts to Migratory Bird Sanctuaries during the environmental assessment (EA) process. For example, during the EA for the Mackenzie Gas Project (MGP) in the Northwest Territories, allowances were recommended for the predicted flooding to the Kendall Island Bird Sanctuary that would result from MGP activities. While a final decision on whether the MGP will go ahead has

[2] Description of this allowance is based on the *Regulations Amending the Wildlife Area Regulations* published in the *Canada Gazette*, Part II, Vol. 133, No. 11, 26/5/99.

[3] Terriplan Consultants (2011). Habitat Offsets as Compensation and Mitigation for Habitat Loss Due to Industrial Activities. Prepared for Environment Canada – Canadian Wildlife Service, Yellowknife (18-19).

not yet been made, it does provide a good example of how allowances may be applied through the EA process. In this case, since flooding associated with a gas extraction project was determined to be unavoidable, conservation allowances were deemed to be a suitable mitigation approach. The proposed allowance project was to establish replacement bird habitat outside of the existing sanctuary area. The area of replacement habitat was to be provided at a 5:1 ratio, meaning that the allowance area would have been five times the size of the flooded area. Environment Canada would have worked to determine the exact location of the allowance activity by engaging the Inuvialuit, Gwich'in, other governments, other government departments and stakeholders (including environmental non-governmental organizations and industry).

Conservation allowances as agreements as part of environmental assessment process

Environment Canada has experience in the development of voluntary allowances undertaken to promote responsible resource development. For example, Environment Canada entered into an agreement for a conservation allowance with Total E&P Canada Ltd. (TOTAL) for their Joslyn North Mine Project in Alberta.

The joint federal-provincial review panel established to oversee the EA of the project recommended mitigation, such as off-site offsets, be identified in addition to the on-site mitigation and avoidance measures to mitigate impacts on valued wildlife, species at risk and migratory birds, and reduce the overall cumulative effects on wildlife in general.

TOTAL responded by offering lands on a neighbouring oil-sands lease as replacement wildlife habitat while reclamation on the Joslyn North Mine Project proceeds. This was formalized with an agreement with Environment Canada that included monitoring to gauge the effectiveness of the reclamation in re-establishing wildlife habitat.

Additional Resources:

For additional information on the use of conservation allowances and other mitigation measures, please visit the following links:

Fisheries and Oceans Canada
www.dfo-mpo.gc.ca/habitat/role/141/1415/14154-eng.htm

Environmental Mitigation Policy for British Columbia
www.env.gov.bc.ca/emop

Alberta's Provincial Wetland Restoration and Compensation Guide
www.waterforlife.alberta.ca/01533.html

Alberta Land-Use Framework
https://landuse.alberta.ca/ConservationStewardship/ConservationStewardshipTools/ConservationOffsets/Pages/default.aspx

Nova Scotia Wetland Conservation Policy
www.gov.ns.ca/nse/wetland/conservation.policy.asp

Prince Edward Island Wetland Conservation Policy
www.gov.pe.ca/forestry/index.php3?number=1015685

www.ec.gc.ca

Additional information can be obtained at:

Environment Canada
Inquiry Centre
10 Wellington Street, 23rd Floor
Gatineau QC K1A 0H3
Telephone: 1-800-668-6767 (in Canada only) or 819-997-2800
Fax: 819-994-1412
TTY: 819-994-0736
Email: enviroinfo@ec.gc.ca

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Guidelines for Wildlife Response Plans

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Environment and Climate Change Canada
Public Inquiries Centre
12th Floor, Fontaine Building
200 Sacré-Coeur Boulevard
Gatineau QC K1A 0H3
Telephone: 819-938-3860
Toll Free: 1-800-668-6767 (in Canada only)
Email: enviroinfo@ec.gc.ca

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Abstract

Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS) is responsible for the management and conservation of Wildlife under its jurisdiction. The Guidelines for Wildlife Response Plans outline the rationale, objectives, and process for developing, implementing and evaluating the efficacy of Wildlife response planning for Pollution and Non-Pollution Incidents. This document supports the standardization of the planning process according to ECCC-CWS's recommendations. The purpose of this document is to guide governments, Indigenous organizations, industry, Response Organizations, and other stakeholders in developing Wildlife Response Plans that consider all aspects of planning throughout the full life cycle of an incident with regards to Wildlife specific to ECCC-CWS's mandate.

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List of Acronyms

CWA	*Canada Wildlife Act, 1985*
CWS	Canadian Wildlife Service
ECCC	Environment and Climate Change Canada
ECCC-CWS	Environment and Climate Change Canada's Canadian Wildlife Service
ICP	Incident Command Post
ICS	Incident Command System
IPIECA	International Petroleum Industry Environmental Conservation Association
MBCA	*Migratory Birds Convention Act, 1994*
MBR	*Migratory Birds Regulations*
MBSR	*Migratory Bird Sanctuary Regulations*
NWA	National Wildlife Area
RP	Responsible Party
SARA	*Species at Risk Act, 2002*
WRP	Wildlife Response Plan
WRO	Wildlife Response Organization

Definitions

Chain of Custody: A written record for a legal sample documenting the continuity by tracing the possession of the sample from the point of collection through introduction into evidence.

CWS Co-ordinator: A person who leads and implements regional Wildlife Emergency preparedness and response on behalf of ECCC-CWS and represents ECCC-CWS's policies and interests when liaising and integrating with other federal and provincial/territorial government departments, Indigenous governments and organizations, and stakeholders involved in the response during Wildlife Emergencies. CWS Co-ordinators may also fulfill some of the on-site roles of responder.

CWS Responder: Emergency response personnel that provide on-site support on behalf of ECCC-CWS, as directed by the CWS Co-ordinator, during Wildlife Emergencies.

Environmental Emergency: Any uncontrolled or unexpected incident involving the release (or the likelihood thereof) of a polluting substance into the environment that results or may result in an immediate or long-term harmful effect on the environment, or constitutes or may constitute a danger to human life or health. It may be caused by an industrial activity, natural emergency or by a wilful act.

Field Stabilization Site: Facility that provides initial triage, care and/or euthanasia as well as short-term holding (sometimes overnight) for Wildlife prior to transport to an Oiled Wildlife Rehabilitation Centre. It is not meant for washing oiled Wildlife and not designed for long-term care.

Incident Command: Responsible for overall management of the incident and consists of the Incident Commander, either single or unified command, and any assigned supporting staff.

Incident Commander: The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and release of resources. The Incident Commander has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

Lead Agency: The governmental authority that regulates or has legislative authority over the responsible parties' response and is responsible for overseeing the appropriateness of the response.

Migratory Bird: As defined in the *Migratory Birds Convention Act, 1994*, a Migratory Bird referred to in the Convention, and includes the sperm, eggs, embryos, tissue cultures and parts of the bird of species listed under Article 1 of the Convention (Government of Canada 2017).

National Environmental Emergencies Centre (NEEC): Environment and Climate Change Canada's 24/7 focal point for pollution-related emergencies, providing technical/scientific advice, assistance and coordination to the Lead Agency, as well as management of an incident when required.

National Wildlife Area: A protected area created under the *Canada Wildlife Act* that contains nationally significant habitats for plants and animals and that is managed for the purposes of wildlife conservation, research and interpretation.

Non-Pollution Incident: An uncontrolled or unexpected Wildlife injury or mortality event other than a Pollution Incident.

Oiled Wildlife Rehabilitation Centre: Facility used for the triage, stabilization, cleaning, pre-release conditioning and/or euthanasia of oiled Wildlife. The centre may be a permanent purpose-built facility, an existing Wildlife rehabilitation centre, a mobile facility, or a temporary facility established during an incident.

Pollution Incident: The release or deposit of a substance that is harmful to Wildlife into an area or waters that are frequented by Wildlife or into a place from which the harmful substance may enter an area or waters frequented by Wildlife.

Resource Agency: Any department or agency, other than the Lead Agency, that has jurisdiction or interest in the response, which provides support to the Lead Agency.

Response Organization: Any qualified person or organization that has been certified and designated by the Minister of Transport to carry out emergency response activities (as per the revised *Canada Shipping Act* (2001)). In Canada, there are four Response Organizations as follows: Atlantic Emergency Response Team, Eastern Canada Response Corporation Ltd., Western Canada Marine Response Corporation, and Point Tupper Marine Services Ltd.

Responsible Party: Any person or organization who might be responsible for the source or cause of an environmental emergency and/or a Wildlife Emergency.

SARA-listed Species: *A* wildlife species listed on the List of Wildlife Species at Risk set out in Schedule 1 of the *Species at Risk Act* (SARA).

Species at Risk: As defined in the *Species at Risk Act* (S.C. 2002, c.29), means an Extirpated, Endangered or Threatened species, or a species of Special Concern.

Unified Command: An application of the Incident Command System, used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the Unified Command to establish a common set of objectives and strategies and a single Incident Action Plan.

Wildlife: In this document, “Wildlife” is used to refer to the terms Migratory Birds as defined under the *Migratory Birds Convention Act,* and listed Species at Risk as those terms are defined under the *Species at Risk Act* for species falling within the jurisdiction of the Minister of Environment and Climate Change (with the exception of individuals of SARA-listed Species that are located on lands administered by Parks Canada). This term also refers to all wild species occurring in the National Wildlife Areas set out on Schedule I of the *Wildlife Area Regulations* (C.R.C., c. 1609).

Wildlife Emergency: A Pollution or Non-Pollution Incident that results or may result in an immediate and/or long-term harmful effect on the life or health of Wildlife and/or their habitat.

Wildlife Response Organization: Organizations that provide expertise, capabilities and trained personnel to undertake one or several aspects of response, including planning, implementation and reporting of activities related to Wildlife Emergencies. Wildlife Response Organizations (or representatives thereof) are authorized under applicable federal, provincial, and/or territorial legislation to capture, transport, clean, rehabilitate, euthanize, and release Wildlife.

Wildlife Response Plan: A document that outlines the initial and ongoing Wildlife-related strategies that are needed to support any Wildlife response objectives that may occur at the onset of a Pollution or Non-Pollution Incident

1.0 Introduction

Environmental protection legislation in Canada at the federal, provincial or territorial level contains provisions to have approved contingency plans in the event of an environmental emergency for construction, operation or decommissioning activities that may impact the environment. Projects undergoing an environmental assessment may include additional conditions upon approval to develop and implement an environmental protection plan. All contingency plans/environmental protection plans for which a threat to Wildlife is identified may have specific sections dedicated to Wildlife response in order to be in compliance with applicable federal, provincial, or territorial legislation.

Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS) oversees and/or leads Wildlife Emergency response activities in association with Environment and Climate Change Canada (ECCC)'s responsibilities under the *Migratory Birds Convention Act, 1994* (MBCA) and its regulations (*Migratory Birds Regulations* (MBR) and *Migratory Bird Sanctuary Regulations* (MBSR)), the *Species at Risk Act, 2002* (SARA), the *Canada Wildlife Act, 1985* (CWA), and *Wildlife Area Regulations*. Through these pieces of legislation, ECCC-CWS is responsible for the management and conservation of all Migratory Birds and Species at Risk under its jurisdiction (hereafter "Wildlife") and how they are managed during a Pollution or Non-Pollution Incident. In the case of Migratory Birds, including SARA-listed Migratory Bird species, this document applies to wherever they are found in Canada. For other SARA-listed Species, this document applies to individuals that are located on federal lands in the provinces, on lands under the authority of the Minister of Environment and Climate Change in the territories, or in the exclusive economic zone or on the continental shelf of Canada (with the exception of individuals of SARA-listed Species under the jurisdiction of Parks Canada or Fisheries and Oceans Canada) (see also Section 2.2 for additional details). For greater clarity, this document does not apply to any wildlife species, including aquatic species (which include fish, marine mammals, marine turtles, and marine plants, as defined in Sections 2 and 47 of the *Fisheries Act*), located on any lands or in any waters administered by Parks Canada or under the jurisdiction of Fisheries and Oceans Canada. The CWA and *Wildlife Area Regulations* broaden the responsibility of ECCC-CWS to include habitats and all wild species within designated National Wildlife Areas (NWAs).

1.1 Scope

Wildlife Emergencies, in the context of this document, include Pollution or Non-Pollution Incidents that result or may result in an immediate and/or long-term harmful effect on the life or health of Wildlife and/or their habitat. Pollution Incidents with potential harm to Wildlife are prohibited under the MBCA and SARA. Non-Pollution Incidents are uncontrolled or unexpected Wildlife injury or mortality events other than a Pollution Incident, which may include things such as disease outbreaks, mass strandings, or other unexplained Wildlife deaths. The degree to which any Pollution or Non-Pollution Incident may be deemed a Wildlife Emergency is dependent on a number of factors such as the scope and severity of the incident (e.g., numbers of animals or area of habitat impacted), the likelihood of an incident expanding, potential for impacts to Species at Risk, and potential link to human health, among other factors. The appropriate level of response expected to incidents should be reasonable and commensurate with the risks. ECCC-CWS is responsible for informing various aspects of response to Wildlife Emergencies, including the development and implementation of Wildlife response strategies and activities, as outlined in the *National Policy on Wildlife Emergency Response* (ECCC-CWS 2021).

During an incident, Responsible Parties (RPs) must demonstrate their ability to safely, efficiently, and effectively respond in a manner that incorporates measures designed to avoid or minimize harm to Wildlife, while managing the public's understanding of response decisions and activities. In the absence of an RP during an incident (e.g., mystery spill), or for planned operations with a potential to impact Wildlife (e.g., oil removal from wreckages), the Lead Agency is deemed responsible for implementing Wildlife response appropriate to that incident.

Wildlife Response Plans (WRPs) are documents that formalize the guidance and strategy for responding to incidents with potential to impact Wildlife. A WRP should include the following elements:

- The objectives of implementing a WRP with respect to managing or preventing harm to Wildlife and its habitat during a Pollution or Non-Pollution Incident
- A description of the incident management structure for Wildlife response and how it is integrated into an incident-specific response command system (e.g., an Incident Command Post (ICP))
- Background information on responsibilities of the RP as well as regulatory requirements, permits, and authorizations to engage in Wildlife response activities
- Information on Wildlife and its habitat known or potentially impacted by an incident
- A description of Wildlife response procedures to be implemented immediately following an incident (e.g., deterrence and dispersal, surveillance)
- A description of the operational structure and implementation of ongoing Wildlife response efforts throughout all phases of an incident
- Procedures for information management and communication, including to key stakeholders (e.g., local communities, hunters)
- Health and safety, security, and training requirements for personnel, equipment, and facilities required to support Wildlife response activities

The purpose of this document is to guide federal, provincial/territorial and Indigenous governments, Indigenous organizations, industry, Response Organizations, and other stakeholders in developing a WRP that considers all aspects of planning throughout the full lifecycle of an incident. This document outlines the attributes that are necessary for effective implementation of Wildlife Emergency response. Proponents should keep in mind that the guidance provided within this document is developed by ECCC-CWS for species' protection within their mandate. As such, proponents developing comprehensive WRPs should also consult with other federal, provincial/territorial and Indigenous governments or agencies where applicable (e.g., for mammals, reptiles, amphibians, fish and some bird species not under the jurisdiction of the MBCA).

2.0 Regulatory Requirements

2.1 Applicable Legislation

ECCC-CWS is responsible for ensuring that all Wildlife response activities are coordinated, enacted, and carried out in compliance with applicable federal law. Federal legislation applicable to Wildlife response includes:

- ***Migratory Birds Convention Act*** **(MBCA):** Section 5 of the MBCA prohibits the deposit of harmful substances into waters or areas frequented by Migratory Birds, unless authorized under the *Canada Shipping Act, or* the substance is of a type and quantity, and the deposit is made

under conditions, authorized under an Act of Parliament other than the *Canada Shipping Act, 2001* or authorized for scientific purposes by the Minister of Environment and Climate Change. Section 6 of the *Migratory Birds Regulations* (MBR) made under the MBCA prohibits the disturbance, destruction, taking of a nest, egg, nest shelter, eider duck shelter or duck box of a Migratory Bird, or anyone from having in his possession a live Migratory Bird, or a carcass, skin, nest or egg of a Migratory Bird. The MBR regulate the hunting of Migratory Birds and other circumstances under which the killing, capturing of and harming of Migratory Birds may be authorized. The *Migratory Bird Sanctuary Regulations* (MBSR) further regulate activities related to Migratory Birds and their habitats within designated Migratory Bird Sanctuaries. Permits may be issued to authorize the permit holder to undertake activities that are otherwise prohibited (Government of Canada 2017).

- ***Species at Risk Act* (SARA):** SARA permits are required for activities affecting a SARA-listed Species, any part of its critical habitat or the residences of its individuals. For the purpose of SARA, an "*activity affecting"* means any activity prohibited under the Act or its regulations. Section 73 of SARA authorizes the issuance of permits for activities affecting a SARA-listed Species, any part of its critical habitat or the residences of its individuals, and sets out conditions that must be met before a competent minister can issue a permit. SARA prohibitions apply to any species listed on Schedule 1 as Threatened, Endangered or Extirpated, but do not apply to species listed as Special Concern.
- ***Canada Wildlife Act* (CWA):** The CWA allows for the establishment of National Wildlife Areas (NWAs), which protect wildlife habitat in Canada. The *Wildlife Area Regulations* identify all NWAs and prohibit certain activities from occurring within NWAs, but Section 3.4 of the *Wildlife Area Regulations* provides exemptions for the prohibited activities within the NWAs in the event of an emergency response effort (e.g., ensuring public safety and national security). The Scott Islands marine NWA has its own regulations, *Scott Islands Protected Marine Area Regulations*, which also provide exemptions for the prohibited activities in the event of an emergency response effort.

Further to these Wildlife specific pieces of legislation, other environmental protection legislation in Canada at the federal, provincial or territorial level contain additional provisions which require approved contingency plans in the event of an environmental emergency for construction, operation or decommissioning activities that may impact the environment. Projects undergoing an environmental assessment may require the development and implementation of an environmental protection plan, conditional upon approval.

Where contingency plans/environmental protection plans identify a threat to Wildlife, ECCC-CWS considers a WRP to fulfill some of these requirements if contingency and emergency response planning efforts adequately address the identified Wildlife issues.

ECCC-CWS recommends that strategic WRPs be developed prior to incidents for activities or areas where the potential for, or associated risk of a Wildlife Emergency is high (see Section 3.2 for more details). These strategic plans may be standalone plans or components (or annex) to overarching response plans (e.g., operators' facilities response plans). Incident-specific WRPs are routinely developed as part of the ICP to standardize and document Wildlife response activities during an incident (Section 3.2). Both approaches are in keeping with international standards for Wildlife response planning (International Petroleum Industry Environmental Conservation Association (IPIECA) 2014).

2.2 Permits and Authorizations

As part of Wildlife Emergency response, Wildlife Response Organizations (WROs) are often responsible for undertaking response activities involving direct interaction with Wildlife including the capture, collection, transport, and care/rehabilitation, release, and/or euthanasia of impacted Wildlife. Some WROs operating in Canada may retain annual permits that allow certain levels of immediate response, assuming permits are renewed and standards are maintained. Qualifications of these organizations to perform certain activities are assessed during the permit application process. Otherwise, a WRO will work with ECCC-CWS to obtain incident-specific permits for aspects of Wildlife Emergency response requiring authorizations. Other qualified individuals, working for or contracted by WROs, Response Organizations, the RP, or government agencies, may also apply for permits, as required. Permit and authorization requirements are summarized in Table 1.

ECCC-CWS recognizes deterrence and dispersal as a beneficial practice during Wildlife Emergencies. If proponents plan to use deterrence and dispersal tactics during a Wildlife Emergency, this should be described in a WRP (Section 4.5.5), and ECCC-CWS should be consulted to provide guidance on effective tactics for species, seasons, and habitats.

For most of the activities listed in Table 1, activities affecting SARA-listed Migratory Birds may be permitted through the issuance of SARA compliant MBCA-permit (Scientific Permit or Banding Permit). It is important to note that a SARA permit cannot be issued for an activity that would have a prohibited effect on a listed Migratory Bird for which a permit is not available under the MBCA and its regulations. For activities affecting SARA-listed Species, other than a Migratory Bird, permits may be issued under Section 73 of SARA. Specifically, ECCC-CWS SARA permits are required for SARA-listed Species that, a) are located on federal lands in the provinces, b) are located on lands administered by the Minister of Environment and Climate Change in the territories; c) are located in the exclusive economic zone or on the continental shelf of Canada; or d) are the subject of an order of the Governor in Council under SARA, including an order pertaining to the species' critical habitat or habitat that is necessary for the survival or recovery of the species (except for species under the jurisdiction of Parks Canada or Fisheries and Oceans Canada). Table 1 outlines examples of activities that require permits for SARA-listed Species. For additional clarification on the permitting provisions and how to apply for a SARA permit, please consult the *Species at Risk Public Registry Policies and Guidelines* (Government of Canada 2020).

For emergency response activities occurring on Migratory Bird Sanctuaries, permits are required on a site-specific basis (Table 1). Some types of activities that require authorization on Migratory Bird Sanctuaries include carrying firearms and other weapons, and possession/handling of any animal, carcass, skin, nest, egg or part of those things. These activities may be authorized by permits issued under the MBSR.

With respect to NWAs, a permit is not required to carry out emergency relief activities, as per Section 3.4 of the *Wildlife Area Regulations*. With respect to the Scott Islands marine NWA, a permit is not required to carry out emergency relief activities, as per Section 3 of the *Scott Islands Protected Marine Area Regulations*.

Table 1. Wildlife-related Permits and Authorization Requirements that may be issued by ECCC-CWS[1] during a Wildlife Emergency.

Wildlife	Permit Type	Examples of Activities that Require Permits or Authorization	Permit Holders
Migratory Birds (including SARA-listed Species)	Scientific (for collection)	• Possession • Transportation • Collection/capture • Treatment/rehabilitation/care • Euthanasia	Individuals of WROs are generally permitted for most activities. Subcontractors or independent contractors may be permitted for specific activities through one or several permits.
	Scientific (for capture and banding)	• Capturing • Banding • Using auxiliary markers (e.g., color bands and GPS transmitters) • Collection of biological samples	
	SARA Section 73/74 permit	• Destruction of protected critical habitat • Damage or destruction of any critical habitat that could result in harming individuals of a SARA-listed Migratory Bird • Damage or destruction of residences[2] of a SARA-listed Migratory Bird	SARA permits are issued on site and situation-specific basis and must be discussed early in response activities, as appropriate.
Any SARA-listed Species other than Migratory Birds (on any federal land including NWAs, and any land affected by an order or regulation made under SARA)	SARA Section 73 permit	• Collection, taking, possession • Transportation/relocation • Capture/marking • Treatment/rehabilitation/care • Euthanasia • Harassing, including deterrence and dispersal • Exclusion barriers / trenches • Damage or destruction of critical habitat • Damage or destruction of residences[2] • Any activity specifically prohibited by a Section 80 emergency order, or by a regulation made under SARA	SARA permits are issued on a site and situation-specific basis and must be discussed early in response activities, as appropriate.

Wildlife	Permit Type	Examples of Activities that Require Permits or Authorization	Permit Holders
Migratory Bird Sanctuaries	Scientific (collection)	• Operations occurring on Migratory Bird Sanctuaries[3]	Migratory Bird Sanctuary[3] permits are issued on a site-specific basis and will be developed early in response activities.

Notes:
[1] The permitting process and the types of activities requiring permits is subject to change periodically as regulations are updated. Individuals/organizations should seek up to date advice on permitting from ECCC-CWS permit officers.
[2] For the purpose of SARA, "residence" means a dwelling-place, such as a den, nest or other similar area or place, that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding or hibernating.
[3] Permits issued under the MBSR.

3.0 Elements of Wildlife Response Planning

3.1 Wildlife Response within the Incident Command System

Any activities with potential to result in a Wildlife Emergency may warrant immediate implementation of response actions. Guidance on Wildlife response concerns and actions may be provided through the Environmental Emergencies Science Table, which is chaired by ECCC's National Environmental Emergencies Centre (NEEC). Increasingly, within industries or the Government of Canada, emergency incidents are managed and structured using the Incident Command System (ICS) approach, including the establishment of an ICP for major incidents. It is therefore recommended to stakeholders to use ICS for emergency response. Wildlife experts, such as ECCC-CWS, may be situated in the Environmental Unit of the Planning Section within an ICP, a role which may be titled Wildlife Technical Specialist. The Environmental Unit would develop and refine response plans as well as incident-specific tactics. Depending on the scale of the incident and scope of potential or actual impacts to Wildlife, ECCC-CWS may assist in establishing a Wildlife Branch which is typically situated within the Operations Section of the ICP (IPIECA 2014; Figure 1). An Environmental Unit Liaison position may also be staffed in the Wildlife Branch (Figure 1) to facilitate the dissemination of planning and operational information between the Environmental Unit and the Wildlife Branch. WRPs may also be developed and used for Wildlife Emergencies that are not managed with an ICP or a Wildlife Branch.

The WRP should identify, schematically, the structure and function of the Wildlife Branch and its integration into the Operations Section of the ICP, as well as how it liaises with other ICP sections (e.g., Planning). The WRP should anticipate structuring and scaling the Wildlife Branch according to how the incident is expected to proceed.

It is essential to identify and implement Wildlife response activities within the first 24, 48, and 72 hours of an incident. These response activities are formalized within a WRP to structure and guide response

activities. The RP is responsible for the development of WRPs, to address all of the procedures and strategies required to mount an effective Wildlife response. During an incident, ECCC-CWS will provide advice to support the Wildlife response consistent with the components outlined in Section 4. However, the RP typically leads the development of a WRP and may contract the WRO to develop it on their behalf to ensure the WRP is operationally feasible. While ECCC-CWS does not have the authority to assign, recognize, or approve specific WRPs, ECCC-CWS may provide advice to the Lead Agency, the RP, and WROs regarding the direction and content of a WRP, based on available science and expertise. A WRP does not necessarily equate with statutes and regulations; rather, developing a WRP identifies actions that support compliance with the MBCA, MBR, MBSR, SARA, and the CWA. A WRP receives formal approvals within an ICP through sign-off by the Incident Command and RP.

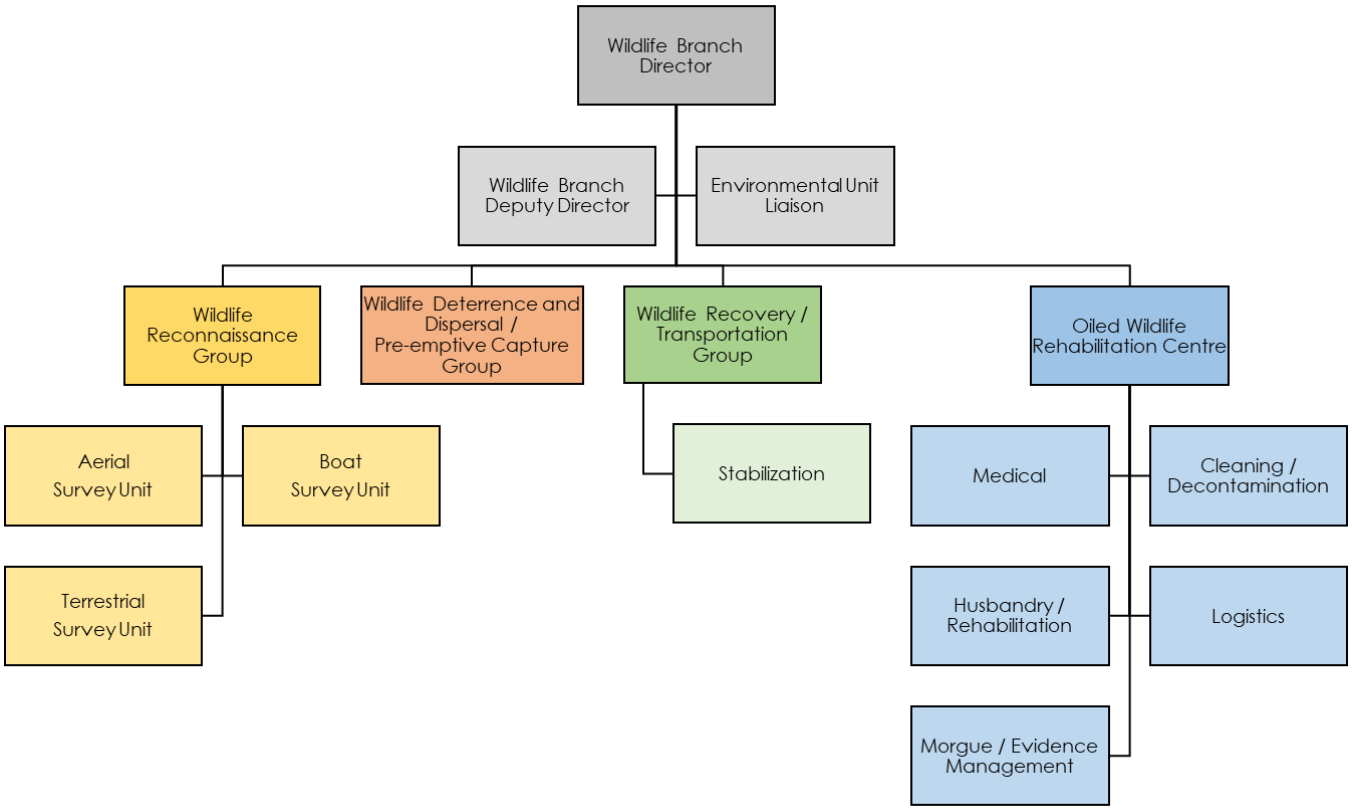

Figure 1. Example of a scalable Wildlife Branch within an ICS setting (adapted from IPIECA 2014).

3.2 Types of Wildlife Response Plans

There are two main types of WRPs, strategic response plans and incident-specific response plans (described below). ECCC-CWS may support the development of various WRPs, including providing technical expertise, permit support, and incident-specific guidance. However, WRP approvals are the responsibility of the RP and the Incident Command (or Unified Command).

3.2.1 Strategic Response Plans

Strategic response plans are often created for specific activities, where there is a recognized risk of a Wildlife Emergency, or for designated areas or specific locations which may warrant special planning

considerations (e.g., protected areas, geographic response areas). Strategic WRPs describe the likely activities to be enacted during a response, but may lack incident-specific actions or tactical plans which may only be developed once the parameters of the incident are known or tested. Thus strategic WRPs are refined and adapted throughout the incident based on incident-specific considerations (Hebert and Schlieps 2018).

Activity-specific Plans: Accidents or malfunctions that may occur at certain types of facilities or infrastructure (e.g., oil-handling facilities, offshore petroleum platforms, liquid natural gas marine terminals), projects (e.g., exploratory drilling), or routine activities (e.g., transport of oil by rail or vessel) have an associated increased risk for Wildlife Emergencies. However, given the static nature of these sites, the characteristics of a Pollution or Non-Pollution Incident and the procedures for mounting a response can be anticipated to a certain degree. Industries or other stakeholders determine whether it is appropriate to develop strategic WRPs to structure a response that aligns with internal policies and procedures (e.g., industry best practices, contract with WROs), and incorporates site-specific considerations for implementing effective response actions (e.g., pre-determined Wildlife rehabilitation areas, standardized methods for Wildlife surveillance). As with other types of plans, activity-specific WRPs need to be adaptable and scalable, depending on the nature of the incident. Activity-specific WRPs should be reviewed and revised on a regular basis to accommodate changes to infrastructure, activities, and operational procedures, and to reflect current guidance on Wildlife response planning. In cases where activity-specific plans are identified for development, ECCC-CWS can review and provide recommendations on WRP components based on site-specific information.

An example of an activity-specific WRP is one that is developed as part of planned vessel salvage or oil recovery activities, where there is potential for impacts to Wildlife. In the case of a planned salvage, the initial draft of the WRP should be developed and approved in advance of initiating salvage activities. As with other incidents, the WRP will evolve over the course of the salvage to address specific response conditions.

Area-specific Plans: Wildlife Emergencies can also occur in land tenures or aquatic areas of significant biological importance, with specific management objectives, and/or where there is otherwise concerted interest in having a response plan in place (e.g., protected areas, geographic response areas). As with activity-specific plans, the procedures for mounting a response to a Pollution or Non-Pollution Incident may be anticipated and planned for to a certain degree. Managers of these areas may determine it is appropriate to develop strategic WRPs to structure a response that aligns with local or regional management objectives. Stakeholders' input that incorporates site-specific considerations for implementing effective response actions should be considered. Area-specific WRPs need to be adaptable and scalable, depending on the nature of the incident. Managers of these areas need to identify zones of higher sensitivity that are to be protected and those of lower sensitivity to allow an efficient response (access points for machinery, ICP, response personnel, etc.). WRPs should be reviewed and revised on a regular basis. In cases where area-specific plans are identified for development, ECCC-CWS can review and provide recommendations on WRP components based on site-specific information.

3.2.2 Incident-specific Response Plans

The most common type of WRP is typically one that is developed in the early phases of a Wildlife Emergency as part of the ICS and is specific to the incident (IPIECA 2014). Incident-specific WRP, sometimes referred to as Wildlife Management Plans, take into account the actual circumstances of a specific incident, particularly factors related to the scope of the incident (e.g., quantity, location and dispersion of pollution), environmental considerations (e.g., weather), and seasonal considerations

(e.g., Wildlife abundance and distribution). A comprehensive strategic WRP may fulfil most of the information needs for an incident-specific plan, but might require further details on implementation given the available resources, weather, and time of year.

For incidents where an RP has been identified, the RP has the first responsibility for initiating effective countermeasures to a Wildlife Emergency and has financial responsibility for damage and cleanup costs incurred during an incident. Upon the establishment of an ICP, the RP and Incident Command will outline planned Wildlife response activities. ECCC-CWS will contribute to the development of an incident-specific WRP by participation in the Wildlife Branch (or Environmental Unit) of the ICP, or by reviewing plans and providing expert advice to individuals working within the ICP. Here, ECCC-CWS may provide guidance on the scope of a WRP and direct the RP, or its contracted response personnel, towards resources that support its development. In particular, ECCC-CWS will inform on any Wildlife response activities that require authorization (i.e., permits), or technical expertise. ECCC-CWS will review and make recommendations on a WRP and subsequent iterations, but the Incident Command ultimately approves the plan. For incidents where an RP has not been identified, ECCC-CWS may contribute to the development and implementation of a WRP.

3.2.3 Plan Development

It is important to recognize that Wildlife Emergency response and WRP development is an iterative process that will evolve as an incident unfolds. A WRP should be structured and implemented in a way that it is adaptable and scalable over the course of an incident, and may accommodate needs for post-incident monitoring.

The Wildlife Branch will determine the appropriate level of response based on specific needs of the incident. The need for greater or fewer resources, equipment, facilities, and response personnel will be based on incident-specific factors including:

- the present and future geographic extent of the incident
- the species, numbers of individuals, and types of habitats present in the geographic extent
- the known or potential risk for injury or mortality
- the timeframe for which incident response actions are implemented

Plans that are developed prior to an incident may also consider tiered response planning to appropriately manage various degrees or types of Wildlife Emergencies. *Wildlife Response Preparedness* (IPIECA 2014) describes tiered response planning in more detail.

3.3 Habitat Considerations for Response Planning

The various habitats occupied by Wildlife require different considerations with regards to response planning. For emergency response involving pollutants such as oil, the key variable in a response plan is the presence of bodies of water that may act as a carrier for contaminants discharged into the environment, causing contaminants to spread over large areas where Wildlife may become affected. In Canada, habitats occupied by Wildlife requiring similar response approaches during an emergency response involving contaminants can be grouped into the following three main landscape categories: a) marine and open fresh water, b) aquatic, and c) terrestrial.

3.3.1 Marine and Open Fresh Water

Pollution Incidents that occur in the marine environment or large freshwater bodies of open water tend to affect Wildlife that spend a high proportion of their time on the water, such as alcids and waterfowl.

The effect on Wildlife is influenced by the location of the incident, persistence and toxicity of the contaminants, and duration of the incident. In seasons and areas of high concentrations of vulnerable Wildlife, the number of impacted individuals may reach the thousands, even when a relatively low volume of contaminant is discharged. Affected Wildlife may eventually come ashore either alive or dead, requiring systematic search and collection effort on accessible shorelines. Contaminants discharged offshore may eventually travel inshore and reach the coastline, affecting other Wildlife communities associated with aquatic habitats (see Section 3.3.2). A Wildlife response in the marine and open fresh water landscape focuses on preventing Wildlife from utilizing the affected area, recovering affected individuals if they come to shore, and assessing the impact of the incident on Wildlife (Table 2).

3.3.2 Aquatic Habitats

For the purpose of this document, aquatic habitats consist of any land saturated with water long enough to take on the characteristic of an ecosystem and promote aquatic processes, such as salt marshes, wetlands, fens, lagoons, and bogs, but also include small ponds, creeks, rivers, tidal flats, marshes, and reed beds, or any combination of such categories. Unlike the other landscapes, aquatic habitats are vulnerable to activities that occur both on land and in the marine environment. During a response to a Pollution Incident, aquatic habitats are priority areas for protection as they can trap large quantities of contaminant, are difficult to clean, and can take years or decades to recover due to the retention of contaminants in these environments. Because of the large variety of aquatic habitats and biotypes that they accommodate, removing contaminants from the environment and operationalizing a Wildlife response may be complex. Rivers will carry and spread pollutants over potentially large distances, and shorelines may be inaccessible. Wildlife diversity may be high and include a mix of aquatic (waterfowl, shorebirds, inland waterbirds) and terrestrial (landbirds) Migratory Bird species and Species at Risk from a variety of groups, including mammals, birds, amphibians, reptiles, plants, and fish. Additional survey effort and resources may be required for reconnaissance and surveillance surveys as well as collecting affected individuals. Small lakes and ponds may be attractive for large concentrations of Migratory Birds during migration, molting, and staging periods and may require extended resources to exclude Wildlife from the area. In addition to deterrence activities, a Wildlife response in aquatic habitats may also focus on prioritizing protection and containment strategies to minimize the spread of contaminants to key habitats, denying Wildlife access to impacted habitats, pre-emptive capture to relocate unaffected individuals (e.g., Species at Risk), recovery of affected individuals, and assessing the effect of the incident on Wildlife (Table 2).

3.3.3 Terrestrial Habitats

Pollution discharged into a terrestrial landscape where a body of water is absent will be limited in spread and affect a small area in relation to the released volume. Pollution Incidents in a terrestrial landscape are usually limited to a point source (e.g., truck, rail, pipeline, oil storage facility), however, the species and types of incident interactions among terrestrial Wildlife may be diverse, as there is potential for impacts to birds, mammals, reptiles, and amphibians. A Wildlife response strategy in a terrestrial landscape may focus on excluding Wildlife from the affected area, pre-emptive capture to relocate unaffected individuals (e.g., Species at Risk), recovering affected individuals, and assessing the impact of the incident on Wildlife.

Table 2. Key activities/strategies for Wildlife response based on major landscape types. This table is meant as a guide to highlight some potential key differences in approaches, but should not be considered as a checklist for all incidents. Refer to text for details.

Response Strategy/Activity	Landscape Categories		
	Marine/Open fresh water	Aquatic	Terrestrial
Reconnaissance and surveillance surveys	X	X	X
Wildlife deterrence	X	X	X
Wildlife exclusion		X	X
Prioritize habitats for protection	X	X	X
Pre-emptive capture of Wildlife		X	X
Recovery of affected individuals	X	X	X
Assessing impacts to Wildlife	X	X	X

3.4 Detecting Signs of impacted Avian Species

In planning for Wildlife Emergency and preparation of a WRP, it can be important to consider target species and how detectable contaminated (or injured) Wildlife may be. The ability to detect contaminated Wildlife will help in planning several of the actions to be taken during a response, notably Initial Wildlife Impact Assessment (Section 4.5.2), reconnaissance and surveillance surveys (Sections 4.5.3 and 4.5.4), and Wildlife capture (Section 4.5.7). Detecting contaminated Wildlife is best done by experienced observers, such as WRO, but understanding of contaminated Wildlife detection can benefit all aspects of response planning and implementation. Here we provide guidance for detecting signs of oiling in avian species, though the principles outlined are generally applicable to birds affected by other contaminants.

Under normal conditions, typical bird behaviour will vary by the species, the habitats they occupy, as well as time of year and weather conditions. Generally, birds that spend a great deal of time on the surface of the water are typically seen resting on the water (e.g., loons, grebes, scoters, alcids, and cormorants). Piscivorous species (e.g., loons, grebes, alcids), will normally dive and surface repeatedly over time. Some species, like gulls, will move between resting on the water to being flight bound to using land to feed or rest. Species that are common in shore environments, like shorebirds, dabbling ducks, and cormorants are typically quite obvious on rocks or beaches, and would be expected to be quite mobile/active.

Birds that have come into contact with oil may have obvious oiling indications, including coating, discoloured feathers, or feathers having a wet or ragged appearance (i.e., disruption of feather structure). Heavily oiled birds or individuals oiled below the waterline may also appear as though they are sitting low on the water (when compared with normal species posture), struggling to maintain buoyancy. Oiled birds have increased potential to lose buoyancy and thermoregulatory properties of their feathers. Accordingly, it is common to see oiled birds focused intently on preening themselves in order to maintain buoyancy and reduce heat loss; this may be most apparent while birds are on the water. Diving or dabbling species may appear to be foraging less than expected (although this should be assessed by experienced observers). Birds may also exhibit changes in flushing behaviour, being

less inclined to fly when disturbed. Birds might also congregate near or on shore, or strand and rest on structures (e.g., vessels, buildings, platforms); this includes species that would not normally be expected to use these habitats or those that have contacted oil in the intertidal environment. In nearshore or shoreline environments, birds may also use shallow waters to reduce risk of drowning or take advantage of coastal vegetation to camouflage or reduce risk of predation while they try to preen or recover. Observations of behavioral changes in birds are sometimes the key indicators of oil impacts.

Detecting birds contaminated with oil is particularly difficult for aquatic birds with dark plumage that remain on the water and far from shore. Under these circumstances, it may be appropriate to determine a probable rate of contamination using appropriate indicator species. Ideally, indicator species are common throughout the incident area, share similar life history attributes, are sensitive to oiling, and signs of oiling are readily observable. The contamination percentage determined for indicator species only provides an estimation of the contamination percentage for the other species in the incident area. This type of assessment is likely to underestimate the actual contamination rate of the most vulnerable aquatic species, such as sea ducks and alcids, and overestimate the contamination of the more coastal species, such as geese and dabbling ducks (Lehoux and Bordage 1999). Additional details on how to assess rates of oiling for indicator species is provided in the *Guidance and Protocols for Wildlife Surveys for Emergency Response* (ECCC-CWS 2022a).

4.0 Components of a Wildlife Response Plan

A WRP is a plan that describes the objectives and methods for undertaking Wildlife Emergency response, specific to an area and Pollution or Non-Pollution Incident(s). The aim of a WRP is to avoid or minimize injury or harm to Wildlife during Pollution and Non-Pollution Incidents.

The following section outlines attributes that should be considered within a WRP (IPIECA 2014; Hebert and Schlieps 2018). An annotated WRP template is provided as an example in Appendix A, to be adapted and scaled based on the nature of individual Wildlife Emergencies. A checklist of activities that should be completed within the first 24, 48, and 72 hours of an incident involving Wildlife is provided in Appendix B.

4.1 Introduction

The Introduction section of the WRP provides the basis and rationale for how a Wildlife response will be handled. The Introduction will provide a general description of the types of issues that will be addressed by the WRP. Where appropriate, the Introduction will describe how this WRP interfaces with various aspects of an ICP, including other response plans that WRP activities may interact with.

4.2 Notification Procedures

The Notification Procedures section outlines the agencies, organizations, and other technical specialists that will be notified during incidents involving Wildlife response. Where appropriate, this section will describe how notifications operate within the incident-specific ICS structure, as well as any intra- and interdepartmental communication requirements.

4.3 Regulatory Requirements

The Regulatory Requirements section provides a brief description of the applicable Wildlife legislation, where it applies, and whether supporting permits or authorizations are required to support a Wildlife response. In most cases, incidents involving Wildlife will need to consider the MBCA, the SARA, and possibly the CWA (see Section 2), as well as other provincial or territorial legislation. Additional permits and authorizations may also be required outside the regulatory authority of ECCC-CWS.

4.3.1 Permits and Authorizations

For any Wildlife Emergency involving the development of a WRP, the plan will identify any WROs or contracted subject-matter experts that will be engaged to support Wildlife response activities. Authorized organizations or individuals must have the training and resources necessary to meet Wildlife response requirements. Where permits or authorizations are identified, this section will highlight:

a. what the authorization is for
b. the issuing agency
c. activities that are authorized
d. who holds authorization to conduct those activities
e. if a technical specialist or qualified professional is required to supervise or participate in the authorized activity (e.g., supervision or guidance of bird deterrence activities by ECCC-CWS or a WRO supervision of bird deterrence activities)
f. reporting requirements, if any, for these authorizations

With respect to strategic WRPs prepared in advance for specific activities or areas, this section will also identify permits which are already in place and relevant information on renewal and reporting cycles.

4.4 Resources-at-Risk

The WRP will outline potential Wildlife and habitat resources-at-risk from the incident's current and reasonably foreseeable impacts. The resources-at-risk section of the WRP will describe:

- the geographic extent for which resources are being identified
- Migratory Bird sensitivities
- Species at Risk sensitivities
- important habitats for consideration and protection:
    - critical habitat
    - protected areas
    - colonial nesting areas
    - general nesting areas
    - seasonal stopover, molting, or staging areas
    - key areas (e.g., Important Bird Areas, Ecologically and Biologically Significant Areas)
    - other important habitat features such as estuaries

In addition to these general factors, the characterization of resources-at-risk should consider area- and species-specific factors such as seasonal presence, abundance, life stage, and habitat associations. Where available, incident-specific observations should be referenced in the description of resources-at-risk to characterize current conditions. Resources-at-risk should also consider details on mitigations related to habitats including priority sites, protection measures, clean-up restrictions, and information

relevant to Net Environmental Benefits Assessment (NEBA) or Spill Impact Mitigation Assessment (SIMA) (e.g., IPIECA 2016, 2018).

4.5 Wildlife Management and Response

This section will describe the nature of Wildlife management and response activities that are, or will be undertaken as part of the incident. The nature and scale of a WRP will depend on the incident, and the known or potential impacts to Wildlife.

For the early phases of an incident, the WRP should include, at minimum, a description of the initial approaches for Wildlife impact assessment (e.g., reconnaissance and monitoring activities). This section of the WRP will be revised as an incident evolves. Where appropriate, aspects of Wildlife management and response may warrant standalone plans that could be appended, and referenced in this section (e.g., detailed plans for Wildlife rehabilitation).

4.5.1 Operational Objectives

This section briefly describes the primary objectives for the activities that will be implemented during the operational period(s) this plan is expected to apply to until its next iteration. Objectives will consider the ethical considerations in context with situational, technical, and financial feasibility of implementation (IPIECA 2014). Objectives will change based on Wildlife concerns as well as personnel and equipment resource availability. These objectives form the basis for the nature and scope of activities described in this section of the WRP.

4.5.2 Initial Wildlife Impact Assessment (0 to 24 Hours)

In order to effectively plan for and direct Wildlife response efforts, an Initial Wildlife Impact Assessment needs to be conducted as early in the incident response as possible, to determine:

- existing information on Wildlife and habitats
- current/initial estimates of Wildlife impacts
- projection of potential impacts to Wildlife
- initial Wildlife response recommendations
- initial habitat protection recommendations
- initial resource, personnel, equipment, and facility requirements

As with all phases of a response, the Initial Wildlife Impact Assessment must be completed in consideration of the health and safety of response personnel and adhere to all incident-specific health and safety requirements (see Section 4.7).

4.5.3 Reconnaissance Surveys (24 to 48 Hours)

Reconnaissance surveys should be conducted in a timely manner on a large geographic scale to assess the outer limits of the incident. These surveys serve to obtain current information on impacted habitats, areas of special concern (e.g., colonial nesting areas) and the abundance and distribution of Wildlife within the general area of the incident, recognizing that Wildlife movements may extend beyond the geographic limits of the incident area. Initial reconnaissance surveys should take place as early in the response as possible to determine current conditions and inform potential response priorities and strategies. In all cases, reconnaissance should extend, at minimum, to the expected geographic limits of the incident area, recognizing those boundaries may change as the incident progresses. Reconnaissance surveys may be conducted on a recurring basis to inform response activities (e.g., deterrence and dispersal, Wildlife capture), or if the situation of the incident changes (e.g., following a

storm). Reconnaissance surveys help identify the most suitable approaches for the surveillance or *monitoring* phase of the response. Reconnaissance may occur from land, boat, or air. Reconnaissance surveys are not systematic and the goal is not to precisely assess Wildlife densities but rather to conduct informal surveys to rapidly assess the distribution of impacted, or potentially impacted, Wildlife and habitats for a prompt response.

Primary objectives of reconnaissance surveys are to:

- determine the geographic scale of the incident
- identify Wildlife and habitats that have already been impacted
- estimate relative abundance and distribution of Wildlife with potential to be impacted
- evaluate key habitats of importance to Wildlife with potential to be impacted
- inform development of appropriate response strategies
- inform mitigation activities to minimize further damage to Wildlife
- inform suitability of various survey methods (e.g., shore, boat, or aerial surveys) for subsequent surveillance or monitoring for the duration of the incident
- inform Incident Command on the status of known or potential impact on Wildlife

If impacts to Wildlife or their habitats are known or anticipated, an approach for systematically surveying and monitoring Wildlife should be developed and articulated in the WRP (see Section 4.5.4). Standardized protocols have been developed for conducting systematic Migratory Bird surveys during an emergency response in Canada and are summarized in the *Guidance and Protocols for Wildlife Surveys for Emergency Response* (ECCC-CWS 2022a). The following stages of a Wildlife response (Sections 4.5.5 to 4.5.10) should be developed and implemented by trained and qualified personnel under the supervision of the Wildlife Branch Director in the Wildlife Branch and/or Wildlife Technical Specialist(s) in the Environmental Unit, depending on the structure of the response (see also Section 3.1).

4.5.4 Surveillance (Monitoring) Surveys (48 to 72 Hours and Onwards)

If impacts to Wildlife or their habitats are known or anticipated, Wildlife Branch will develop a systematic surveillance (monitoring) survey program with an appropriate temporal and geographic scope. If surveillance is required, the RP will secure qualified personnel to develop and execute the program and who will report to Wildlife Branch Director and/or Wildlife Technical Specialist(s). The methods and general approach(es) may be described in strategic WRPs and ECCC-CWS can advise on survey design and implementation for incident-specific WRPs, consistent with the *Guidance and Protocols for Wildlife Surveys for Emergency Response* (ECCC-CWS 2022a).

Primary objectives of surveillance surveys are to:

- monitor and refine the identification of Wildlife and habitats in the impacted area
- monitor and identify areas where Wildlife would be potentially at risk from further impacts
- monitor and refine estimates of abundance and distribution of Wildlife in the impacted area
- monitor and estimate Wildlife densities for damage assessment
- monitor and estimate number of dead and moribund Wildlife affected by incident
- identify areas where affected Wildlife can be collected
- inform other response activities such as habitat protection and Wildlife deterrence and dispersal
- inform Incident Command

Implemented throughout the response in accordance with the plan, data collected during surveillance provides critical response information and can also be used to document damage assessment following the incident.

4.5.5 Deterrence and Dispersal

For some incidents, deterrence and dispersal can be an effective early means to deter Wildlife from moving into or near the incident area and coming into contact with contaminants. Use of these techniques can also be helpful in excluding Wildlife from impacted areas throughout the response phase. Deterrent devices used to disperse Wildlife include both visual and auditory techniques and range in their effectiveness depending on the species, number of individuals, time of year, and habitat where the incident occurs.

If deterrence or dispersal is required or recommended, the RP will retain a qualified and, if applicable, authorized WRO to develop and execute a Wildlife deterrence and dispersal program. In the absence of an RP, the Lead Agency may develop and execute a Wildlife deterrence and dispersal program. Guidance to conduct activities related to deterrence and dispersal are outlined in Lehoux and Bordage (2000), with revisions and updates in development by ECCC-CWS. Other guidance to consider in the development of deterrence and dispersal tactics for WRP include Gorenzel and Salmon (2008) and IPIECA (2017). Deterrence will be conducted only by appropriately trained personnel, and under direct guidance and supervision (as required) from the Wildlife Branch Director and/or Wildlife Technical Specialist(s). A WRP may also outline protocols for Wildlife Technical Specialists in the field to monitor and document the use and effectiveness of deterrence and dispersal techniques so that updates may be made to subsequent WRPs. ECCC-CWS may provide guidance on deterrence and dispersal strategies and may also supervise deterrence and dispersal techniques for habitats or species that are particularly sensitive to these types of response measures (e.g., in proximity to breeding colonies). Strategic WRPs may outline a set of applicable techniques for a particular industry or facility, whereas an incident-specific WRP may then specify actions to be put in place given the species observed and environmental conditions at the time (e.g., weather).

Deterrence activities should be determined on a species-specific and location-specific basis that considers the following factors:

- What is the location and/or the extent of the spill
- Where are alternative species-appropriate habitats that birds can be dispersed to
- What species are present or likely to be at risk
- What is the life history status of the birds present (e.g., roosting, staging, breeding)
- What qualified personnel and equipment is available with experience and knowledge for deterrent use and Wildlife dispersal
- What are the environmental conditions
- Can the deterrence and dispersal plan be enacted in a safe manner for response personnel and Wildlife

4.5.6 Exclusion, Pre-emptive Capture, and Relocation

WRPs often implement measures designed to pre-emptively limit the potential for Wildlife to become impacted during Pollution Incidents. Often, marine, aquatic and terrestrial Wildlife can be excluded from areas that are known or have potential to become impacted through a combination of mechanical and physical techniques designed to dissuade habitat use (e.g., visual or acoustical deterrents, fence or net installation, physical habitat modification). Pre-emptive Wildlife capture and relocation similarly seeks to collect Wildlife before they are impacted during a Wildlife Emergency. Planning for Wildlife collection

requires considerations for capture, transport, holding, and release strategies. If pre-emptively captured Wildlife need to be contained for a period of time, a WRO authorized to carry out these activities must be identified to provide appropriate species-specific housing, nutritional support, and medical care (if necessary) for a potentially extended period. Guidance and protocols on pre-emptive capture and care for Wildlife during a Pollution Incident are described in the *Guidelines for the Capture, Transport, Cleaning, and Rehabilitation of Oiled Wildlife* (ECCC-CWS 2022b). Where appropriate, the WRP should describe plans for Wildlife collection and relocation activities.

4.5.7 Wildlife Capture, Transport, Rehabilitation, Release, and/or Euthanasia

This section of the WRP will be broken down into detailed phases, each of which are described briefly in Table 3. Planning for these activities may evolve over the course of the incident to include details on the number of monitoring and field staging facilities, capture procedures, rehabilitation facilities, as well as coordination of rehabilitation personnel.

The RP should retain a qualified and authorized WRO to develop and implement these phases of Wildlife response. These programs will adhere to the *Guidelines for the Capture, Transport, Cleaning, and Rehabilitation of Oiled Wildlife* (ECCC-CWS 2022b), *Guidelines for Establishing and Operating Treatment Facilities for Oiled Wildlife* (ECCC-CWS 2022c), as well as an area-specific or incident-specific Health and Safety Plan. Not all phases will be applicable or readily implemented during a response, but all may be considered as options when developing a strategic WRP, and later refined in an incident-specific WRP.

Table 3. Phases of Wildlife Capture, Transport, Rehabilitation, Release, and/or Euthanasia

Phase	Objectives
Pre-emptive Capture	• The capture of Wildlife that is at risk of being impacted • Transport of Wildlife to a holding facility
Capture	• The capture of impacted Wildlife • Transport of Wildlife to Field Stabilization Site or Oiled Wildlife Rehabilitation Centre
Field Stabilization	• Physical evaluation • Removal of gross contaminants • Thermoregulatory support • Fluid therapy and nutritional support • Address life threatening conditions • Euthanasia evaluations based on established criteria and best practices
Transportation	• Transport of contaminated animals from field or Field Stabilization Site to an Oiled Wildlife Rehabilitation Centre
Processing	• Evidence collection • Birds given individual, temporary band • Feather/fur sample • Photograph • Individual medical record

Phase	Objectives
Intake	• Medical examination, triage, and treatment plan development • Critical care concerns addressed • Euthanasia evaluations based on established criteria and best practices
Triage	• Ongoing euthanasia and treatment plan evaluation based on medical health status
Euthanasia	• Euthanize Wildlife that are assessed by the WRO as not being good candidates for rehabilitation or survival
Stabilization	• Fluid, nutritional and medical stabilization of impacted animals • 48–72 hours period • Prepare animals for cleaning process
Cleaning	• Removal of all contaminants from an impacted animal by washing • Removal of the cleaning agent by rinsing • Drying cleaned and rinsed animal
Conditioning	• Restoring waterproofing and physical condition
Release	• Federal banding of individual animals • Consider additional tracking devices on some birds to monitor post-release • Release of cleaned, waterproof animals into a clean environment
Post-release Monitoring	• Determining the effectiveness of rehabilitation of Wildlife impacted during a Pollution Incident • Monitoring the clean Wildlife's condition and activities • Following short-term and long-term survival and breeding status following rehabilitation

4.5.8 Wildlife Carcass Collection Procedures

Dead Wildlife should be removed from the environment to avoid attracting scavengers to the site and secondary contamination of Wildlife. The responsibility for the collection and documentation of dead Wildlife is primarily the responsibility of the Wildlife Branch and is completed under the supervision of authorized organizations (e.g., Wildlife Enforcement Directorate) and personnel with appropriate permits. Protocols for Wildlife collection, storage and documentation will be developed. Wildlife recovery personnel will retrieve dead Wildlife as part of daily activities. Dead Wildlife observed by the public can be reported to a 24-hour hotline (see Section 4.6.1). Members of the public must not pick up dead Wildlife but rather report them to the hotline. The Wildlife Branch will work with the Information Officer to develop appropriate messaging.

Carcass collection information will be used to:

- refine the geographic scale of the incident
- determine the cause of death if the source is unknown
- minimize damage and exposure to unaffected Wildlife by removing affected Wildlife from the environment
- minimize potential for harm or exposure by the public who participate in hunting activities or are supporting aspects of the response

- support appropriate response strategies for the treatment of affected Wildlife
- obtain a minimum number of casualties for damage assessment purposes
- obtain specimens/samples for legal enforcement activities or reporting requirements
- inform Incident Command

These procedures will also outline requirements necessary for proper chain of custody and storage of specimens. Chain of custody, and other record-keeping forms, will be attached as appendices to the WRP.

For additional guidance on collecting dead Wildlife during incidents, see the *Guidance and Protocols for Wildlife Surveys for Emergency Response* (ECCC-CWS 2022a).

4.5.9 Waste Management

Plans for decontamination and disposal of waste materials will be developed. Waste and secondary pollution should be minimized at each step of the Wildlife response. During the various phases of Wildlife cleaning (holding pen, carcass wrapping), waste will be created. Washing Wildlife will cause waste water (e.g., oil with detergent), which will need to be managed (through existing Waste Management Plans or by establishing additional plans as needed). Medical waste (e.g., syringes and gloves) should be considered. The response plan will identify the legislation and the authorities responsible for waste management.

4.5.10 Demobilization

Regardless of the scale of a Wildlife Emergency, the WRP will describe any processes or considerations for demobilizing Wildlife response activities. As appropriate, demobilization will be scaled in accordance with the size of Wildlife response (e.g., decreased intake of contaminated Wildlife) and must be approved by the Incident Command.

This section of the plan will discuss, as applicable:

- processes for demobilizing equipment, facilities, and personnel
- processes for ongoing involvement in the ICP or post-response impact assessment and monitoring
- processes for chain of custody of data to support enforcement decisions
- processes by which the RP can continue to receive advice and support from ECCC-CWS

4.6 Information Management and Reporting

This section of a WRP should describe how information collected throughout the operational periods of the WRP would be managed, organized, vetted, and reported on. It should include:

- the type of data being collected (e.g., inventory, photos, videos, GIS)
- the personnel that will collect, organize, and vet the data
- the process for maintaining data records during and after the incident
- the process for integrating Wildlife data and activities into an incident information system (often referred to as the Common Operating Picture) within an ICP
- who data will be reported to, including the type and frequency of reports (e.g., daily email tabular summaries to the Environmental Unit Leader)
- how information is disseminated to agencies responsible for overseeing response

4.6.1 Wildlife Reporting From the Public (Wildlife Hotline)

Within the initial phases of an ICP being established where there are potential impacts to Wildlife, ECCC-CWS should ensure that reports of impacted Wildlife are directed to the Environmental Unit by way of a 24-hour hotline (or other reporting mechanism created for an incident). The contact information and instructions to the public for the 24-hour hotline should be outlined in the WRP. This may include the use of already existing environmental emergencies reporting systems, or the development of new hotlines as required for the scale of the incident. The Wildlife hotline may also serve as a platform to relay incident-specific safety information to the public (e.g., avoiding direct contact with contaminated Wildlife).

4.6.2 Media Relations

Media statements help to inform the public and raise awareness regarding Wildlife concerns and treatment, as well as public safety. The WRP should identify how Wildlife response activities will be reported to the public through media statements, and who within the Environmental Unit or Wildlife Branch are responsible for informing them. Generally, Wildlife Branch Response Director and the incident's Information Officer will jointly develop these statements, with relevant input from Wildlife Technical Specialist(s) and/or Environmental Unit Lead. Where appropriate, public statements involving Wildlife will also be vetted and approved by the ECCC-CWS technical specialists, Media Relations, and the Regional Director.

4.6.3 Permits Reporting

Certain permits which may be issued prior to or during an incident may also have reporting requirements. Most ECCC-CWS issued permits require reporting of activities within 30 days of the permit expiry.

4.7 Health and Safety

Responder safety is of paramount importance when initiating Wildlife response activities. Activities recommended and implemented as part of a WRP will adhere to the incident-specific health and safety plan and be identified in consultation with the Incident Safety Officer. A brief overview of health and safety considerations and requirements will be described in the WRP, with specific mention of Wildlife responder personal protective equipment, zoonoses, and site safety and security (including areas off limits to Wildlife responders). This section will evolve over the course of the incident.

4.7.1 Personal Protective Equipment

For Wildlife management and response activities proposed in a WRP, responders will have appropriate training and equipment for safely operating in shoreline, marine, or aerial environments (depending on incident location and response activities) and for contaminated Wildlife handling within a rehabilitation setting. Responders will have appropriate equipment and clothing to operate for extended periods and that protect against environmental exposure or incident-specific conditions. Basic personal protective equipment recommended for Wildlife management and monitoring activities includes:

- eye protection (e.g., sunglasses, goggles, safety glasses, or face shield)
- oil-resistant rain gear or oil protective clothing (e.g., coated Tyvek, Saranex, etc.)
- water and oil resistant hand protection (e.g., neoprene or nitrile rubber)
- waterproof and oil resistant non-skid boots; steel-toes may be required under the incident-specific health and safety plan
- hearing protection (muff or ear plug type)

- personal flotation device when working on, near, or over water
- air monitoring device when appropriate
- specific gear appropriate for work where personnel are or may be submersed in water (wet suits, dry suits, survival gear)
- species-specific capture and protective gear (welding gloves, steel toed boots etc.)

The above list should not be considered comprehensive or applicable to all incidents. Additional incident-specific and specialized equipment may be required for other aspects of Wildlife response and will be developed in consultation with WROs and the Safety Officer.

4.7.2 Zoonoses

Zoonoses are infectious diseases that may be transmitted between animals and humans under natural conditions. Personnel handling or coming into contact with Wildlife are at risk of zoonotic disease exposure. Veterinarians, technicians, response personnel, Wildlife handlers, and other animal care personnel who come into direct or indirect contact with Wildlife or any body fluids are at risk of contact with disease agents that may have zoonotic potential. Organisms that may cause or transmit zoonotic diseases include many classifications from viruses, fungi, and bacteria to internal and external parasites. The WRP will describe biosecurity practices that will be employed in all aspects of Wildlife response to reduce risk of disease transmission.

4.7.3 Biosecurity

Biosecurity is a set of preventative measures that reduce the risk of transmission of infectious diseases, pests, and invasive species. Where there is potential for response measures (both overall incident response and Wildlife-specific response) to contribute to issues involving biosecurity, the WRP will outline a suite of measures to control for these risks.

4.8 Personnel Requirements

There are many personnel that could be involved in various aspects of WRP implementation. Certain roles, responsibilities, or authorized activities require various types of training or technical expertise.

Where applicable, the WRP will specify which activities individuals with specific training or expertise can complete. This may include outlining training standards and/or experience that may be required for specific industries, areas, or facilities. Industries and Response Organizations should consult with regional ECCC-CWS staff for guidance on relevant standards.

4.9 Facility and Equipment Requirements

As part of planning and implementing Wildlife response measures outlined in a WRP, specific equipment and facility requirements may need to be developed. The level of detail of these requirements will vary by the scale of the incident and may be more appropriately described in documents appended to the WRP. Components of equipment and facility considerations may include:

- the type and amount of equipment required
- means of transportation to support Wildlife response elements
- requirements for utilities, waste management, and security
- the nature of equipment or facility requirements (e.g., temporary, mobile, permanent)
- sources of supplies if known

Additional information to support equipment and facility planning is outlined in the *Guidelines for Establishing and Operating Treatment Facilities for Oiled Wildlife* (ECCC-CWS 2022c).

5.0 Evaluating Wildlife Response

5.1 Evaluation and Review

WRPs should be implemented and evaluated for their effectiveness within a context of adaptive management, where the results are used to refine future iterations (IPIECA 2014, Hebert and Schlieps 2018). Following a Wildlife Emergency, WRP developers and implementers should debrief on strengths and weaknesses of the plan, lessons learned, and gaps or areas for improvement (particularly for strategically developed activity- or area-based WRPs). Evaluation of the WRP should consider a) ease of implementation, b) efficiency of implementation, c) areas of practice that were or were not included, and d) whether the WRP supported the desired response outcome(s), business and legal requirements. ECCC-CWS may be consulted in this review and assist with recommendations for refinement.

5.2 Emergency Exercises

Emergency exercises are important for testing the effectiveness of WRPs, identifying potential gaps, and ensuring activity-, area- or incident-specific considerations are planned for in advance of an actual incident occurring (IPIECA 2014). Exercises also allow for government and industry partners to work together and familiarize themselves with the personnel and resources available to support Wildlife response activities. Exercises can also be an excellent means to provide training, or to test certain response strategies in a controlled setting.

Emergency exercises can take place in several formats: notifications, tabletop, field drills, and participation in the Environmental Unit or Wildlife Branch of an ICP. Each exercise will be planned with specific Wildlife response focused objectives in mind, and may center on testing particular aspects of the WRP. WRPs should be updated and revised to incorporate identified gaps and lessons learned into the plans.

6.0 Custodian

The custodian for the *Guidelines for Wildlife Response Plans* and any amendments thereto is the:

Director General, Regional Operations Directorate
ECCC-CWS
ECCC

The approval of future updates is vested to the Director General, Regional Operations Directorate, ECCC-CWS.

7.0 Acknowledgements

This publication represents the collective efforts of many members of the ECCC-CWS National Wildlife Emergency Response Working Group (François Bolduc, Daniel Bordage, Andrew Boyne, Brigitte Collins, Jean-François Dufour, Kevin Fort, Carina Gjerdrum, Jeanette Goulet, Jack Hughes, Nancy Hughes, Lesley Howes, Vicky Johnston, Raphael Lavoie, Jim Leafloor, Erika Lok, Craig Machtans, Kim Mawhinney, Ruth Milkereit, Dave Moore, Patrick O'Hara, Mia Pelletier, Lisa Pirie, Jennifer Provencher, Greg Robertson, Myra Robertson, Rob Ronconi, Pierre Ryan, Saul Schneider, Chris Sharp, Eric Shear, Marielle Thillet, Graham Thomas, Mike Watmough, Becky Whittam, Sabina Wilhelm, Megan Willie, and Sydney Worthman) and the ECCC-CWS Permits Working Group. Additional review and comments were provided by Tri-State Bird Rescue and Research (Ryan Wheeler), and Focus Wildlife (Jenny Schlieps, Charlie Hebert). This document is a product of ECCC.

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Appendix A: Wildlife Emergency Response Plan Example Template

The following is a recommended outline for a Wildlife Response Plan. To obtain a complete, annotated template, please contact your regional Canadian Wildlife Services Wildlife Emergency Response Coordinator.

Recommended Table of Contents

Appendix B: Example Checklist of Wildlife Emergency Activities

Table B.1. Example Checklist of Activities to Undertake within the initial 24, 48, and 72 hours of a Wildlife Emergency (adapted from Hebert and Schlieps 2018)

Timeline	Responsibility	Action
0-24 Hours	Incident Command/ Unified Command	• Ensure appropriate notifications to relevant government departments and branches • Activate an authorized WRO
	Environmental Unit	• Compile existing information on Wildlife • Complete a Resources-at-risk form (i.e., ICS 232) • Initiate Initial Wildlife Impact Assessment • Initiate deterrence and dispersal strategy
24-48 Hours	Incident Command/ Unified Command	• Establish a Wildlife Branch under the Operations Section of the ICP • Designate a Wildlife Branch Director
	Environmental Unit and/or Wildlife Branch	• Mobilize the WRO • Continue Initial Wildlife Impact Assessment • Conduct Reconnaissance Survey • Refine deterrence and dispersal strategy • Develop Wildlife Branch organization chart • Establish a Wildlife hotline • Initiate incident-specific WRP • Initiate requests for resources (personnel, supplies, facilities, equipment) • Identify Wildlife response health and safety requirements • Ensure ongoing notifications and updates to relevant government department contacts • Identify subject matter experts that might support the ICP

Timeline	Responsibility	Action
48-72 Hours	Wildlife Branch and/or WRO	• Coordinate with the WRO to develop or modify an existing WRP, and a process for WRP implementation • Develop plan for ongoing monitoring • Conduct surveillance and monitoring surveys • Determine locations for field stabilization • Establish field staging areas • Refine incident-specific WRP • Develop internal and external communications with the Information Officer and departmental communications personnel • Ensure ongoing notifications and updates to departmental contacts

Environment and Climate Change Canada | Environnement et Changement climatique Canada

Canada

TITLE OF INCIDENT – LOCATION

WILDLIFE RESPONSE PLAN

DATE

VERSION XX | DATE

Cat. No.: xxx
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Environment and Climate Change Canada
Public Inquiries Centre
12th Floor, Fontaine Building
200 Sacré-Coeur Boulevard
Gatineau QC K1A 0H3
Telephone: 819-938-3860
Toll Free: 1-800-668-6767 (in Canada only)
Email: enviroinfo@ec.gc.ca

Aussi disponible en français

Instructions

Delete this page in the final report.

This document is formatted as a template for developing an incident-specific Wildlife Response Plan (WRP). The format of this document is intended to cover the primary essential considerations for the development and refinement of a plan throughout the course of mounting a response. This WRP planning template is limited to information necessary to meet Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS)'s planning requirements. Additional sections and information are required to address federal, provincial, territorial, municipal, or Indigenous requirements beyond the authority of ECCC-CWS. This WRP can be tailored to be specific to individual federal or provincial/territorial government jurisdiction or can be combined into a consolidated Wildlife plan depending on the needs of the incident.

Throughout this template, please note the following:

1. Regular text is 'boiler plate' language that can be retained for all Plans, no changes required
2. Text in grey highlighting provides some annotation for sections of text that should be added but need to be modified with details specific to the incident and scope of work
3. Red text must be replaced with incident-specific details embedded in a sentence
4. Blue text is a placeholder provided as an example and must be replaced based on the incident

Abstract

Abstract

Table of Contents

Version History

The version history of this document is as follows:

Version	Approval Date	Authorized Sign-Off

Authorship

This Wildlife Response Plan was developed collaboratively by the following:

Name	Agency / Organization	Contact

List of Acronyms

Acronym	Actual Name
Acronym	Actual Name
Acronym	Actual Name

Definitions

Chain of Custody: A written record for a legal sample documenting the continuity by tracing the possession of the sample from the point of collection through introduction into evidence.

Environmental Emergency: Any uncontrolled or unexpected incident involving the release (or the likelihood thereof) of a polluting substance into the environment that results or may result in an immediate or long-term harmful effect on the environment, or constitutes or may constitute a danger to human life or health. It may be caused by an industrial activity, natural emergency or by a wilful act.

Field Stabilization Site: Facility that provides initial triage, care and/or euthanasia as well as short-term holding (sometimes overnight) for Wildlife prior to transport to an Oiled Wildlife Rehabilitation Centre. It is not meant for washing oiled Wildlife and not designed for long-term care.

Incident Command: Responsible for overall management of the incident and consists of the Incident Commander, either single or unified command, and any assigned supporting staff.

Incident Commander: The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and release of resources. The Incident Commander has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

Lead Agency: The governmental authority that regulates or has legislative authority over the responsible parties' response and is responsible for overseeing the appropriateness of the response.

Migratory Bird: As defined in the *Migratory Birds Convention Act, 1994*, a Migratory Bird referred to in the Convention, and includes the sperm, eggs, embryos, tissue cultures and parts of the bird of species listed under Article 1 of the Convention (Government of Canada 2017).

National Wildlife Area: A protected area created under the *Canada Wildlife Act* that contains nationally significant habitats for plants and animals and that is managed for the purposes of wildlife conservation, research and interpretation.

Non-Pollution Incident: An uncontrolled or unexpected Wildlife injury or mortality event other than a Pollution Incident.

Pollution Incident: The release or deposit of a substance that is harmful to Wildlife into an area or waters that are frequented by Wildlife or into a place from which the harmful substance may enter an area or waters frequented by Wildlife.

Response Organization: Any qualified person or organization that has been certified and designated by the Minister of Transport to carry out emergency response activities (as per the revised *Canada Shipping Act* (2001)). In Canada, there are four Response Organizations as follows: Atlantic Emergency Response Team, Eastern Canada Response Corporation Ltd., Western Canada Marine Response Corporation, and Point Tupper Marine Services Ltd.

Responsible Party: Any person or organization who might be responsible for the source or cause of an environmental emergency and/or a Wildlife Emergency.

SARA-listed Species: *A* wildlife species listed on the List of Wildlife Species at Risk set out in Schedule 1 of the *Species at Risk Act* (SARA).

Species at Risk: As defined in the *Species at Risk Act* (S.C. 2002, c.29), means an Extirpated, Endangered or Threatened species, or a species of Special Concern.

Unified Command: An application of the Incident Command System, used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated members of the Unified Command to establish a common set of objectives and strategies and a single Incident Action Plan.

Wildlife: In this document, "Wildlife" is used to refer to the terms Migratory Birds as defined under the *Migratory Birds Convention Act,* and listed Species at Risk as those terms are defined under the *Species at Risk Act* for species falling within the jurisdiction of the Minister of Environment and Climate Change (with the exception of individuals of SARA-listed Species that are located on lands administered by Parks Canada). This term also refers to all wild species occurring in the National Wildlife Areas set out on Schedule I of the *Wildlife Area Regulations* (C.R.C., c. 1609).

Wildlife Emergency: A Pollution or Non-Pollution Incident that results or may result in an immediate and/or long-term harmful effect on the life or health of Wildlife and/or their habitat.

Wildlife Response Plan: A document that outlines the initial and ongoing Wildlife-related strategies that are needed to support any Wildlife response objectives that may occur at the onset of a Pollution or Non-Pollution Incident.

Wildlife Response Organization: Organizations that provide expertise, capabilities and trained personnel to undertake one or several aspects of response, including planning, implementation and reporting of activities related to Wildlife Emergencies. Wildlife Response Organizations (or representatives thereof) are authorized under applicable federal, provincial, and/or territorial legislation to capture, transport, clean, rehabilitate, euthanize, and release Wildlife.

[Insert/remove definitions as needed]

1.0 Introduction

Paragraph 1: *Provide a brief, 1-paragraph description of the incident, including the type of vehicle/vessel involved, type of release (product(s), estimated volume(s), general location and time of year of incident, general habitat characteristics.*

Example:

On November 6, 2018, the Athena Contain Ship rain aground on Arachne Reef, south of Moresby Island. The grounding resulted in a puncture to the starboard side fuel tank, resulting in a release of approximately 300 tonnes of heavy fuel oil (HFO) per hour. As of the initiation of the Incident Command Post at 0730 h on November 7, 2020, 5,000 tonnes of HFO had been reportedly released.

Paragraph 2: *Describe the potential impacts, potentially affected species and corresponding federal or provincial legislation and departmental authorities based on the nature of the incident. This could include Migratory Birds (e.g., Migratory Birds Convention Act), Species at Risk (e.g., SARA), Canada Wildlife Act (CWA), provincial species. Consider if separate definitions for Wildlife and habitat need to be provided based on anticipated impacts to marine, aquatic, or terrestrial plants, etc.*

Example:

Potential impacts to Migratory Birds and species designated on Schedule 1 under the Species at Risk Act (SARA) under Environment and Climate Change Canada (ECCC)'s jurisdiction (hereto collectively referred to as Wildlife), and their habitats, have been identified as a potential concern.

The purpose of this Wildlife Response Plan (the WRP) is to summarize primary resources at risk and strategies to assess, monitor, control, and recover Wildlife that are known, or have potential to be impacted by a Pollution of a Non-Pollution Incident. The Plan is also intended to prevent unaffected Wildlife from coming into contact with impacted habitats or individuals. Guidance provided within is consistent with the *National Policy on Wildlife Emergency Response* (ECCC-CWS 2021) and supporting guidance documents.

This Plan reflects current knowledge of environmental and incident conditions. The Plan will be amended, as necessary, to reflect changing conditions and input from applicable agencies, stakeholders, and the [insert name of the Responsible Party (RP)]. As part of the Incident Command System (ICS), activities within this Plan should be implemented under direction of the Wildlife Branch Director and/or appropriate Wildlife technical specialist(s) of The Environmental Unit, and be undertaken or supervised by qualified personnel, as indicated herein.

2.0 Agency Notification Procedures

This section describes the government agencies, organizations and/or individuals that should be contacted during incidents involving Wildlife, and the level of potential risk that warrants immediate concerns and notification requirements to each.

Wildlife concerns will be communicated to the Environmental Unit Lead(s) and directed to the appropriate technical specialist(s) (Table 1).

Table 1. Wildlife Agency Contacts

Role	Agency	Contact(s)	Phone	Email
Environmental Unit Lead				
Wildlife Branch Director				
Migratory Bird and Species at Risk Technical Specialist				
Wildlife Response Organization*				

* Should be contacted at the recommendation of the Incident Command, Environmental Unit and request of the RP

The Lead Agency and/or Environmental Unit Lead should ensure ECCC-CWS is alerted as early as feasible in an incident, if certain criteria are met. Examples of these include:

- If large groups (100+ individuals) of dead birds on shore or on the water are observed
- If there is any sign of Migratory Birds demonstrating signs of oiling
- If there is any sign of species at risk located on any federal land demonstrating signs of oiling
- If any sign of oil reaching a National Wildlife Area (NWA)

3.0 Regulatory Requirements

This section provides a brief description of the applicable Wildlife legislation, where it applies, and whether supporting authorizations are required to support a response. Where authorizations are identified, the table in this section will highlight a) what it is for, b) the issuing agency, c) activities that are authorized, d) who holds authorization to conduct those activities, e) if a technical specialist or qualified professional is required to supervise or participate in the authorized activity (e.g., ECCC-CWS or a Wildlife Response Organization (WRO) will supervise Migratory Bird deterrent and dispersal activities), and f) reporting requirements, if any, for these authorizations.

Federal regulations applicable to the incident are:

- ***Migratory Birds Convention Act* (MBCA) and the *Migratory Birds Regulations* (MBR):** Section 5 of the MBCA prohibits the deposit of harmful substances into waters or areas frequented by Migratory Birds, unless authorized under the *Canada Shipping Act*, or the substance is of a type and quantity, and the deposit is made under conditions, authorized under an Act of Parliament other than the *Canada Shipping Act*, 2001 or authorized for scientific purposes by the Minister of Environment and Climate Change. Section 6 of the MBR made under the MBCA prohibits the disturbance, destruction, taking of a nest, egg, nest shelter, Eider Duck shelter or duck box of a Migratory Bird, or anyone from having in his possession a live Migratory Bird, or a carcass, skin, nest or egg of a Migratory Bird. The MBR regulate the hunting of Migratory Birds and other circumstances under which the killing, capturing of and harming of

Migratory Birds may be authorized. The *Migratory Bird Sanctuary Regulations* (MBSR) further regulate activities related to Migratory Birds and their habitats within designated Migratory Bird Sanctuaries. Permits may be issued to authorize the permit holder to undertake activities that are otherwise prohibited (Government of Canada 2017).

- ***Species at Risk Act* (SARA):** SARA permits are required for activities affecting a SARA-listed Species, any part of its critical habitat or the residences of its individuals. For the purpose of SARA, an "activity affecting" means any activity prohibited under the Act or its regulations. Section 73 of SARA authorizes the issuance of permits for activities affecting a SARA-listed Species, any part of its critical habitat or the residences of its individuals, and sets out conditions that must be met before a competent minister can issue a permit. SARA prohibitions apply to any species listed on Schedule 1 as Threatened, Endangered or Extirpated, but do not apply to species listed as Special Concern.
- ***Canada Wildlife Act* (CWA):** The CWA allows for the establishment of National Wildlife Areas (NWAs), which protect wildlife habitat in Canada. The *Wildlife Area Regulations* identify all NWAs and prohibit certain activities from occurring within NWAs, but Section 3.4 of the *Wildlife Area Regulations* provides exemptions for the prohibited activities within the NWAs in the event of an emergency response effort (e.g., ensuring public safety and national security). The Scott Islands marine NWA has its own regulations, *Scott Islands Protected Marine Area Regulations*, which also provide exemptions for the prohibited activities in the event of an emergency response effort.

3.1 Permits and Authorizations

The use of deterrence for dispersal, capture, collection, and treatment of impacted Wildlife will require permits and/or authorizations from the agencies responsible for Wildlife. These permits and/or authorizations are summarized in Table 2; copies of issued permits are provided in Appendix A.

Table 2. Wildlife Permit and Authorization Requirements

Wildlife	Permit Type	Activities that Require Permits or Authorization	Permit Holders
Migratory Birds (including SARA-listed Species)	Scientific (for collection)	• possession • transportation • collection/capture • treatment/rehabilitation/care • euthanasia	Individuals of WROs are generally permitted for most activities. Subcontractors or independent contractors may be permitted for specific activities through one or several permits.
	Scientific (for capture and banding)	• capturing • banding • using auxiliary markers (e.g., color bands and GPS transmitters) • collection of biological samples	
	SARA Section 73/74 permit	• destruction of protected critical habitat	SARA permits are issued on site and situation-specific basis and must be discussed

Wildlife	Permit Type	Activities that Require Permits or Authorization	Permit Holders
		• damage or destruction of any critical habitat that could result in harming individuals of a SARA-listed Migratory Bird • damage or destruction of residences of a SARA-listed Migratory Bird	early in response activities, as appropriate.
Any SARA-listed Species other than Migratory Birds (on any federal land including NWAs, and any land affected by an order or regulation made under SARA)	SARA Section 73 permit	• collection, taking, possession • transportation/relocation • capture/marking • treatment/rehabilitation/care • euthanasia • harassing, including deterrence and dispersal • exclusion barriers / trenches • damage or destruction of critical habitat • damage or destruction of residences • Any activity specifically prohibited by a Section 80 emergency order, or by a regulation made under SARA	SARA permits are issued on site- and situation-specific basis and must be discussed early in response activities, as appropriate.
Migratory Bird Sanctuaries	Scientific (Collection)	• operations occurring on Migratory Bird Sanctuaries	Migratory Bird Sanctuary permits are issued on a site-specific basis and will be developed early in response activities.
Raptors and non-Migratory Birds (bald eagles, cormorants, ravens, crows etc.), terrestrial Wildlife	Provincial or territorial authority	• collection • transportation • holding • treating • deterrence and dispersal	Contact provincial or territorial authority representative through the Environmental Unit for authorization or permit.

Note: The permitting process and the types of activities requiring permits is subject to change periodically as regulations are updated. Individuals/organizations should seek up to date advice on permitting from ECCC-CWS permit officers.

4.0 Resources at Risk

This section will be a brief, high-level summary of the key species and species groups, habitats, and supporting on-site evidence of Wildlife resources at risk. It may draw from information gathered in development of an ICS 232 form.

The identification of resources at risk is an ongoing priority of the Environmental Unit. Wildlife have differing likelihoods of being affected based on patterns in habitat use, seasonal occurrence, and behaviours relative to the area of release.

4.1 Geographic Extent

The current scope of review of resources at risk focuses on the incident area [insert a description of the incident area] (see Figure X).

4.2 Migratory Bird Sensitivities

Table 3 provides a list of the species that potentially occur in the incident area during the time of the incident. Images of common species are provided in Appendix B.

Table 3. Migratory Bird Species Expected to be Present in [insert incident location] in [insert season]

Bird Guild	Species
Pelagic Seabirds	• Common Murre and Rhinoceros Auklet common in nearshore areas
Gulls, Terns, Allies	• Glaucous-winged Gull and Mew Gull may be widespread throughout this area (hundreds of individuals) • Increasing numbers of other species, including California Gulls are observed in the fall • Total gull numbers fluctuate but may exceed several thousands
Loons, Grebes, Cormorants, Pelicans	• Pelagic Cormorant and Pacific Loon occur in low numbers in fall • Red-necked Grebe occurs in the low hundreds (~350 birds) • Western Grebe (SARA Special Concern) can occur in the hundreds to thousands (≤1,500 birds) in the fall • Collectively, numbers of Red-necked, Western, and Horned Grebes may exceed 5,000 birds in the fall, particularly in Bearskin Bay
Geese, Swans, Dabbling Ducks	• Brant, Canada Goose, and Greater White-fronted Goose may occur in large aggregations during migratory movements. Upwards of several hundred geese may occur at one time • Habitats near Lina and Robertson Island may be staging areas for geese
Herons, Cranes, Allies	• Herons occur at low densities in the fall
Shorebirds	• Large numbers of Black Turnstone (~230 birds) and Black Oystercatcher (~200 birds) may occur in the fall; areas towards

Bird Guild	Species
	Skidegate Landing, Transit Island, Lina Island, Charlotte Island, and islets in Bearskin Bay support fall aggregations of Black Oystercatcher and Black Turnstone • Additional species include Spotted Sandpiper, Wandering Tattler, and phalarope species
Sea Ducks and Diving Ducks	• May occur in low numbers in early fall, increasing as birds return from breeding grounds; upwards of 5,000 White-winged Scoter, Surf Scoter, Harlequin Duck, and Bufflehead may occur • The area between Lina Island and Robertson Island, including the immediate area in the vicinity of the incident is recognized as a molting location for several thousand scoters between August and September

4.3 Species at Risk Sensitivities

4.3.1 Avian Species at Risk

[Insert number of species] SARA-listed Species have potential to occur in this region:

- Great Blue Heron, fannini subspecies, year-round (SARA Special Concern, Schedule 1)
- Marbled Murrelet, year-round (SARA Threatened, Schedule 1)

4.3.2 Other Species at Risk

[Insert number of species] SARA-listed Species have potential to occur in this region:

- Western Toad, year-round (SARA Special Concern, Schedule 1)

4.4 Habitat Sensitivities

All Wildlife habitats have ecological values for Wildlife whether actively occupied or not. *Provide a description of where Wildlife are expected to be present based on time of year (e.g., in fall, colonial seabirds will have dispersed from breeding colonies). Also consider details on mitigations related to habitats including priority sites, protection measures, clean-up restrictions, and information relevant to Net Environmental Benefits Assessment (NEBA) or Spill Impact Mitigation Assessment (SIMA).*

Primary habitats of importance in the area are summarized in Table 4.

Table 4. Wildlife Habitats in the [insert area of the incident]

Habitat Type	Location	Description
Important Bird Area		
Seabird Colony		
Critical Habitat		
Estuary		

Habitat Type	Location	Description
Other important areas (e.g., nesting areas, seasonal stopover, molting, or staging areas, Ecologically and Biologically Significant Areas, Ramsar Sites, Western Hemisphere Shorebird Reserve Network, Sea Duck Key Habitat Sites Atlas, etc.)		

4.5 Wildlife Observations

Onsite personnel have indicated the following Wildlife were observed within the area of the incident during the Initial Wildlife Impact Assessment (see Table 5).

Table 5. Wildlife Observed on [insert date] in [insert description of area]

Record of Wildlife Observations													
Zone	**Habitat**	**Time**	**Species**	**Total #**	**Contaminated Birds**								**Deterrence Possible?**
					Degree of Contamination							**Notes**	
					0	**1**	**2**	**3**	**4**	**?**	**Diff**		
A	Marsh	12:00	Common Loon	2		2						Adults. Preening excessively	Y
B	Shore	12:05	Common Murre	3	3							at Lighthouse beach	Y

[insert figure of resource sensitivities]

Figure X. Migratory Bird, Species at Risk, and Habitat Sensitivities in the [insert name of incident area]

5.0 Wildlife Management and Response

This section will describe the nature of Wildlife management and response activities that are or will be undertaken as part of the incident. This section will be revised as an incident evolves. Where appropriate, aspects of Wildlife management and response may warrant standalone plans that could be appended and referenced in this section. At minimum, it will describe initial approaches for Wildlife impact assessment (e.g., reconnaissance and monitoring activities), but potentially include:

- *Operational objectives*
- *Initial Wildlife Impact Assessment (0 to 24 hours)*
- *Reconnaissance surveys (aerial, vessel, shore) (0 to 48 hours)*
- *Surveillance and monitoring surveys (aerial, vessel, shore) (48 hours onwards)*
- *Deterrence and dispersal*
- *Wildlife capture, transport, rehabilitation, release, and/or euthanasia*
- *Wildlife exclusion, pre-emptive capture and relocation*
- *Wildlife carcass collection*
- *Demobilization*

5.1 Operational Objectives

This section will briefly describe the primary objectives for the activities that will be implemented during the operational period(s) this plan is expected to apply to until its next revision. Objectives will change based on Wildlife concerns as well as personnel and equipment resource availability. These objectives form the basis for subsequent activities described in this section.

This version of the WRP is intended to support the following operational objectives. A revised WRP will be developed as changes to the operational objectives are identified and need to be addressed in this plan.

- Remove dead, oiled Wildlife from the environment to reduce interaction and contamination of non-polluted Wildlife and habitats
- Identify the numbers and species present in areas at risk of contamination during the next three operational periods
- Identify area- or species-based strategies to limit interaction between live, uncontaminated Wildlife and potential contaminants
- Capture and stabilize up to 10 individual impacted Migratory Birds while rehabilitation facilities are established
- Track reports of oiled and distressed Wildlife as reported through the Wildlife hotline

These operational objectives will be implemented as specified below, according to the structure and function of the Wildlife Branch for this operation period (see Appendix C).

5.2 Initial Wildlife Impact Assessment (0 to 24 hours)

In order to effectively direct Wildlife response efforts, an Initial Wildlife Impact Assessment needs to be conducted to determine:

- *Existing information on Wildlife, including initial site observations from response partners*
- *Current/initial estimates of Wildlife impacts*
- *Projection of potential impacts to Wildlife*
- *Initial Wildlife response recommendations*
- *Initial habitat protection recommendations*
- *Initial resource, personnel, equipment, and facility requirements*

5.3 Reconnaissance Surveys (24 to 48 hours)

Reconnaissance surveys will be conducted in a timely manner on a large geographic scale to assess the outer limits of the incident. Reconnaissance surveys serve to obtain current information on impacted habitats, areas of special concern (e.g. colonial nesting areas) and the abundance and distribution of Wildlife within the general area to obtain an accurate account of Wildlife in the area of the incident. Standardized protocols have been developed for conducting Migratory Bird surveys during an emergency response in Canada. The following direction is summarized from the Guidance and Protocols for Wildlife Surveys for Emergency Response (ECCC-CWS 2022a). Please refer to the report for full details.

5.3.1 Objectives

Initial reconnaissance surveys will take place as early in the response as possible to determine current conditions and inform potential response priorities and strategies. Reconnaissance may occur from land, boat, or air. In all cases, reconnaissance will extend, at minimum, to the expected geographic limits of the incident area, recognizing those boundaries may change as the incident progresses. These reconnaissance surveys help identify the most suitable approaches for the surveillance or monitoring phase of the response.

Primary objectives of reconnaissance surveys are to:

- *Determine the geographic scale of the incident*
- *Identify Wildlife and habitats that have already been impacted*
- *Estimate relative abundance and distribution of Wildlife with potential to be impacted*
- *Evaluate key habitats of importance to Wildlife with potential to be impacted*
- *Inform development of appropriate response strategies*
- *Inform mitigation activities to minimize further damage to Wildlife*
- *Inform suitability of various survey methods (i.e., shore, boat, or aerial surveys) for subsequent surveillance or monitoring for the duration of the incident*
- *Inform Incident Command on the status of known or potential impact on Wildlife*

5.3.2 Survey Methods

Table 6 provides detailed information to record for reconnaissance surveys. An example datasheet is provided in Appendix D.

Table 6. Recording Survey and Wildlife Information for Reconnaissance Surveys

Organization	Record the company, agency, or organization that requested the surveys.
Platform name and type	Record the name and type of platform used to complete the survey (i.e., shore, boat and boat type, plane, helicopter).
Observer(s)	Indicate the first and last name of the primary observer.
Observer(s)' affiliation	Indicate the affiliation of the primary observer.
Date	Date that the observation period occurred. Use format DD-MMM-YYYY (e.g., 12-Apr-2021) to avoid ambiguity.
Start and End Time	Record the time (using 24-hour notation) at the start and end of the observation period. Stationary surveys are considered an instantaneous scan of the area and therefore only the start time is required.
Location(s)	Indicate position of platform in either decimal degrees (e.g., 47.5185) or degree decimal minutes (e.g., 47˚ 31.11') depending on which format is available to you. Record observation location continuously if completing a moving survey.
Scan	Indicate scan type and direction, speed (if moving platform) and altitude (if aerial survey).
Weather Conditions	Record the general weather conditions at the time of the survey. Include notes on visibility (km), weather condition code, glare, sea state, wave height, true wind speed and direction, ice type and concentration code, precipitation.
Species	Where possible, record the exact species using photos if necessary to provide for reference later. If species is unknown, try to narrow down the species group as much as possible (e.g., gull, loon, shorebird). For mixed flocks, try to separate out species or groups as possible. Record the size, colouring, and behaviour to assist with post-survey species identification.
Number of Individuals	Record the number of individuals to the greatest level of accuracy possible.
Distance	Record the distance of the individual or groups from the observer.
Behaviour	At minimum, record whether individuals are in the air, on the water, or on the shore. If possible, record if individuals are resting or feeding. For birds, record fly direction.
Age	Where possible, record age of individual (juvenile, immature, or adult).
Plumage (for birds)	Where possible, record plumage (breeding, non-breeding, or moult).
Sex	Where possible, record sex of individual.
Degree of contamination	Where possible, record the degree of contamination and the number of individuals for each category.
Comments	Provide other relevant comments that would be useful to report back to the Wildlife Branch Director or Technical Specialist(s). For example, associations with incident site or response activities.

5.3.3 Survey Results

Include a summary of the highlights of reconnaissance survey results.

5.4 Surveillance (Monitoring) Surveys (48 to 72 hours and onwards)

If impacts to Wildlife or their habitats are known or anticipated, Wildlife Branch will develop a systematic surveillance (monitoring) survey program with an appropriate temporal and geographic scope. If surveillance is required, the RP will secure qualified personnel to develop and execute the program and who will report to Wildlife Branch Director and/or Wildlife Technical Specialist(s). The methods and general approach(es) may be described in strategic WRPs and ECCC-CWS can advise on survey design and implementation for incident-specific WRPs, consistent with the Guidance and Protocols for Wildlife Surveys for Emergency Response (ECCC-CWS 2022a).

Primary objectives of surveillance surveys are to:

- *Monitor and refine the identification of Wildlife and habitats in the impacted area*
- *Monitor and identify areas where Wildlife would be potentially at risk from further impacts*
- *Monitor and refine estimates of abundance and distribution of Wildlife in the impacted area*
- *Monitor and estimate Wildlife densities for damage assessment*
- *Monitor and estimate number of dead and moribund Wildlife affected by incident*
- *Identify areas where affected Wildlife can be collected*
- *Inform other response activities such as habitat protection and Wildlife deterrence and dispersal*
- *Inform Incident Command*

5.5 Deterrence and Dispersal

The Wildlife Branch will continually assess options for moving Wildlife beyond the area of impact. If avian deterrence or dispersal is determined to be appropriate, the RP will retain a qualified and authorized WRO to develop and execute an avian deterrence and dispersal program and plan. In the absence of an RP, the Lead Agency may develop and execute a Wildlife deterrence and dispersal program. The program will follow available guidance and consult with ECCC-CWS.

If Migratory Birds are observed or are likely to be near an incident, the Wildlife Branch Director will consult with the Wildlife Technical Specialist(s) whether to develop a deterrence and dispersal plan for those species. Deterrence activities will be determined on a species-specific and location-specific basis that considers the following factors:

- *What is the location and/or the extent of the spill*
- *Where are alternative species-appropriate habitats that birds can be dispersed to*
- *What species are present or likely to be at risk*
- *What is the life history status of the birds present (e.g., roosting, staging, breeding)*
- *What qualified personnel and equipment is available with experience and knowledge for deterrent use and Wildlife dispersal*
- *What are the environmental conditions*

- *Can the deterrence and dispersal plan be enacted in a safe manner for response personnel and Wildlife*

When appropriate, deterrence and dispersal of Wildlife can be an effective means to deter Wildlife from moving into or near the incident area and coming into contact with contaminants. Deterrence and dispersal will be conducted only by appropriately trained personnel with applicable authorizations, and under direct guidance and supervision (as required) from the Wildlife Branch Director and/or Wildlife Technical Specialist(s).

5.6 Exclusion, Pre-emptive Capture, and Relocation

Exclusion, pre-emptive Wildlife capture, and relocation seeks to dissuade Wildlife from impacted areas before they are affected during a Wildlife Emergency. Planning for Wildlife exclusion or capture requires considerations for equipment, personnel as well as capture, transport, holding, and release strategies. If pre-emptively captured Wildlife need to be contained for a period of time, a WRO authorized to carry out these activities must be identified to provide appropriate species-specific housing, nutritional support, and medical care (if necessary) for a potentially extended period. Guidance and protocols on pre-emptive capture and care for Wildlife during a Pollution Incident are described in the Guidelines for the Capture, Transport, Cleaning, and Rehabilitation of Oiled Wildlife (ECCC-CWS 2022b). Where appropriate, the WRP will describe plans for Wildlife capture and relocation activities.

5.7 Wildlife Capture, Transport, Rehabilitation, Release, and/or Euthanasia

This section will describe, as applicable, tactical plans associated with all phases of Wildlife treatment from capture through to release or euthanasia. This section may evolve over the course of the incident to include details on the number of monitoring and field staging facilities, capture procedures, rehabilitation facilities, as well as coordination of rehabilitation personnel. Table 7 provides an overview of relevant phases, which will be expanded upon in a full WRP as those activities are required.

Where Wildlife capture, transport, rehabilitation, release, and/or euthanasia are considered appropriate, the [insert name of the RP] will retain a qualified and authorized WRO to develop and execute these phases of response. These programs must adhere to the Guidelines for the Capture, Transport, Cleaning, and Rehabilitation of Oiled Wildlife (ECCC-CWS 2022b), and Guidelines for Establishing and Operating Treatment Facilities for Oiled Wildlife (ECCC-CWS 2022c).

Table 7 summarizes the phases of Wildlife capture, containment, and response.

Table 7. Phases of Wildlife Capture, Transport, Rehabilitation, Release, and/or Euthanasia

Phase	Objectives
Pre-emptive Capture	• The capture of Wildlife that is at risk of being impacted • Transport of Wildlife to a holding facility
Capture	• The capture of impacted Wildlife • Transport of Wildlife to Field Stabilization Site or Oiled Wildlife Rehabilitation Centre

Phase	Objectives
Field Stabilization	• Physical evaluation • Removal of gross contaminants • Thermoregulatory support • Fluid therapy and nutritional support • Address life threatening conditions • Euthanasia evaluations based on established criteria and best practices
Transportation	• Transport of contaminated animals from field or Field Stabilization Site to an Oiled Wildlife Rehabilitation Centre
Processing	• Evidence collection • Birds given individual, temporary band • Feather/fur sample • Photograph • Individual medical record
Intake	• Medical examination, triage, and treatment plan development • Critical care concerns addressed • Euthanasia evaluations based on established criteria and best practices
Triage	• Ongoing euthanasia and treatment plan evaluation based on medical health status
Euthanasia	• Euthanize Wildlife that are assessed by the WRO as not being good candidates for rehabilitation or survival
Stabilization	• Fluid, nutritional and medical stabilization of impacted animals • 48–72 hours period • Prepare animals for cleaning process
Cleaning	• Removal of all contaminants from an impacted animal by washing • Removal of the cleaning agent by rinsing • Drying cleaned and rinsed animal
Conditioning	• Restoring waterproofing and physical condition
Release	• Federal banding of individual animals • Consider additional tracking devices on some birds to track post-release • Release of cleaned, waterproof animals into a clean environment
Post-release Monitoring	• Determining the effectiveness of rehabilitation of Wildlife impacted during a Pollution Incident • Monitoring the clean Wildlife's condition and activities • Following short-term and long-term survival and breeding status following rehabilitation

5.8 Wildlife Carcass Collection Procedures

Dead Wildlife will be removed from the environment to avoid attracting scavengers to the site and secondary contamination of Wildlife. The responsibility for the collection and documentation of dead

Wildlife is primarily the responsibility of the Wildlife Branch and is completed under the supervision of authorized organizations and personnel. Wildlife recovery personnel will retrieve dead Wildlife as part of daily activities. Dead Wildlife observed by other response personnel will be reported to the Wildlife hotline. Members of the public must not pick up dead Wildlife but rather report dead Wildlife to the Hotline. The Wildlife Branch will work with the Information Officer to develop appropriate messaging. For guidance on collecting dead Wildlife during incidents, see the *Guidance and Protocols for Wildlife Surveys for Emergency Response (*ECCC-CWS 2022a*)*.

5.9 Waste Management

Plans for decontamination and disposal of waste materials will be developed. Waste and secondary pollution should be minimized at each step of the Wildlife response. During the various phases of Wildlife cleaning (holding pen, carcass wrapping), waste will be created. Washing Wildlife will cause waste water (e.g., oil with detergent), which will need to be managed. Medical waste (e.g., syringes and gloves) should be considered.

Include reference(s) to relevant waste management plan(s). These plans should identify the legislation and the authorities responsible for waste management.

5.10 Demobilization

This section of the WRP will discuss, as applicable:

- *processes for demobilizing equipment, facilities, and personnel*
- *processes for ongoing involvement in the Incident Command Post or post-response impact assessment and monitoring*
- *processes for chain of custody of data to support enforcement decisions*
- *processes by which the RP can continue to receive advice and support from ECCC-CWS*

6.0 Information Management and Reporting

This section will describe how information will be managed, organized, vetted, and reported on. It will include for each Wildlife group, a) the type of data being collected (e.g., inventory, photos, GIS), b) the personnel that will collect, organize, and vet the data for each agency, c) the process for maintaining data records during and after the incident, d) the process for integrating Wildlife data and activities into an incident information system (often referred to as the Common Operating Picture) within an Incident Command Post, e) who data is reported to, including the type and frequency of reports (e.g., daily email tabular summaries to the Environmental Unit Lead), and f) how information is disseminated to agencies responsible for overseeing response.

All Wildlife information and observations will be reported to the Wildlife Branch Director and/or Wildlife Technical Specialist(s) and include the following:

- Daily record of all Wildlife observations, including habitats of potential importance or use by Wildlife

- Submission of written notes, completed data sheets, photographs, maps, and/or GPS location information
- Oiled bird sightings, including locations and maps for all reports of oiled birds
- Field Retrieval Report, including records for all birds collected from the field
- Live Bird Intake / Admissions Log
- Dead Bird Intake / Admissions Log
- Oiled Bird Examination Report, including an individual record summary of retrieval, medical exam, diagnostic results, samples collected (chemical, blood, and tissue), cleaning, treatment, evaluation, chain-of-custody, federal bird bands, and final disposition
- Report of anticipated management and response activities for the following operational period
- Daily Summary of Actions: This report is produced daily and provides an overall status of live and dead Wildlife admissions, euthanasia, releases, and treatment status of live Wildlife patients.

Additional information will need to be reported if there is any deterrence and dispersal, collection, and rehabilitation anticipated. All Wildlife information and data will be retained by the Wildlife Branch and transferred to appropriate regulatory agencies at end of incident.

6.1 Wildlife Reporting from the Public (Wildlife Hotline)

All concerns regarding impacted Wildlife will be routed through the Environmental Unit. Observations of impacted Wildlife will be directed to the Environmental Unit through a 24-hour hotline [insert hotline number here]. The public and Wildlife responders are requested to stay away from impacted Wildlife to minimize stress to impacted animals. Under no circumstances will the public or Wildlife responders attempt to capture any impacted Wildlife, as such efforts must only be conducted by permitted and trained personnel. Unauthorized capture could endanger the safety of both individuals and the animals.

6.2 Media Relations

When the Wildlife Branch is activated, media statements regarding ongoing Wildlife response activities will be provided in order to inform the public and raise awareness regarding Wildlife concerns and treatment as well as public safety. The Wildlife Branch Director and the incident's Information Officer will jointly develop these statements, with relevant input from Wildlife Technical Specialist(s) and/or Environmental Unit Lead. Every effort must be made to assure that information release by the Information Officer and the Wildlife Branch is fully coordinated to provide a consistent message on Wildlife response efforts and Wildlife impacts. Where appropriate, public statements involving Migratory Birds must be vetted and approved by the ECCC-CWS technical specialists, Media Relations and the Regional Director.

6.3 Permits Reporting

Certain permits which may be issued prior to or during an incident may also have reporting requirements.

The WRP should specify those reporting requirements and timelines, if known at the time of plan creation.

7.0 Health and Safety

This section will provide a brief overview of safety considerations and requirements, with specific mention of personal protective equipment relevant to current activities that Wildlife responders are expected to be engaged in. This section will evolve over the course of the incident.

Responder safety is of paramount importance when initiating Wildlife response activities. Activities recommended and implemented as part of this WRP will adhere to the incident-specific site safety plan [insert reference here] and be identified in consultation with the Incident Safety Officer. Responders will have appropriate training for response activities and will wear personal protective equipment that meets minimum requirements for personal safety and contaminant or disease transmission, based on the activities they are engaged in. Detailed safety training and equipment considerations will be required if incident activities include Wildlife deterrence and dispersal, handling, collection, rehabilitation, and/or disposal.

7.1 Personal Protective Equipment

For Wildlife management and response activities proposed in this WRP, responders will have appropriate training and equipment for operating in shoreline, marine, or aerial environments (depending on incident location and response activities) and for contaminated Wildlife handling within a rehabilitation setting. Responders will have appropriate equipment and clothing to operate for extended periods and that protect against environmental exposure or incident-specific conditions. Basic personal protective equipment recommended for Wildlife management and monitoring activities include the following:

- Eye protection (e.g., sunglasses, goggles, safety glasses, or face shield)
- Oil resistant rain gear or oil protective clothing (e.g., coated Tyvek, Saranex, etc.)
- Water and oil resistant hand protection (e.g., neoprene or nitrile rubber)
- Waterproof and oil resistant non-skid boots; steel-toes may be required under the incident-specific safety plan
- Hearing protection (muff or ear plug type)
- Personal flotation device when working on, near, or over water
- Air monitoring device when appropriate
- Specific gear appropriate for work where personnel are submersed in water (wet suits, dry suits, survival gear)
- Species-specific capture and protective gear (welding gloves, steel toed boots etc.)
- [Update this list of personal protective equipment requirements according to planned response activities]

7.2 Zoonoses

Zoonoses are infectious diseases that may be transmitted between animals and humans under natural conditions. Personnel handling or coming into contact with Wildlife are at risk of zoonotic disease exposure. Veterinarians, technicians, response personnel, Wildlife handlers, and other animal care personnel who come into direct or indirect contact with Wildlife and any body fluids are at risk of contact with disease agents that may have zoonotic potential. Organisms that may cause or transmit zoonotic

diseases include many classifications from viruses, fungi, and bacteria to internal and external parasites.

Anyone whose immune system is compromised is highly susceptible to opportunistic and secondary infections with zoonotic disease agents and should not be on site of an incident. Standard biosecurity practices will be employed in all aspects of Wildlife operations to reduce risk of disease exposure.

The WRP will describe biosecurity practices that will be employed.

7.3 Biosecurity

Biosecurity is a set of preventative measures that reduce the risk of transmission of infectious diseases, pests, and invasive species.

Where there is potential for response measures (both overall incident response and Wildlife-specific response) to contribute to issues involving biosecurity, the WRP will outline a suite of measures to control for these risks.

8.0 Personnel Requirements

There are many personnel that could be involved in various aspects of WRP implementation. Certain roles, responsibilities, or authorized activities require various types of training or technical expertise.

Where applicable, the WRP will specify which activities individuals with specific training or expertise can complete.

9.0 Facility and Equipment Requirements

As part of planning and implementing Wildlife response measures outlined in a WRP, specific equipment and facility requirements may need to be developed. The level of detail of these requirements will vary by the scale of the incident and may be more appropriately described in documents appended to the WRP. Components of equipment and facility considerations may include the following:

- *The type and amount of equipment required*
- *Means of transportation to support Wildlife response elements*
- *Requirements for utilities, waste management, and security*
- *The nature of equipment or facility requirements (e.g., temporary, mobile, permanent)*
- *Sources of supplies, if known*

Additional information to support equipment and facility planning is outlined in the Guidelines for Establishing and Operating Treatment Facilities for Oiled Wildlife (ECCC-CWS 2022c).

10.0 Additional Information

11.0 Literature Cited

ECCC-CWS. 2021. National Policy on Wildlife Emergency Response. Canada. vii + 9 pages.

ECCC-CWS. 2022a. Guidance and Protocols for Wildlife Surveys for Emergency Response. Canada. x + 97 pages.

ECCC-CWS. 2022b. Guidelines for the Capture, Transport, Cleaning, and Rehabilitation of Oiled Wildlife. Canada. ix + 45 pages.

ECCC-CWS. 2022c. Guidelines for Establishing and Operating Treatment Facilities for Oiled Wildlife. Canada. viii + 32 pages.

Appendix A: Wildlife Permits

Appendix B: Images of Common Species

Appendix C: Structure, Roles, and Responsibilities of the Wildlife Branch

Appendix D: Example Datasheet of Wildlife Sightings

Example Record Sheet for Aerial Surveys			
Company/agency		Visibility (km)	
Aircraft type		Weather conditions code	
Observer(s)		Glare conditions code	
Observer(s) name(s)		Sea state code (m)	
Date (dd/mm/yyyy)		Cloud cover (%)	
Time (UTC)		Precipitation	
Latitude		Wave height (m)	
Longitude		True wind speed (knots) **OR** Beaufort code	
Altitude		True wind direction	
Speed		Ice type code	
Recorder type		Ice concentration code	
Scan type			
Scan direction			
Camera model			
Notes:			

Record of Observed Wildlife													
Zone	Habitat	Time	Species	Total #	Contaminated Birds								Deterrence Possible?
					Degree of Contamination							Notes	
					0	1	2	3	4	?	Diff		

Degree of contamination covering: 0 = no spots visible on the body, 1 = <10% of the body, 2 = 10-33% of the body, 3 = 33-66% of the body, 4 = >66% of the body. Diff = birds unable to fly, having considerable difficulty swimming, or constantly preening. Indicate the location of birds in difficulty as precisely as possible (preferably on a map)

SIPEKNE'KATIK
522 Church Street
Indian Brook, NS
B0N 2H0

Tel: 902.758.2049
Fax: 902.758.2017

February 12, 2023

Nova Scotia Environment & Climate Change
1903 Barrington Street, Suite 2085
PO Box 442, Halifax, NS B3J 2P8

RE: Port Hawkesbury Paper Goose Harbour Lake Wind Farm Project

Dear Mark McInnis,

This letter is to acknowledge receipt by the Sipekne'katik Governance Initiative (SGI) of the above-mentioned letter dated January 25, 2023 regarding the Port Hawkesbury Paper Goose Harbour Lake Wind Farm Project. The aforementioned project may impact Mi'kmaq rights, including Mi'kmaq title and self-governance. Please note that Sipekne'katik is not a party to the 2010 Mi'kmaq-Nova Scotia-Canada Consultation Terms of Reference since exiting from the agreement in 2013.

In July 2020, Sipekne'katik enacted into law the *Sipekne'katik Governance Initiative Protocol* ("the SGI Protocol"), a community-based consultation process that must be relied upon whenever the Crown and/or proponent contemplates conduct that could adversely impact Mi'kmaq rights. We are enclosing the SGI Protocol and an information brochure outlining the six-phase approach to consultation.

To address any correspondence relating to legal consultation, all projects must go through the SGI Protocol process. Therefore, we are returning the information to your office pending completion of the enclosed application form and payment of the requisite administrative fee.

The administrative fee covers the first four phases of the process, including Application Intake (Phase 1), the Preliminary Assessment of the Consultation Scope (Phase 2), the Internal Governance Review (Phase 3), and Negotiations, where required (Phase 4). The substantive community consultation process (Phase 5) is triggered when a project is identified as having significant adverse impacts to Mi'kmaq rights, including to the ecological integrity of Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. The cost of community consultation is not included in the initial administrative fee; rather, capacity funding will be negotiated during Phase 4 according to the level of consultation owed.

SIPEKNE'KATIK
522 Church Street
Indian Brook, NS
B0N 2H0
Tel: 902.758.2049
Fax: 902.758.2017

Please note that the length of the SGI Protocol process may not accord with proponent's proposed project timeline as well as legislated timelines imposed by the federal and provincial governments. Nonetheless, we require that all projects undergo the SGI Protocol process to ensure full and meaningful consultation.

Notices and information provided to Sipekne'katik reviewed pursuant to the SGI Protocol are reviewed on a without prejudice basis. Neither the consultation process nor any agreements concluded with Government or Industry Proponent(s) as a result of the participation of Sipekne'katik in the consultation process can be used to define or in any way limit Aboriginal and Treaty rights. Further, the participation of Sipekne'katik in consultation is without prejudice to any position, past, present, or future that may be taken in negotiations, litigation or in any other process, as per section 4.3 of the SGI Protocol.

The Sipekne'katik Governance initiative staff will be happy to arrange a time to meet to answer any questions and to discuss a path forward with your department or project leads. We look forward to collaborating with you in a manner consistent with the Nation-to-Nation treaty relationship.

Please ensure that you copy consultationclerk@sipeknekatik.ca in all communications with the Sipekne'katik Governance Initiative.

Sincerely,

Sipekne'katik Governance Initiative
consultation@sipeknekatik.ca
(902) 835-2869

Encl.

CC:
consultationclerk@sipeknekatik.ca
directorofoperations@sipeknekatik.ca
@sipeknekatik.ca
knekatik.ca
@gmail.com

Sipekne’katik Governance Initiative Protocol

OVERVIEW

The Sipekne’katik Governance Initiative (SGI) Protocol, “Navigating a New Path Forward,” outlines how community members want to be consulted regarding matters impacting their inherent rights and title. The Protocol was enacted into law in the summer of 2020 and represents an exercise of Sipekne’katik’s right to self-governance and self-determination. Historically, environmental assessment processes have failed to adequately address the concerns of rightsholders, including in the case of Alton Gas.

The SGI Protocol upholds the fiduciary duties owed by the Crown to rights-holders, on the one hand, and by the Sipekne’katik Chief & Council to its members, on the other.

The following six-phase regulatory process has been adopted with the aim of implementing Sipekne’katik’s right to Free, Prior & Informed Consent.

The Alton Gas site on the Shubenacadie River.
Credit: Shawn Maloney

Phase 1: Application

Application forms for each project must be completed and submitted with the requisite processing fee. The application form introduces each project, its nature, size and scope, the project timeline, the relevant legal jurisdiction(s), and the applicable legislation.

Phase 2: Scope of Consultation

Applicants are expected to complete a “Scope of Consultation” form in which they will outline the potential risks and impacts to: (a) the environment, (b) social, cultural, economic and health rights, (c) Aboriginal & Treaty Rights, and (d) Mi’kmaq title and self-governance.

Phase 3: Governance Review

The SGI Team will prepare an internal Project Report that will proceed to a three-part Governance Review by:

i) The in-house legal team;
ii) A Community Committee; and
iii) Chief & Council.

This comprehensive review will help determine whether and what level of consultation is owed. The outcome of this initial assessment must be communicated to the Crown within 90 days of the application submission.

Phase 4: Consultation Workplan & Negotiations

A Consultation Workplan with internal and external elements will be developed in cooperation with the applicant. The parties will negotiate the amount of capacity funding required to implement the Workplan.

Phase 5: Community Consultation

In Phase 5, the parties will implement the Consultation Workplan. Consultation activities can include:

i) Specialized studies on Mi’kmaq ecological knowledge and use, baseline scientific data, archaeology, etc.;
ii) Archival and historical research;
iii) Community engagement sessions;
iv) Referendum, where required.

Once consultation is complete, the parties shall work towards an Agreement in Principle.

Phase 6: Outcome

The Final Agreement shall be subject to the approval mechanism stipulated in the Consultation Workplan (e.g., Band Council Resolution, Community Referendum and/or other). Where there is consent, an Impact Benefit Agreement may be negotiated. Where there is no community consent, further consultation may be required. The parties may agree to resume negotiations.

Spectrum of Consultation

The level of consultation owed falls along a spectrum ranging from low to deep, depending on the seriousness of the potential impacts on rights.

Low

- Disclosure of relevant and accessible information
- Listen to concerns and input
- Sufficient time to discuss issues raised
- Minimize and mitigate adverse effects

Moderate

- Capacity funding
- Adjust and modify plans to accommodate concerns
- Written reasons that show that Aboriginal concerns were considered and how they impacted the decision

Deep

- Formal participation in the decision-making process
- Consent required – community referendum
- Negotiate interim satisfactory solutions
- Compensation for unavoidable infringements

Dated: July 31, 2020

SIPEKNE'KATIK GOVERNANCE INTIATIVE PROTOCOL:
Navigating A New Path Forward

Committing to a meaningful and inclusive consultation process, conducted in good faith and with the proper rights holders. Enacted pursuant to the authority of the inherent right of Sipekne'katik, as represented by the duly elected Chief and Council.

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1. PROLOGUE

1.1 Mi'kmaw Worldview

Language guides us to the Indigenous consciousness and understandings of the world and the tribal knowledge of how the world works; it is where the epistemological foundations of tribal societies are held[1]. Language reveals the unique connection of the Mi'kmaw people to the landscape in *Mi'kma'ki,* their traditional homeland for at least the last 11,000 years[2]. There are several Mi'kmaw words that are central to telling this story.

Kisu'lt melkiko'tin is the Mi'kmaw word for the place of creation, an "ecological order or vantage point from which [the Mi'kmaq] construct their worldview, language, knowledge and order"[3].

Weji-sqalia'timk translates to "where we sprouted or emerged from" and

[1] Battiste, M. 1998. Enabling the autumn seed: Toward a decolonized approach to Aboriginal knowledge, language and education. *Canadian Journal of Native Education* 22(1): 16-27. —. 2000. Introduction: Unfolding the lessons of colonization. In *Reclaiming Indigenous voice and vision*, ed. M. Battiste. Vancouver, BC: UBC Press, xvi-xxx; Kovach, M. 2009. *Indigenous methodologies: Characteristics, conversations and contexts*. Toronto, ON: University of Toronto Press; Lewis, D., Castleden, H., Apostle, R., Francis, S. & Francis-Strickland, K. (In print). Linking land displacement and environmental dispossession to Mi'kmaw health and wellbeing: Culturally relevant place-based interpretative frameworks matter. *The Canadian Geographer;* Tuhiwai Smith, L. 2012. *Decolonizing methodologies: Research and Indigenous Peoples* (2nd ed.). London, UK; Zed Books.

[2] Sable, T., B. Francis, R. Lewis, and W. Jones. 2012. *The language of this land, Mi'kma'ki*. Sydney, NS: Cape Breton University Press.

[3] Battiste, M., and J. Youngblood Henderson. 2000. *Protecting Indigenous knowledge and heritage: A global challenge.* Saskatoon, SK: Purich Publishing, Ltd; Lewis, D., Castleden, H., Apostle, R., Francis, S. & Francis-Strickland, K. (In print). Linking land displacement and environmental dispossession to Mi'kmaw health and wellbeing: Culturally relevant place-based interpretative frameworks matter. *The Canadian Geographer;* Youngblood Henderson, J. 2000. Ayukpachi: Empowering aboriginal thought. In *Reclaiming Indigenous voice and vision*, ed. M. Battiste. Vancouver, BC: UBC Press, 248-278.

expresses the Mi'kmaw cultural understanding of the origin of people as rooted in the land[4], which is integral to the cultural and spiritual psyche of the Mi'kmaq, to their language, to their social order, and to their way of being[5] . Cajete terms the relationship to the natural world as "ensoulment", a metaphysical attachment at the deepest level of psychological involvement with the land[6].

Tlilnuo'lti'k reflects Mi'kmaw ontology and translates in several ways - to "how we maintain our consciousness"[7], or "the process of maintaining the Mi'kmaw worldview"[8]. This is reflected in the relational and associative aspects of the Mi'kmaw language, which extend beyond the individual to the environment[9].

Netukulimk reflects a value system that dictates the interaction between the Mi'kmaq and nature. As a set of rules and obligations, it embraces the cultural norms for being on the land and for the sustainable use of resources, and it embodies relational accountability which sanctions particular types of behavior, taking what you need, giving back, and offering thanks[10].

Ko'kmanaq means 'our relations' and conveys a value system of how Mi'kmaq

[4] Sable, T., B. Francis, R. Lewis, and W. Jones. 2012. *The language of this land, Mi'kma'ki*. Sydney, NS: Cape Breton University Press.

[5] Sable, T., B. Francis, R. Lewis, and W. Jones. 2012. *The language of this land, Mi'kma'ki*. Sydney, NS: Cape Breton University Press; Youngblood Henderson, J. 2000. Ayukpachi: Empowering aboriginal thought. In *Reclaiming Indigenous voice and vision*, ed. M. Battiste. Vancouver, BC: UBC Press, 248-278.

[6] Cajete, G. 2000. *Native science: Natural laws of interdependence*. Sante Fe, NM: Clear Light Publishers, p. 186.

[7] Battiste, M., and J. Youngblood Henderson. 2000. *Protecting Indigenous knowledge and heritage: A global challenge*. Saskatoon, SK: Purich Publishing, Ltd, p. 35.

[8] Battiste, M. 2000. Introduction: Unfolding the lessons of colonization. In *Reclaiming Indigenous voice and vision*, ed. M. Battiste. Vancouver, BC: UBC Press, xvi-xxx, p. 263.

[9] Sable, T., B. Francis, R. Lewis, and W. Jones. 2012. *The language of this land, Mi'kma'ki*. Sydney, NS: Cape Breton University Press.

[10] Prosper, K., L. J. McMillan, A. Davis, and M. Moffit. 2011. Returning to netukulimk: Mi'kmaq cultural and spiritual connections with resource stewardship and self-governance. *The International Indigenous Policy Journal* 2(4): 1-17.

extend a relationship to both animate and inanimate objects, creating a relationship of respect and kinship and a reciprocity that includes obligations[11]. Relationality, the way of being in sacred relationships, includes the inanimate and the spiritual[12], while reciprocity ensures that all life is respected "as we are in reciprocal relations with all life[13]". Nothing can exist outside of that relationship[14].

1.2 Sipekne'katikowaq Health and Well-being

Any disassembly of Indigenous consciousness and understandings of the world and knowledge of how the world works has implications for the health and wellbeing of Indigenous people[15].

The *Sipekne'katikowaq* identity flows from their place in *Sipekne'katik.* Any disruption of *Sipekne'katik* including that of the Sipekne'katik River System will impact the health and well-being of the *Sipekne'katikowaq*. Any disruption of the river disrupts how the *Sipekne'katikowaq,* orient to the world. Disrupting the river means that the *Sipekne'katikowaq* will have less opportunity to engage in the value system embraced by *Netukulimk* and to gain the knowledge and values of living within their traditional ecosystem.

The Sipekne'katik Governance Initiative: Navigating A New Path Forward is an expression of empowerment of the *Sipekne'katikowaq* Aboriginal and treaty right to be healthy and is enacted pursuant to the authority of the inherent right of Sipekne'katik, as represented for this purpose by the duly elected Sipekne'katik Chief and Council.

[11] Sable et al. 2012.

[12] Wilson, S. 2008. *Research is ceremony: Indigenous research methods.* Halifax, NS: Fernwood Publishing.

[13] Hart, M. A. 2010. Indigenous worldviews, knowledge, and research: The development of an Indigenous research paradigm. *Journal of Indigenous Voices in Social Work* 1(1): 1-16.

[14] Sable et al. 2012.

[15] Lewis et al. 2020.

Societal practices that supported material sustenance and economic prosperity were hunting, fishing, trapping, gathering, artisanship, and the trade of the products of these activities. Activities were seasonal and the needs of the Mi'kmaq varied. These activities are still practiced and are integral to the Mi'kmaq, a distinctive original society.

The Covenant Chain of Treaties, including the Treaty of 1752, neither ceded nor sold any land in Mi'kma'ki. The absence of cession is explicitly recognized and affirmed by Western legal principles and further protected under the *Constitution Act* of 1982, section 35.

The implementation of the Centralization Policy resulted in dispersing, separating and amalgamating governance structures of the Mi'kmaq Nation to various reserve lands and into various Band entities. The purpose of the policy, coupled with the intentions of the *Indian Act*, was to settle the Mi'kmaq into a state of poverty so that control would be more easily.

The impacts of economically oppressive policies imposed on the Mi'kmaq Nation continue. The hold of disempowering policies is lessening and the Sipekne'katik Mi'kmaq are regaining strength through various channels of empowerment.

The Sipekne'katik Governance Initiative Protocol: Navigating A New Path Forward is an expression of empowerment and is enacted pursuant to the authority of the inherent right of Sipekne'katik, as represented for this purpose by the duly elected Sipekne'katik Chief and Council.

1.3 The Duty to Consult

This Protocol is developed as a result of the legal obligations and arising from the Crown's duty to consult and, if necessary, accommodate, Indigenous People when their Aboriginal and treaty rights including title may be impacted by Proposed Activities.

The Crown's duty to consult and, if necessary, accommodate varies with the circumstances of the proposed activity that triggers the duty. The duty exists on a spectrum described in *Haida Nation v. British Columbia (Minister of Forests),* 2004 SCC 73 at paras 43-45:

> *... I turn to the kind of duties that may arise in different situations. In this respect, the concept of a spectrum may be helpful, not to suggest watertight legal*

compartments but rather to indicate what the honour of the Crown may require in particular circumstances. At one end of the spectrum lie cases where the claim to title is weak, the Aboriginal right limited, or the potential for infringement minor. In such cases, the only duty on the Crown may be to give notice, disclose information, and discuss any issues raised in response to the notice. "'[C]onsultation' in its least technical definition is talking together for mutual understanding": T. Isaac and A. Knox, "The Crown's Duty to Consult Aboriginal People" (2003), 41 Alta. L. Rev. 49, at p. 61.

At the other end of the spectrum lie cases where a strong prima facie case for the claim is established, the right and potential infringement is of high significance to the Aboriginal peoples, and the risk of non-compensable damage is high. In such cases deep consultation, aimed at finding a satisfactory interim solution, may be required. While precise requirements will vary with the circumstances, the consultation required at this stage may entail the opportunity to make submissions for consideration, formal participation in the decision-making process, and provision of written reasons to show that Aboriginal concerns were considered and to reveal the impact they had on the decision. This list is neither exhaustive, nor mandatory for every case. The government may wish to adopt dispute resolution procedures like mediation or administrative regimes with impartial decision-makers in complex or difficult cases.

Between these two extremes of the spectrum just described, will lie other situations. Every case must be approached individually. Each must also be approached flexibly, since the level of consultation required may change as the process goes on and new information comes to light. The controlling question in all situations is what is required to maintain the honour of the Crown and to effect reconciliation between the Crown and the Aboriginal peoples with respect to the interests at stake. Pending settlement, the Crown is bound by its honour to balance societal and Aboriginal interests in making decisions that may affect Aboriginal claims. The Crown may be required to make decisions in the face of disagreement as to the adequacy of its response to Aboriginal concerns. Balance and compromise will then be necessary.

The Sipekne'katik Mi'kmaq have established treaty rights and continue to assert Aboriginal rights and title. As such, the duty to consult and accommodate is on the high end of the spectrum.

The duty to consult and, if necessary, accommodate is grounded in the honour of the Crown, is part of reconciliation, must be meaningful and is reciprocal. For consultation to achieve these objectives, it must be conducted with the proper rights holders. All parties must make a good faith effort to understand each other's concerns and move forward to address them in a meaningful process. All parties are required by law to be committed to that meaningful process and exhibit good faith throughout the process which must, at all times, be meaningful.

2. PURPOSES

2.1 Empowering Relations Between Sipekne'katik, Government and Industry

The purpose of the Sipekne'katik Governance Initiative Protocol is to empower and promote fair, transparent relations conducted in good faith between Sipekne'katik, Government and Industry.

2.2 Empowering Relations Internally Among Sipekne'katik and with Neighbours

Further, the purpose of the Sipekne'katik Governance Initiative Protocol is to empower transparent relations, conducted in good faith, among the Mi'kmaq internally and in relation to their neighbours with whom interests are shared.

2.3 Setting Consultation Expectations

Further, the purpose of the Sipekne'katik Governance Initiative Protocol is to set out how Sipekne'katik expects to be consulted by Government and Industry/ Proponents in regard to Proposed Activities taking place.

2.4 Establishing Internal Consultation Process

Further, the purpose of the Sipekne'katik Governance Initiative Protocol is to meet the legal obligations the Band owes to its members as defined in Indigenous, Domestic, and International laws.

2.5 Establishment of Process, Not Outcome

The Sipekne'katik Governance Initiative Protocol establishes the process for consultation. It does not presuppose or imply any

outcome or commit Sipekne'katik to any position, result, or agreement.

3. DEFINITIONS AND TERMINOLOGY

Aboriginal Rights: specific and may vary between Aboriginal peoples, generally they include rights to the land, resources, the right to self-determination and to self-govern, and the right to practice customs including language and religion.

Aboriginal Title: an inherent Aboriginal right to land or territory.

Adverse impact: Refers to a negative effect or impact on Aboriginal rights, title, and treaty rights.

Centralization Policy: officially imposed in 1942 by the federal government as an attempt to reduce administration costs by creating two central reserves in Nova Scotia (Eskasoni and Shubenacadie)[16].

Colonialism: A policy or practice of a county extending control over other people, imposing religion, economics, and other cultural practices on Indigenous peoples[17].

Covenant Chain of Treaties: The series of treaties signed between various representatives of the Mi'kmaq of Mi'kma'ki and of the Crown in the 1700s, establishing relations of equality and mutual benefit. This chain includes the Treaty of 1752, the continued validity of which was affirmed by the Supreme Court of Canada in *Simon v The Queen*, 1985 2 SCR 387.

Consultation: is commitment to a process, a meaningful discussion about something that is being decided, sharing information.

Confidentiality: keeping something private.

Capacity: the ability to do something.

Crown or Government: The government of Nova Scotia and the government of Canada including departments, agencies, Crown corporations, boards, commissions, Ministers, and government employees have the duty to consult. The actions of one level of government does not discharge the duty of the other level.

Cumulative impact: changes in the environment as a result from a combination of past,

[16] https://www.cbu.ca/indigenous-affairs/mikmaq-resource-centre/mikmaq-resource-guide/contemporary-mikmaq-kiskukewaq-mikmaq/#:~:text=The%20Centralization%20Policy%20was%20created,and%20the%20other%20in%20Shubenacadie.

[17] https://www.google.com/search?q=colonialism&rlz=1C1SQJL_enCA841CA859&oq=colonialism&aqs=chrome..69i57j0l7.5621j1j7&sourceid=chrome&ie=UTF-8

present, and future activities.

Direct impact: impact to rights as a result of a project/activity.

Duty to consult: the government has a legal duty to consult and accommodate on operational and strategic-level decisions to ensure fair consideration is given.

Engagement: a meeting or other event used for purpose to share information.

Honour of the Crown: is a term to describe the conduct expected of the Crown. Section 35 of the Consultation Act, 1982 requires government to determine, recognize, and respect Aboriginal and treaty rights. The Crown is required to act honourably in its consultations and when indicated to accommodate Aboriginal interests.

Indirect impact: impact to rights as a result of a project/activity which is not a direct result of the project, can be produced outside of the defined project/activity area.

Industry or Industry Proponent: any private or public corporate or partnership-based entity that seeks to exploit or is contemplating the exploitation of resources, natural or otherwise, within Mi'kma'ki.

Lead: the individual appointed by the Sipekne'katik Governance Initiative to coordinate a consultation process on behalf of Sipekne'katik.

Meaningful: having a serious, important, or useful quality of purpose. Sincere, honest, and forthcoming. Refers to quality of consultation and means listening to concerns. Discussing those concerns, and being prepared to accommodate those concerns.

Mi'kma'ki: all lands and waterways commonly known as the Maritimes, including parts of Newfoundland and Quebec, and parts of the State of Maine in the United States of America.

Nova Scotia Supreme Court (NSSC): the superior court in the province of Nova Scotia.

Pre-confederation treaties: peace and neutrality treaties signed between 1701 to 1760.

Peace and Friendship treaties: signed between 1725-1779.

Proposed Activities: any and all activities contemplated or undertaken by an Industry Proponent, Government or related entity concerning the exploitation of resources in Mi'kma'ki, including those which are preparatory or exploratory. An activity contemplated or undertaken by Industry, Proponents, Government, or other entity concerning the exploitation of resources.

Reconciliation: restoring friendly relations.

Residential School System: the residential school in Shubenacadie was imposed from 1930 until 1966 with purpose of religious conversion by the church and assimilation by the federal

government. Children who attended lost their language, culture, and identity. Teachings were based on European concepts contrary to Mi'kmaw teaching styles. Many who attended the school refer to themselves as survivors[18].

Rightsholder: a person/organization with a legal right to something.

Royal Proclamation: issued by King George III on October 7, 1763 which established the basis for governing the North American territories surrendered by France to Britain and set the structure for treaty negotiation and other matters.

Self-Determination: making own decisions for governance.

Self-Governance: exercising all functions of regulations without intervention from an outside entity.

Section 35 of the Constitution Act, 1982: "The existing aboriginal and treaty rights of Aboriginal peoples of Canada are hereby recognized and affirmed"[19]. The Constitution protects rights however the extent of rights has not been fully defined which is why cases are brought to the courts when impacts to rights are not considered during Crown decisions.

Sipekne'katik: legal name of Band. Formerly known as "Shubenacadie Band".

Stakeholder: a person/organization with an interest/concern.

Supreme Court of Canada (SCC): is the highest court in Canada and the final court of appeals in the Canadian justice system**.**

Traditional Districts: http://www.danielnpaul.com/Map-Mi'kmaqTerritory.html

[18] https://www.cbu.ca/indigenous-affairs/mikmaq-resource-centre/mikmaq-resource-guide/contemporary-mikmaq-kiskukewaq-mikmaq/#:~:text=The%20Centralization%20Policy%20was%20created,and%20the%20other%20in%20Shubenacadie.
[19] *Constitution Act*, 1982.

Truth and Reconciliation Commission (TRC): The TRC was the largest class action in Canadian history and resulted in the Residential School Settlement Agreement with a mandate to inform all Canadians what happened in residential schools. The TRC issued 94 Calls to Action to repair the legacy of harm caused by the Residential School System.

Treaty: a formal agreement signed and ratified.

Treaty of Utrecht: signed in 1713 and recognized Queen Anne of England as the legitimate sovereign of England and officially ended French claims to the British throne. This caused previously French claimed territories to be claimed by England.

Treaty Rights: are rights conferred through the signature of a treaty.

Two-Eyed Seeing: Elder Albert Marshall's[20] principle of looking at both Indigenous and Western perspectives equally.

Without Prejudice: without any effect whatsoever on any existing or future right or claim. If so labeled, the provision of information, promulgation of positions and any and all statements cannot be used against either party in the context of any existing or future claim regarding rights and/or title.

Western perspective: ideas associated with the United States, Canada, and Western, Northern and Southern Europe. Western science seeks to understand the natural world by studying individual parts[21].

Indigenous perspective: ideas associated with Indigenous people. Indigenous knowledge seeks to understand the natural world in a holistic way, observing connections.

[20] Eskasoni First Nation, Nova Scotia.

[21] https://combiningtwowaysofknowing.wordpress.com/comparingindigenousknowledge/

4. INTERPRETATION AND LIMITATIONS

4.1 Spirit and Intent

All aspects of the Sipekne'katik Governance Initiative Protocol must be interpreted consistently with the spirit and intent of the Statement of Principles and Expectations.

4.2 Conflict

In case of conflict between the Statement of Principles and Expectations and other parts of the Sipekne'katik Governance Initiative Protocol, the conflict shall be viewed in light of the Statement of Principles and the appropriate interpretation shall be the one that gives greatest effect to the Statement of Principles.

4.3 Without Prejudice

The Sipekne'katik Governance Initiative Protocol does not prejudice Sipekne'katik's rights. Nothing in the Sipekne'katik Governance Initiative Protocol shall neither be construed to justify any infringement of Sipekne'katik's rights, nor to prevent or to limit the exercise of such rights. Further, the Sipekne'katik Governance Initiative Protocol shall not be construed as conferring consent or as providing approval of any past, existing, new, or ongoing activities within Mi'kma'ki.

Notices and information provided to Sipekne'katik reviewed pursuant to the Sipekne'katik Governance Initiative Protocol are reviewed on a without prejudice basis. Neither the consultation process nor any agreements concluded with Government or Industry Proponent(s) as a result of the participation of Sipekne'katik in the consultation process can be used to define or in any way limit Aboriginal and treaty rights. Further, the participation of Sipekne'katik in consultation is without prejudice to any position, past, present, or future that may be taken in negotiations, litigation or in any other process.

5. STATEMENT OF PRINCIPLES AND EXPECTATIONS

5.1 Assertion of Title to Mi'kma'ki

5.1.1 Continuous Use and Occupation

The Mi'kmaq Nation have used and occupied Mi'kma'ki, including the Sipekne'katik district territory, since time immemorial.

5.1.2 Use and Occupation

The Mi'kmaq Nation have used and occupied Mi'kma'ki before contact with Europeans in the 17th century, and continued to use and occupy these lands after contact, at some points exclusively.

5.1.3 Title: A Right to the Land Itself

Aboriginal title is a right to the land itself. Use and development of Aboriginal title lands must not be inconsistent with the preservation of such lands for the use and development of future generations.

5.2 The 18th Century Chain of Covenants is the Foundation of Mi'kmaq-Crown Relations

5.2.1 Perpetuity of the Treaty Relationship

The series of Treaties signed in the 1700's are the foundational instruments grounding Sipekne'katik's relations with the Crown and its subjects and heirs, however variously composed over time, now and into the future.

5.2.2 Contemporary Force and Effect

Those Treaties are of as much force and effect today as they were at the time they were concluded[22].

5.2.3 Reciprocity of Treaty Rights and Obligations

The Treaties create reciprocal rights and obligations for the Mi'kmaq Nation and its citizens, the Crown and its heirs and successors, however represented or composed, now and into the future.

5.2.4 No Cession and No Delegation of Governing Authority

The Treaties do not cede land[23] and they do not delegate any decision-making authority to other Peoples, the Crown or otherwise, with respect to activities that may take place in Mi'kma'ki. Rather, the Treaties themselves create the need for cooperative processes to establish and facilitate transparent governance for all parties.

[22] *Simon v The Queen*, 1985 2 SCR 387, at para 36, regarding the Treaty of 1752.

[23] [*Simon v The Queen*, 1985 2 SCR 387, at para 50]

5.3 Expectation: Meaningful Processes

Sipekne'katik is committed to and expects to be engaged in truly meaningful and reconciliatory consultation processes.

5.3.1 Mutually Beneficial Outcomes

Meaningful consultation processes reciprocally conducted in good faith with the proper rights holders will result in mutually beneficial outcomes for all involved.

5.3.2 Commitment to Compliance With Indigenous, Domestic and International Law

Sipekne'katik is committed to carrying out meaningful consultation, without prejudice, as set out by various decisions of the Supreme Court of Canada, Indigenous, domestic, and international laws.

5.4 Collaboration and Cooperation

a. Sipekne'katik may collaborate and cooperate with any other Band, Tribal organization or/and partners with whom it shares interests by entering into a Memorandum of Understanding (MOU) under the Sipekne'katik Governance Initiative Protocol which clearly outlines Sipekne'katik's roll and expected outcomes.

b. Participation in other tables and processes without a formal MOU cannot bind the Band or community as legal consultations.

6. EXTERNAL CONSULTATION PROCESS

6.1 GUIDING PRECEPTS

6.1.1 Intention to Reach Agreement

All parties – the Government, Industry Proponent(s), and Sipekne'katik – shall engage with each other with the genuine intention to substantially address the interests and concerns of all parties and reach mutually beneficial agreement.

6.1.2 Separate and Distinct from other Processes

Sipekne'katik represents itself pursuant to the requirements of the Sipekne'katik Governance Initiative Protocol.

6.1.3 Holistic View of Proposed Activities and Impacts

The duty to consult is not met by addressing only the site-specific impacts of any Proposed Activities. The parties must also seriously consider and substantially address the potential indirect, derivative, induced and cumulative impacts of any Proposed Activities, including injurious affection and environmental degradation generally.

6.1.4 Continuity of Negotiators and Consistency

a) The parties shall each appoint one key individual (Lead) for all consultation activities at the outset of a consultation process, in order to facilitate communication and to build and develop relationships and understanding over time. If that key individual (Lead) must change at any time after the appointment has been made, notice in writing will be provided to all other parties in a timely manner and knowledge and history of party relations will be transmitted to the new key individual (Lead) to the greatest extent possible.

b) The Sipekne'katik Governance Initiative is responsible for carrying out the consultation process on behalf of Sipekne'katik.

c) The Sipekne'katik Governance Initiative will identify a Lead to coordinate a consultation process. Any attempt to consult with any other person outside of this process will not constitute lawful consultation with Sipekne'katik.

6.1.5 Full and Ongoing Disclosure

a) Industry Proponent(s) and Government shall provide Sipekne'katik with all available information about the impact of Proposed Activities during consultations under the Sipekne'katik Governance Initiative Protocol. Disclosure shall include all Industry and Government assessments of impacts and copies of applications and studies in the possession of the Government or Industry Proponent(s).

b) Sipekne'katik shall be provided with a minimum of two copies of all information relevant to Proposed Activities, one hard copy and one in electronic form. Information shall be provided directly to Sipekne'katik by hand delivery, registered mail, or courier to the address below:

Sipekne'katik Governance Initiative
Consultation Coordinator
522 Church Street
Indian Brook, Nova Scotia
B0N 1W0
Email: consultation@sipeknekatik.ca

c) Disclosure shall be ongoing. Information shall be updated or provided as it becomes available.

6.1.6 Processing Fees

a) Sipekne'katik requires adequate resources to assess the potential impacts of any Proposed Activities on its rights and interests and to identify mitigation and accommodation opportunities.

b) As such, Sipekne'katik will charge processing fees to consider Proposed Activities. These fees are non-refundable and shall pay for the consideration of a notice only; they do not guarantee a certain outcome or assessment. The Sipekne'katik Governance Initiative will set fees and publish them in a fee schedule.

c) The parties shall also negotiate adequate funding that enables Sipekne'katik to carry out its consultation obligations in relation to any Proposed Activities.

6.1.7 Honesty and Transparency

Communication between all parties shall be clear and honest. Each side will communicate its interests openly and honestly and update the other parties on any changes in a timely manner.

6.1.8 Ongoing Discussion and Negotiation

a) The parties shall meet early and regularly.

b) Any consultation process commencing after Proposed Activities have already occurred and/or immediately prior to when a decision is to be made will be deemed and presumed to not be meaningful.

c) All parties will make their best efforts to attend all of the meetings concerning their interests.

d) All parties shall have the opportunity to speak freely and without interruption at meetings. When expressing a concern, a constructive solution will be offered.

e) Industry Proponent(s) and Government, if required, will be available to attend community meetings and present information as requested by Sipekne'katik.

f) Community meetings will members the chance to speak freely and be heard.

6.1.9 Good Faith, Reasonableness and Cooperation

a) The parties shall meet and negotiate in good faith and treat each other as partners. They shall not withhold, willfully, neglectfully or through a lack of diligence appropriate to the subject matter, relevant information from the other parties. They shall update each other on changes to the Proposed Activities or their positions as soon as such changes are known.

b) When a party voices concerns about or objections to the Proposed Activities, they will also offer constructive solutions to the concerns. They will provide reasons for objections and concerns that are rooted in science and/or Mi'kmaq knowledge. Such objections and concerns may be made in writing and supported with information, including documentation, western science, oral history and/or Mi'kmaq law.

c) The parties shall not object to the validity of oral history and Mi'kmaq knowledge and laws as legitimate and helpful sources of information as established in Delgamuukw[24] and strongly affirmed in successive Supreme Court judgments.

6.1.10 Flexibility

The parties will demonstrate flexibility, including with respect to project timelines, in order to ensure consultation is full, meaningful, and adequate in the circumstances.

6.1.11 Confidentiality

a) The complete exchange of all relevant information, including that of a confidential or proprietary nature, is essential for full engagement between the parties. The parties shall respect the confidentiality of each other's proprietary or sensitive information.

b) Each party will mark its written confidential material as such, and declare information shared orally confidential prior to disclosure.

[24] Delgamuukw v British Columbia, 1997 3 SCR 1010.

c) All traditional, ecological and cultural information that Sipekne'katik provides to the Government and/or Industry Proponent(s) in relation to Proposed Activities shall be kept in strict confidence and any such information shall not be disclosed to any third party without the written consent of Sipekne'katik, unless disclosure of such information is required by law or unless that information is already in the public domain. The Sipekne'katik Governance Initiative Team will treat Government and Industry Proponent confidential information in the same manner, and will follow confidentiality protocols supplied by the disclosing party.

6.1.12 Specificity of Consultation

a) Consultation under the Sipekne'katik Governance Initiative Protocol shall be specific to Sipekne'katik, specifically addressing its rights and interests.

b) Consultation under the Sipekne'katik Governance Initiative Protocol is a separate and distinct process from any public consultations conducted by Government or Industry Proponent(s) and from any activities undertaken by other parties. Sipekne'katik's participation in public consultations neither discharges the Government's duty to consult nor displaces the applicability of the Sipekne'katik Governance Initiative.

6.1.13 Protection of Aboriginal Rights

If Proposed Activities have the potential to infringe any Aboriginal or treaty right, Sipekne'katik, supported by Indigenous, domestic, and international law, require that:

a) Priority be given to Aboriginal and treaty rights versus those of non-Aboriginal stakeholders;
b) Activities minimally impact rights;
c) Mitigation measures are taken to avoid impacts and to ensure that any impact that does occur is "as little as possible" and to ensure that Aboriginal concerns are "demonstrably integrated" into any plan of action;
d) Fair compensation is given for unavoidable infringements; and,
e) Meaningful efforts are made to ensure sensitivity to and respect of Aboriginal and treaty rights.

6.2 PROCESS MECHANICS

6.2.1 Notice

6.2.1.1 Notice Trigger

The Government or Industry Proponent(s) will provide notification of any Proposed Activities ("Notice") that may:

a) have an adverse environmental, health, social, or cultural impact;
b) on Sipekne'katik or Mi'kma'ki waterways or lands;
c) before or during the province of Nova Scotia's "consultation screening" stage of its Consultation Policy; and,
d) in advance of any application for a decision regarding such Proposed Activities is made and substantially before any decision regarding such Proposed Activities is made.

6.2.1.2 Notice Content

The Notice of Proposed Activities shall include:

a) Strength of claim assessment for Aboriginal and treaty rights including title;
b) the nature and scope of Proposed Activities and related future contemplated conduct;
c) the reasons for or purpose of the Proposed Activities;
d) the applicable regulatory framework and an overview of the regulatory process;
e) the timing of the Proposed Activities, including the timing for all approvals and decisions in the regulatory process;
f) the location of the Proposed Activities;
g) the duration of the Proposed Activities;
h) the potential risks to Mi'kma'ki associated with the Proposed Activities, as understood at the time Notice is provided;
i) proposed measures to ensure inclusion of Sipekne'katik's traditional, ecological, and cultural knowledge;
j) a plan for how Sipekne'katik will be consulted and included in the development of studies related to the Proposed Activities, including in the pre-application phase and in all aspects of the regulatory process;
k) the identification of alternatives to the Proposed Activities;
l) the identification of who will be involved in carrying out the Proposed Activities, including any agents or contractors;
m) a list of documents available to be reviewed, including but not limited to:
    i. applications, in the event an application has already been made before Notice is provided;
    ii. studies;

iii. reports, such as in respect of seismic or exploration phases of the Proposed Activities;

iv. any previous assessments, studies or reports in respect of any phase of the Proposed Activities, including the exploratory stage, or in the vicinity of the Proposed Activities that are known to or in the possession of the government or Industry Proponent(s); and,

v. information on applicable legislation, policies, guidelines, and regulations related to the Proposed Activities or which will guide decision making over the Proposed Activities by the Industry Proponent(s);

n) the names, addresses, emails, and telephone numbers for the Government and Industry Proponent(s) contacts with whom the Sipekne'katik Lead will communicate and negotiate.

6.2.1.3 Notice to be Updated

If there is any change to the information provided in the Notice as outlined in the above section or if new and/or additional information becomes available during the regulatory review of the Proposed Activities, the Notice shall be amended to include the new or changed information. The amended Notice shall be delivered in accordance with the provisions of this section as soon as it is known, with all changes and/or additions flagged in a cover letter.

6.2.1.4 Form of Notice

a) The Notice shall be drafted in accessible language, and all information will be organized in a logical manner that allows Sipekne'katik to easily locate specific information.

b) The Notice shall include a detailed table of contents with clear and descriptive headings and references to page numbers. The Notice should index any documents it encloses and include the title, date of production and author of included documents.

6.2.1.5 Processing Fee

The Industry Proponent(s) or Government shall include with the Notice the processing fee for the review of the Notice in accordance with the Sipekne'katik Governance Initiative Protocol fee schedule in effect at the time the Notice is sent. Fees are subject to change from time to time.

6.2.1.6 Logistics of Notice

a) Notices shall be sent electronically to: consultation@sipeknekati.ca

b) A hard copy will be delivered to:

Sipekne'katik Governance Initiative
Consultation Coordinator
522 Church Street
Indian Brook, Nova Scotia
B0N 1W0

6.2.2 Initial Assessment and Response

6.2.2.1 Initial Assessment

Upon the receipt of Notice satisfying the above section, the Sipekne'katik Governance Initiative Protocol will conduct an initial assessment of the impact to Sipekne'katik rights and interests and whether and what type of consultation is required. For clarity, this initial assessment is to be Sipekne'katik's equivalent to "Step 1: Consultation Screening" of the Province of Nova Scotia's April 2015 consultation policy. This will involve:

a) Presenting the Proposed Activities at a Community Meeting as set out in the following section of this Protocol, the Internal Consultation Process, with industry participation if requested by Sipekne'katik;
b) Seeking the views of elders and others with traditional knowledge, as required;
c) Consideration of whether negotiation will be worthwhile for Sipekne'katik, both in terms of potential value in an agreement and the integrity and capacity of the Industry Proponent; and,
d) Retaining other technical experts, as required.

6.2.2.2 Letter of Acknowledgment

Sipekne'katik shall acknowledge receipt of the Notice in writing within 30 business days, stating when it plans to inform the Government and/or Industry Proponent(s) of the outcome of its initial assessment and requesting additional information, if required.

6.2.2.3 Outcome of Initial Assessment

The outcome of the initial assessment will determine either that:

a) The Proposed Activities do not have the potential to adversely affect its rights or interests or Sipekne'katik does not wish to be consulted at the present time. The parties must keep Sipekne'katik apprised of changes that

may change the initial assessment; or,

b) The Proposed Activities do have the potential for adverse impacts and that Sipekne'katik wishes to be consulted. Sipekne'katik will draft a list and description of its preliminary concerns in respect of the Proposed Activities and identify the appropriate level of consultation.

6.2.2.4 Response – Outcome of Initial Assessment

As soon as practicable, and no longer than 90 business days from when Notice was received, Sipekne'katik shall provide the outcome of its Initial Assessment. This Response will:

a) include a list and description of preliminary concerns and the level of consultation required;
b) request a meeting to discuss next steps; and,
c) identify the Lead for Government and Industry Proponent(s) engagement on the Proposed Activities.

6.2.3 External Consultation Plan

6.2.3.1 Initial Meeting

If consultation is required, the parties will meet before any decisions are made on the Proposed Activities. The meeting will be guided by a jointly drafted formal agenda and address:

a) the nature of the regulatory review process or other approval process contemplated for the Proposed Activities and timelines review of the Proposed Activities;
b) information requirements, including the identification of information gaps, required to facilitate Sipekne'katik's ability to assess and ultimately determine the potential impacts of the Proposed Activities on its rights, title, and interests; and;
c) a workplan and fee schedule for Sipekne'katik's review of the Proposed Activities to enable the Sipekne'katik Governance Initiative to engage fully and meaningfully, as required by law.

6.2.3.2 Developing a Consultation Plan

The parties will discuss and agree on a plan for consultation that meets the reciprocal obligations of good faith, the honour of the Crown, meaningfulness, and the promotion of reconciliation ("External Consultation Plan"). The External Consultation Plan will be presented to Chief and Council, as discussed in the next section, the Internal Consultation Process. The External Consultation Plan will include:

a) a timeline of key dates and deadlines in the regulatory review process and when key studies and reports will be undertaken;
b) a timeline of meetings and negotiations between the parties;
c) a plan for presentations by Government and/or Industry Proponent(s) directly to the community;
d) arrangements for the parties to cooperate on key studies and reports, or the commissioning of separate studies;
e) the processing fees to be provided to the Sipekne'katik Governance Initiative to execute the plan;
f) when Sipekne'katik will provide its Impact Analysis; and,
g) when and at what stages community approval will be required.

6.2.4 Processing Fees

6.2.4.1 Fees in the External Consultation Plan

The reasonable cost of consultation shall be negotiated with the Crown by Sipekne'katik. The Government and Industry Proponent(s) shall pay processing fees to enable Sipekne'katik to implement the External Consultation Plan. The amount of resources required will depend on the complexity of the Proposed Activities and their impact, and the requirements of the External Consultation Plan.

6.2.4.2 Purpose of Fees

The fees provided to the Sipekne'katik in the External Consultation Plan will be used exclusively for consultation and managed by Sipekne'katik. Fees may be used for:

a) technical/legal expertise and analysis;
b) engagement costs with the parties or with Council and/or the community on the project;
c) office space and capacity needs; and,
d) administrative costs not to exceed 15% of the total fees.

6.2.5 Impact Analysis

6.2.5.1 Sipekne'katik Governance Initiative Responsibility

The Sipekne'katik Governance Initiative shall provide to the other parties an analysis in writing of the impact of Proposed Activities, as well as recommendations on how such concerns can be addressed, accommodated, or mitigated ("Impact Analysis"). This analysis will be undertaken as early as practicable in the process and provided at a time determined in the External Consultation Plan.

6.2.5.2 Consideration of Impact Analysis

The Government and Industry Proponent(s) shall work with Sipekne'katik to reach agreement on how best to eliminate or minimize the potential impacts identified in the Impact Analysis. All applications and decision documents drafted by either the Government or Industry Proponent(s) shall directly address the Impact Analysis and discuss how impacts were addressed, mitigated, accommodated, or compensated.

6.2.6 Negotiation and Agreement in Principle

6.2.6.1 Agreement in Principle

Once the Impact Analysis is completed, the parties shall work towards an Agreement in Principle on how the impacts identified by Sipekne'katik will be addressed. The Agreement in Principle shall be approved by the parties through their respective approvals processes. The Agreement in Principle, if approved, will allow the Parties to proceed to negotiation and finalization of a legally binding Final Agreement.

6.2.6.2 Resources

Sipekne'katik requires adequate resources to engage in negotiation. The External Consultation Plan and fee schedules will provide for these resources in most instances. However, when unanticipated costs are incurred or studies are undertaken, the parties must approach resourcing issues flexibly and with the aim of ensuring all parties are able to present their respective positions. Otherwise, consultation may become less meaningful and the integrity of the process may be compromised.

6.2.6.3 Collaboration

The parties shall at all times approach this interest-based negotiation as a collaborative endeavour. Where it is possible and the parties agree, joint reports shall be commissioned. Negotiations shall be conducted focusing on solutions to parties' concerns. Obstructionist approaches shall be considered to run against the goal of collaboration and put good faith into question.

6.2.6.4 Timelines

a) Timelines in the External Consultation Plan shall be respected and ensure sufficient time for the community to conduct its internal consultations where the approval mechanism in a process requires it.

b) Parties shall not unreasonably refuse to extend timelines where circumstances justify it and are beyond the control of the party requiring an extension.

6.2.6.5 Approvals

a) If internal community consultation is required under this Protocol, the Internal Consultation Plan shall determine the appropriate approval mechanism: either Band Council Resolution (BCR) or Community Referendum (CR).

b) If Sipekne'katik departs from a "yes or no" vote on an Agreement in Principle, the wording of the question put to the community in a CR shall be subject to consultation with the Industry Proponent and the Government.

6.2.6.6 Evaluation

At the mutual agreement of the parties, and after negotiations have concluded and an Agreement in Principle has been reached, the parties shall each submit a report evaluating each other's conduct during negotiations and offering lessons learned and best practices going forward.

6.2.7 Final Agreement

6.2.7.1 Final Agreement

a) The resolution of Sipekne'katik's concerns, as articulated in its Impact Analysis, will be documented in a formal, and duly executed, agreement on avoidance, accommodation, mitigation, benefits or compensation, or a combination thereof (the "Final Agreement").

b) The Final Agreement may be substantially the same as the Agreement in Principle unless the Parties have agreed otherwise.

c) The Agreement shall be endorsed and signed by the appropriate individuals who have the authority to bind their respective parties.

6.2.7.2 Sipekne'katik Interests

Sipekne'katik will be driven by the following interests in negotiating the Agreement in Principle and the Final Agreement:

a) Ensuring that Sipekne'katik has and continues to have the meaningful ability to exercise its rights throughout Mi'kma'ki;
b) Preserving Sipekne'katik cultural, spiritual, and economic relationship to its lands and waterways;
c) Protecting the use and enjoyment of its lands, including its reserve lands, and waterways for present and future generations;
d) Sharing in the wealth created by any industrial development on its lands, in terms of compensation and resource equity sharing or resource revenue sharing;
e) Meaningfully participating in the management, including use and access, of its lands;
f) Protecting its culture and way of life;
g) Building and sustaining healthy communities;
h) Developing the human and financial capacity of Sipekne'katik to participate in the economic and social benefits of development, maximizing the potential benefits of development while minimizing the adverse impacts of development;
i) Developing the human and financial capacity to consult and address and manage impacts of Proposed Activities in Sipekne'katik lands and Mi'kma'ki as a whole; and,
j) Protecting historical and culturally significant sites.

6.2.7.3 Sipekne'katik Community Approval Process

a) If internal community consultation is required under this Protocol, the Internal Consultation Plan shall determine the appropriate approval mechanism for the Final Agreement.

6.2.7.4 No Agreement

Where no Final Agreement is approved, and consultation is meaningful, further consultation may be desired by the parties. The parties may agree to resume negotiations at any time by mutual consent in an attempt to produce a Final Agreement which would be subject to the appropriate approvals processes of the parties.

6.2.7.5 Cancellation

The Final Agreement shall contain a cancellation clause that either party can initiate at any time with cause, or without cause subject to mutually agreed upon notice periods. The cancellation clause shall contain, where practicable, provisions regarding the division of costs in the event of cancellation.

6.2.7.6 Non-Derogation

The Final Agreement shall include a non-derogation clause concerning Aboriginal rights and title.

6.2.8 Government Oversight

6.2.8.1 Legal Duty

The Government has ultimate responsibility for ensuring that the duty to consult is properly discharged.

6.2.8.2 Government – Sipekne'katik Engagement

a) Prior to making a decision on any Proposed Activities, if requested by Sipekne'katik, the government will engage with Sipekne'katik to discuss, among other things:

i. the adequacy of the consultation process;
ii. the basis upon which decisions will be made;
iii. how Sipekne'katik's concerns as outlined in its Impact Analysis were addressed, and, if those concerns have not been addressed, the reason(s) why those concerns have not been addressed.

b) The Government shall provide Sipekne'katik with any and all accounts or records of the consultation process provided by its officials or the Industry Proponent(s), and allow Sipekne'katik to formally comment on such documents and provide its own perspective.

6.2.9 Dispute Resolution

a) At any stage of the process, if the Parties are having difficulty reaching an agreement, the parties will discuss alternative methods of resolving disagreements, including Alternative Dispute Resolution ("ADR"). All parties must agree in order for ADR to occur.

b) In the interests of time and cost, Sipekne'katik shall negotiate an ADR clause in the Final Agreement, where practicable, to address disputes that arise in its implementation.

6.2.9.1 Reservation of Rights

If Sipekne'katik's concerns are not resolved in any process set out under this Protocol or through ADR, Sipekne'katik retains its full right to participate in any regulatory proceedings related to the Proposed Activities and to raise its concerns in any court or other proceeding.

6.2.10 Implementation and Monitoring

6.2.10.1 Monitoring Mechanisms

The Final Agreement shall include fair and effective mechanisms to monitor the implementation of the terms and conditions contained in the Final Agreement on behalf of all parties and to assist the parties to ensure and report that all respective commitments are being fulfilled. At a minimum, reporting concerning financial benefits shall be undertaken by an independent accountant annually, as well as at milestones in the Proposed Activities.

6.2.10.2 Ongoing Communication

The Final Agreement shall include fair and effective mechanisms to ensure the parties continue to meaningfully engage in ongoing and meaningful communication processes about the Proposed Activities, including the opportunity to raise new concerns or propose changes to the Proposed Activities or amendments to the Final Agreement.

6.2.10.3 Environmental Capacity

The Final Agreement shall include provisions to ensure there is adequate environmental monitoring and rehabilitation capacity to fulfill agreed-upon environmental objectives during the implementation and monitoring stages.

7. INTERNAL CONSULTATION PROCESS

7.1 Adaptive Management Approach

7.1.1 The Sipekne'katik internal consultation process is a complex system of Indigenous, Domestic, International, and environmental laws and, therefore, each project must be assessed based upon the existing conditions and impacts present with each project. Where legal duties and obligations are constantly evolving, some project may span multiple years, each project must be flexible and adaptive.

7.1.2 According to section 6.2.2.1 an initial assessment of impact to rights will be undertaken for:

i) Existing established Treaty rights of Sipekne'katik;
ii) Aboriginal Rights; and
iii)Asserted Aboriginal title.

7.1.3 The results will direct the level of consultation needed. The initial assessment is subject review and amendments according to the best available knowledge. New information, developments in project, environment, law, or community input can trigger a deeper duty of community consultations needed to meet the legal and fiduciary duties of Sipekne'katik to its members.

7.1.4 Each project will be assessed on a case by case basis.

7.2 Fiduciary Duties to Members

7.2.4 *Legal definition of "fiduciary": [The Dictionary of Canadian Law] "…[W]here by statute, agreement, or perhaps by unilateral undertaking, one party has an obligation to act for the benefit of another, and that obligation carries with it a discretionary power, that party thus empowered becomes a fiduciary …" Guerin v R, [1984] 2 SCR 335*

7.2.5 *"There can be no question that a chief and the members of the band council are fiduciaries as far as all other members of the band are concerned" Williams Lake Indian Band v Abbey (1992) BC SC*

7.2.6 For each project, a project specific workplan will be developed and included with community engagement, including the necessary schedule of events, timelines and community capacity budget. Where deep consultations are required and impact to rights may cause irreparable harm or extinguishment of a right, a process for plebiscite or referendum maybe triggered subject to Band capacity and legal fiduciary duties.

7.2.7 The level of consultation and approval required will be assessed based upon the Band's legal duties owed to its members and impact to asserted and established rights.

7.3 Reasonable Cost of Consultations

7.3.1 The duty to consult and accommodate, carries with it the obligation to ensure adequate and sustained funding for First Nations to carry out the ongoing work of identifying and articulating their interests and to participate in decision-making processes.

7.3.2 In instances where deep consultation is required capacity funding has become a key part of consultation as there is typically limited or no ability of aboriginal communities to pay for needed expertise to respond to consultation requests. The Courts in Clyde River v. Petroleum Geo-Services Inc. considered the lack of capacity funding in their determination that the duty to consult had not been met.

> "While these procedural safeguards (Public hearings and capacity funding) are not always necessary, their absence in this case significantly impaired the quality of consultation. Although the appellants had the opportunity to question the proponents about the project during the NEB meetings in the spring of 2013, the proponents were unable to answer many questions, including basic questions about the effect of the proposed testing on marine mammals. The proponents did eventually respond to these questions; however, they did so in a 3,926 page document which they submitted to the NEB. This document was posted on the NEB website and delivered to the hamlet offices in Pond Inlet, Clyde River, Qikiqtajuak and Iqaluit. Internet speed is slow in Nunavut, however, and bandwidth is expensive. The former mayor of Clyde River deposed that he was unable to download this document because it was too large. Furthermore, only a fraction of this enormous document was translated into Inuktitut. To put it mildly, furnishing answers to questions that went to the heart of the treaty rights at stake in
> the form of a practically inaccessible document dump months after the questions were initially asked in person is not true consultation. "

7.3.3 Funding for capacity for the Sipekne'katik to participate in consultations will be addressed thru negotiations with the Provincial and Federal crown on a case by case basis. Any proponent funding will be thru crown negotiations as part of the "reasonable cost of consultations" and will not be contingent upon an outcome or impact benefit agreement.

7.4 GUIDING PRECEPTS

7.4.1 Respectfulness and Reasonableness

a) Community interactions and dialogue on consultation and Proposed Activities shall be sincerely respectful of the views and positions of others.

b) Dialogue shall be open and transparent. All relevant information shall be shared amongst all. All shall have the opportunity to speak.

c) Solution based- When someone voices concerns about or objections to the Proposed Activities or to consultation, they shall offer a constructive solution to the issue raised. They shall provide reasons for objections to the Proposed Activities that are rooted in science, Indigenous laws, and values. They shall listen to responses and opposing viewpoints and engage constructively.

7.4.2 Inclusiveness

a) All community meetings and other community-wide participation mechanisms in the consultation processes under this Protocol shall be open to members who have an interest in the Proposed Activities or their impacts or who are subject to any *ad hoc* or more formal Memorandum of Understanding or joint process.

7.4.3 Timeliness and Publication of Timelines

a) The Sipekne'katik Governance Initiative shall provide important dates and timelines on Proposed Activities in a timely manner in accordance with deadlines established in the Internal Consultation Plan established under this Section.

b) The Sipekne'katik Governance Initiative shall publicize relevant deadlines and provide reminders as necessary to ensure interested individuals and community are aware of milestones and the progress of the process.

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7.4.4 Confidentiality

a) Elders and other holders of traditional, ecological, and cultural knowledge and information must be able to share relevant information in the internal consultation processes without concern that the confidential, proprietary and/or sacred nature of the information will be jeopardized. The Sipekne'katik Governance Initiative shall institute appropriate protections for Sipekne'katik's confidential information, including the identification of the confidential nature of information prior to disclosure triggering subsection 6.1.11 of this Protocol.

b) All participants in consultations shall respect the confidentiality of Government and Industry Proponent(s) confidential information, in accordance with subsection 6.1.11 of this Protocol. The Sipekne'katik Governance Initiative shall institute appropriate protections for confidential information disclosed to Sipekne'katik and inform and remind participants in consultation of their obligations, as necessary.

7.5 PROCESS MECHANICS

7.5.1 Community Consultation and Engagement

Community Engagement is based upon the initial strength of claim assessment of existing and established treaty rights, Aboriginal rights and title lands.

7.5.2 Development of Internal Consultation Workplan

The Internal Consultation Workplan will determine what approval mechanism will be required for any agreement or public consultation under the preceding section according to the level of established or asserted rights and impacts. The initial assessments are based upon strength of rights and assertions. According to the adaptive management approach to ongoing consultations, the Internal Consultation Workplan must reflect unforeseen developments in either legal, social, environmental or project developments and maybe subject to amendments with notice and approval of Chief and Council.

7.2.2.1 Monthly Updates

The Sipekne'katik Governance Initiative shall convene monthly community updates via online publication, community newsletters or notices and may from time to time host ("Community Meetings") to provide updates and information to community members and obtain input

from the community regarding ongoing consultation processes. Notice of a Community Meeting shall be made at least 10 days in advance of the date set for the meeting. At such meetings:

a) All new Notices will be presented in accessible language and input on the initial assessment of Proposed Activities will be invited;

b) Internal Consultation Plans will be presented if applicable;

c) Updates on all consultation processes will be delivered, in plain language;

d) Industry Proponents may, upon request of the Sipekne'katik Governance Initiative, present on Proposed Activities as required under the External Consultation Plan;

e) Experts retained by the Sipekne'katik Governance Initiative may attend and participate as required; and,

f) Individual attendees shall have the opportunity to present their views and ask questions. Sipekne'katik may enter Memoranda of Understanding with any other band, tribal organization, governance structure(s) it sees fit to include, who may have common interest and impacts, and/or broaden the base of the consultation process. Sipekne'katik shall do this on its own initiative, upon invitation or upon recommendation, where it is of the view that the interests at stake require collaboration with otherwise excluded structures or interested collectivities.

7.2.1.2 Sipekne'katik Band Council Attendance

Chief and Council, as duly elected and confirmed, may attend any or all Community Meetings at their own discretion and when they do so, they shall be provided time on the agenda to offer their informed opinions regarding the Proposed Activities when requested by participants.

7.5.3 Full Disclosure to Community

7.2.2.1 Accessible Information Repository

All information received about all Proposed Activities shall be available by the Sipekne'katik Governance Initiative and shall be available for review based upon reasonable notice to allow Sipekne'katik Governance Initiative sufficient time and resources to prepare.

7.2.2.2 Industry Availability

Industry Proponents and experts shall be accessible to the community per the External Consultation Plan. They shall attend Community Meetings, as required, and be available, as appropriate and as necessary.

7.2.2.3 Experts

Technical and scientific experts hired by the Sipekne'katik Governance Initiative for assistance in reviewing Proposed Activities shall be available to provide written and verbal reports and, if necessary, answer questions from the community at Community Meetings and upon request, if appropriate.

7.5.4 Internal Consultation Plan

7.2.3.1 Drafting

The Sipekne'katik Governance Initiative will propose a plan for community consultation ("Internal Consultation Workplan") for each set of Proposed Activities in which Sipekne'katik has indicated it should be consulted in its Initial Assessment per subsection 6.2.2.3 of this Protocol. The Lead for a consultation process will present a proposed plan, and invite comment, feedback and revisions to Chief and Council. Further community distribution to be determined upon approval of Chief and Council.

7.2.3.2 Consultation Plan Components

The Internal Consultation Plan will detail how the community will be consulted at the various stages of a regulatory review, as well as lay out the applicable community approval mechanism required for an Agreement in Principle and a Final Agreement. It shall be organized around the deadlines and key dates in the External Consultation Plan, and shall set out:

a) Whether and when the Industry Proponent shall present directly to the community;

b) How input will be solicited, including Community Meetings, special sessions, and awareness-raising measures;

c) Measures for the targeted engagement of elders and other traditional knowledge holders, women, and youth;

d) How interested parties will feed into the Impact Analysis described in subsection 6.2.5;

e) Whether an Agreement will be put to the approval mechanism of a Community Referendum ("CR"), Band Council Resolution ("BCR") and/or another mechanism; and

f) Measures to facilitate community planning regarding the benefits and losses resulting from a Final Agreement.

g) Cost of "reasonable consultation" activities, budget and financial report.

7.5.5 Impact Analysis

7.2.4.1 Responsibility of Individuals

The Mi'kmaq, as those with deep knowledge of their lands and waterways, shall identify impacts on their lands and waterways by the Proposed Activities and communicate those impacts, in detail, to the Sipekne'katik Governance Initiative. The success of the process is the responsibility of both individual members and the collective to feed into this process so that all impacts may be studied and addressed in any Agreement in Principle and Final Agreement.

7.5.6 Endorsement of Agreement

7.2.5.1 Approval Mechanism

a) The Internal Consultation Workplan will determine how any Agreement shall be endorsed by the community.

b) If the Proposed Activities will impact reserve lands, approval of the Chief and Council in the form of a Band Council Resolution ("BCR") shall be required. A conditional surrender of the subject lands or a disposition of the subject lands further to a double majority referendum vote, conducted pursuant to the provisions of the *Indian Act*, may be required.

c) If the Proposed Activities impact lands in Mi'kma'ki that are not reserve lands, a form of community approval shall be required, such as a community referendum or majority vote during a meeting called for that purpose.

d) If the Proposed Activities impact reserve and non-reserve lands, a combination of a) and b) above may be required.

7.2.5.2 Referenda

a) Any referendum will be defined on a case by case approach as set out in the internal consultation workplan.

b) A public information package that contains the key points of the arguments in favour of and against the referendum issue, prepared by the Sipekne'katik Governance Initiative and approved by a quorum of the duly elected Chief and Council at a Band Council meeting duly convened for that purpose, shall be made available to members in advance of a Referendum.

c) The Internal Consultation Plan will determine who is eligible to vote in a referendum: Sipekne'katik members, Sipekne'katik community members by community custom and practice, and/or members of other communities subject to a Memorandum of Understanding under section 5.4 for the purposes of consultation on specific Proposed Activities. Where the Proposed Activities affect Sipekne'katik reserve lands exclusively and the *Indian Act* governs a conditional surrender vote process, voter eligibility shall be restricted to members.

7.2.5.3 Majority Vote at a Special Meeting

Any meeting held for the purposes of taking a vote on an Agreement in Principle or a Final Agreement is valid only when notice guidelines are followed.

7.2.5.4 Role of Band Council

a) Chief and Council shall confirm the results of any community approval mechanism of a Final Agreement in the form of a BCR.

b) Failure to pass a BCR within the prescribed time period shall not nullify the results of the community approval process.

c) Under the terms of this Protocol, Chief and Council shall not modify or overturn the results of any internal community approval process, except when it has a valid legal reason to appeal the result.

7.2.5.5 Role of Sipekne'katik Governance Initiative

In addition to the tasks enumerated in this Protocol, the Sipekne'katik Governance Initiative shall:

a) make available all information on the Proposed Activities to interested members, subject to confidentiality requirements;

b) coordinate all Community Meetings;

c) respond to requests for information from community members, Industry Proponents and the Government;

d) manage all consultation processes;

e) hire and liaise with experts and negotiators; and,

f) maintain all formal records of all consultation processes.

8. REVIEW

The Sipekne'katik Governance Initiative Team, in collaboration with the Sipekne'katik Chief and Council, shall undertake a formal review of the Sipekne'katik Governance Initiative Protocol effectiveness, success and structure no later than 18-24 months from its coming into force. The review process will cause to be produced a report which shall contain recommendations for amendments to the Sipekne'katik Governance Initiative, if any.

A review process shall be undertaken every five years thereafter.

The Sipekne'katik Governance Initiative Protocol is envisioned as a living document. This document will be updated as case law develops and evolves.

9. SCHEDULES AND POLICIES

The Sipekne'katik Governance Initiative Protocol is complemented, augmented, implemented, and operationalized by schedules, policies and procedures. Such schedules, policies and procedures are subject to periodic review and amendment on the authority of the Sipekne'katik Governance Initiative further to its approval processes.

Sipekne'katik Governance Initiative: Six Phases to Consultation

SGI Protocol Application Form:

Please ensure all sections are filled out and application fee is included. Incomplete applications will be returned. **Completion of this form is done on a without prejudice basis and is not considered consultation as per section 4(3) of the SGI Protocol.**

PART I

Application Date: _____

Project name: _____

Consultation Lead & Contact: _____

Government Department: _____

☐ Federal ☐ Provincial ☐ Proponent ☐ Other

Applicable legislation, regulations, policies, guidelines and/or governing bodies (please also identify the relevant jurisdiction).

_____

List: _____ _____

_____ _____

_____ _____

_____

PART II

About the Project: _____

_____

_____

Purpose of the Project _____

Alternatives to the Project _____

Location: _____

Size: _____

Scope: _____

Duration: _____

Timeline for project approval & construction commencement date: _____

Part III

Application fees (contact the SGI Secretariat to discuss fees) ☐ $5,000 ☐ $10,000 ☐ $15,000

Method of Payment: ☐ Cheque ☐ Direct Deposit ☐ Funding Agreement

Payable to Sipekne'katik - Re: SGI Application Fee (Department & Project Name - e.g. DFO - Tusket Dam)

Upon completion of the application and fee, the application will proceed to electronic records department and an electronic file # will be assigned to each project before proceeding to the Strength of claim/impact to rights and review stage.

Upon completion of the application form (Phase 1), the Sipekne'katik Governance Initiative Secretariat will process the file internally and subsequently supply the "Strength of Claim Assessment" form for your perusal (Phase 2). Phase 2 will determine:

- Preliminary issues regarding the potential impacts to established and asserted Aboriginal and Treaty Rights, including Aboriginal title of the Mi'kmaq.

Phase 3, the Governance Review, will determine:

- The level and cost of community consultation, considering the severity of the impacts on rights and capacity needs such as scientific studies, Mi'kmaq Ecological Knowledge Studies, archival and historical research, engagement with L'nu governments (including the Mi'kmaq Grand Council, the Elders Council, etc.), referendums, among other needs.

For more Information

Sipekne'katik Governance Initiative Secretariat

Phone: 902 835-2869
Fax: 902 758-2017
Email: consultation@sipeknekatik.ca
522 Church Street,
Indian Brook 14,
N.S., B0N 2H0

For office use only

Date received: _____ Project: _____

Assessment number: _____ Project File # assigned: _____

Assessment start date: _____ Funding File # Assigned _____

Assessment Phase: _____

Kwilmu'kw Maw-klusuaqn Negotiation Office
Mi'kmaq Rights Initiative
Our Rights. Our Future.

75 Treaty Trail
Truro, NS B6L 1W3

Tel (902) 843 3880 **Fax** (902) 843 3882
Toll Free 1 888 803 3880
Email info@mikmaqrights.com
www.mikmaqrights.com

March 7th, 2023

Mark McInnis
Environmental Assessment Officer
Environment Assessment Branch
Nova Scotia Environment and Climate Change
Email: mark.mcinnis@novascotia.ca

RE: Consultation with the Mi'kmaw of Nova Scotia on Port Hawkesbury Paper Goose Harbour Lake Wind Farm Project, Guysborough County.

Mr. McInnis,

I write to acknowledge receipt of your letter dated January 25th, 2023, initiating consultation under the *Terms of Reference for a Mi'kmaq – Nova Scotia – Canada Consultation Process* (TOR) as ratified on August 31, 20210, on the above noted project. We wish to proceed with Consultation.

This project may impact various communities rights as protected under section 35 of the Constitution Act, 1982. Section 35 recognizes and protects the Indigenous rights of the Mi'kmaq of Nova Scotia to hunt and fish throughout Mi'kma'ki, unceded land of the Mi'kmaq people. This project may impede that ability in the surrounding area, including, but not limited to the ability to hunt, fish, and gather in the proposed project area. As referenced in the Environmental Assessment Registration Document (EARD) and Mi'kmaq Ecological Knowledge Study (MEKS), Moose, Salmon, Lobster, Trout, Deer and Partridge, are some of species that are important to the Mi'kmaq and are all found in the project area.

The Mi'kmaq Nation in Nova Scotia has a general interest in all lands and resources in Nova Scotia as the Mi'kmaq Nation has 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.

The EARD mentions the records of Mainland Moose in the project study area. Mainland Moose populations have declined in recent years due to increased industry development, climate change, habitat, and habitat connectivity loss. With just ~700 Mainland Moose in Nova Scotia, we are not in a position to support any activity that will degrade the habitat of this endangered species.

Continued industry development results in permanent cumulative impacts. This includes, but is not limited to, water degradation and the immediate and future loss of habitat and safe food sources. It has been implied that moose will alter movement due to the sensory disturbance; therefore mitigative measures must be designed to avoid impacts to moose habitat and migration

routes. It is our expectation that Nova Scotia Environment and Climate Change will ensure this endangered species will not be impacted by this proposed project.

The EARD identified many wetlands and watercourses that will be altered, disrupted or destroyed due to the construction and development of the Project. Our office remain concerned how this project will impact these bodies of water and the species that reside in them. The restoration and/or creation of wetland and watercourses is supported and encouraged. It is our understanding that wetlands and watercourses are complicated systems that cannot be easily replicated from a biological perspective. Our office is encouraged to see a site-specific monitoring plan will be developed and executed during the construction phase. We recommend reaching out to The Mi'kmaq Conservation Group and local Mi'kmaw Communities to support these monitoring efforts.

The importance of lichens to our environment can not be limited to just one value. Lichens in general could provide very valuable information about our surrounding environment. Ex: Some lichens can only be present in areas of low pollution, others can inhabit areas of moderate to high pollution converting that atmosphere into a healthier, more sustainable one. Lichens also hold a strong value within the Mi'kmaw nation in Nova Scotia. Through research, multiple words have been identified in the Mi'kmaw language to reference lichens proving their importance to Nova Scotia Mi'kmaq. Further, traditional use of various lichens has been documented and noted to medicinal and ceremonial. It is understood that the main threats to boreal felt lichen include habitat loss and deterioration because of forest harvesting, air pollution, climate change, and predation. Boreal Felt Lichen and Blue Felt Lichen along with other known rare species of lichen were documented as being directly impacted by this project. It is unacceptable to alter or degrade the habitat of a Species at Risk or a Rare Species, and thus this action can not be supported by the Mi'kmaq.

Our office remains concerned of the 52 km of pre-existing roads that would be upgraded and if any of the 12 km of new build will be inventoried for species at this time. However, we anticipate that proper sedimentation control will be practiced during the build of these roads given that road builds run perpendicular to that of critical black ash habitat as well as areas of unique biodiversity. Further, whereby vegetation will be removed for new builds, we expect that suitable immature to mature craft would be made accessible to the community should they have interest.

The KMKNO Archaeological and Research Department (ARD) has reviewed the PORT HAWKESBURY PAPER GOOSE HABOUR LAKE WIND FARM PROJECT EARD particularly Section 9 (Pages 209-213) and current MEKS (Appendix B). A summary of an Archaeological Resource Impact Assessment (ARIA) (HRP A2022NS033) which has been conducted by Boreas Heritage Inc., is included in the EARD and is currently still under review by the Special Places Program of CCTH. Any recommendations that have been offered in the ARIA have yet to be approved. It is our expectation that the final ARIA will be sent to our office for review and comment.

We would like to emphasize that this is an extensive project with a footprint that exhibits impacts within a landscape that has an underdeveloped record of Mi'kmaw archaeological heritage in a

historically significant Mi'kmaw place. Not only because of its association with the Strait of Canso as a documented route of travel and place where resources are abundant, but also, its association with a historic Mi'kmaw hunting territory and proximity to Debert (MEKS, December 2022: iv, 25). As described in the MEKS (December 2022) "Mi'kmaq (sic) hunting territories are larger and more regional, encompassing saltwater coastal shorelines and interior river systems" (December 2022: 26).

The ARIA (A2022NS033) conducted by Boreas was a Phase 1 study informed by background research and a field reconnaissance, that identified seven (7) high potential areas for encountering archaeological resources. Ground disturbance has been noted to be minimal and specific to the placement of power poles. Six of the seven areas (HPA-01 and HPA00) are associated with watercourse crossings. It has been acknowledged that once detailed designs identify areas of disturbance, the areas "will be investigated under a separate permit from NSCCTH, prior to the construction of the transmission interconnection line" (EA Registration Document 2023: 211). Disturbance is defined, for archaeological purposes, as the dislocation of soils and/or sediments, such as that by heavily treaded or tracked vehicles, as well as purposeful excavation by heavy equipment.

The Assembly of Nova Scotia Mi'kmaw Chiefs expects a high level of archaeological diligence with evidence-based decisions grounded in an understanding of the subsurface environmental data. The Maw-lukutijik Saqmaq (Assembly of Nova Scotia Mi'kmaw Chiefs) expects subsurface data, adequate to eliminate concern for presence, protection, and management of Mi'kmaw archaeological and cultural heritage as part of assessment of potential in advance of any development. It is strongly recommended all proposed disturbances or impact areas (including logistical and temporary use areas such as access roads and laydown areas) within the Goose Harbour Lake Wind Farm Project study area be subjected to subsurface testing.

In summary, the ARD cannot support the ARIA's determination that all areas outside of the identified areas of highest potential be considered to hold low archaeological potential without provision of supporting subsurface evidence. Archaeological sites and materials are a non-renewable resource. We wish to clarify that negative tests and negative evidence of presence (evidence of absence) are considered relevant and important data.

The project is situated in a poorly documented landscape and any physical impacts to land, regardless of what might be considered minimal, have the potential to damage or disturb buried cultural remains. Any impact to Mi'kmaw archaeological heritage, including lack of detection, loss, or disturbance, has the potential to negatively impact Mi'kmaw Rights and Title.

It is KMKNO's expectation thatcConsultation will continue in advance of future permitting and approvals, such as a *Fisheries Act Authorization* and Industrial Approval. KMKNO is requesting updated shapefiles be sent to our office for the proposed project area. Shapefiles for the project area will allow for more thorough review and better assessment on how this project may impact Mi'kmaw Rights and Title.

KMKNO does not represent the communities of Millbrook, Sipekne'katik, or Membertou First Nations.

We also request in follow up to this letter, a consultation meeting with NS-ECC. Please coordinate with Mise'l Abram, to identify a mutually suitable date.

Please contact Senior Mi'kmaw Energy and Mines Advisor at KMKNO for any further questions.

Yours in Recognition of Mi'kmaw Rights and Title,

Director of Consultation
Kwilmu'kw Maw-Klusuaqn Negotiation Office

c.c.:
Kwilmu'kw Maw-Klusuaqn Negotiation Office
Janel Hayward, Nova Scotia Department of Natural Resources and Renewables
Nova Scotia Office of L'nu Affairs
Melanie Cameron, Nova Scotia Department of Natural Resources and Renewables

McInnis, Mark

From: @hotmail.com
Sent: January 28, 2023 9:16 PM
To: Environment Assessment Web Account
Subject: Proposed Project Comments

Project: goose harbour lake wind farm project Comments: This project should be a no brainier provided there is an environmental assessment done by the province/provincial agency before hand to minimize any potential environmental concerns. This project if anything should include more turbines for more power generating capacity. Name: Email: c @hotmail.com Address: Municipality: Mulgrave email_message: Privacy-Statement: agree x: 81 y: 29

McInnis, Mark

From: @ns.sympatico.ca
Sent: January 29, 2023 12:02 PM
To: Environment Assessment Web Account
Subject: Proposed Project Comments

** EXTERNAL EMAIL / COURRIEL EXTERNE **
Exercise caution when opening attachments or clicking on links / Faites preuve de prudence si vous ouvrez une pièce jointe ou cliquez sur un lien

Project: goose harbour lake wind farm project Comments: Good Project, provides employment, supports the sustained operation of the PHP mill, provides Government with an annual revenue which, by its nature, imposes a minimal loading on Governmental services, provides an opportunity for an elevated level of overall forest/environmental management. Name: Email: @ns.sympatico.ca Address:
Municipality: Halifax email_message: Privacy-Statement: agree x: 57 y: 15

McInnis, Mark

From: @hotmail.com
Sent: January 29, 2023 7:21 PM
To: Environment Assessment Web Account
Subject: Proposed Project Comments

Project: goose harbour lake wind farm project Comments: 1. Using land already clear cut to install a wind farm is better than clear cutting more new land. 2. I wish the consultants/company had presented better maps. I can see the wind farm area fine but I really canâ?Tt see anything beyond the wind farm area to put everything in the proper perspective. A map of the wind farm including towns like Guysborough, Boylston, Mulgrave etc would help people to better understand the exact location and size. I used google maps to compare it with the wind farm map but they donâ?Tt really align. How do I access better maps? 3. I couldnâ?Tt find anywhere in the document that states the total square acreage for this project. They mentioned 29 windmills but make no mention of the total acreage. How do I find the total acreage? 4. I would like to have seen a map of the delivery routes that will be used to deliver the equipment. On page 203 some routes were mentioned but Iâ?Tm confused because they wrote the â?otowersâ? are travelling on highway 334â?"-which is in Yarmouth! Highway 344 is in Guysborough. Maybe a typo? I feel itâ?Ts important for companies to provide this information even if itâ?Ts just a draft because high volumes of traffic like this has an impact on residentâ?Ts safety and infrastructure like our roads and bridges and this affects not only the wind farm area but the entire travel routes. How do I access a map of the potential routes being considered? Name: Email: @hotmail.com Address: Municipality: Manassette Lake email_message: Privacy-Statement: agree x: 37 y: 14

From: @ecologyaction.ca
To: Environment Assessment Web Account
Subject: Proposed Project Comments
Date: February 27, 2023 4:14:18 PM

Project: goose harbour lake wind farm project Comments: The following submission is in response to Goose Harbour Lake Wind Farm Project Environmental Assessment is on behalf of the Ecology Action Centre EAC. The Ecology Action Centre is an environmental charity based in Miâ?Tkmaâ?Tki/Nova Scotia. We take leadership on critical environmental issues from biodiversity protection to climate change to environmental justice. Grounded in over five decades of deep environmental change work and fueled by love and grief, EAC takes a 50-year perspective on what is needed to build towards a time of thriving and flourishing. We work to equip human and ecological communities for resilience and build a world where ecosystems and communities are restored not just sustained. 30 Day Comment Period Due to the short time frame provided for the public and civil society groups including the EAC to provide comment for Environmental Assessment review 30 days, the EAC staff were only able to review and provide comment on a limited number of aspects of the proposed project. The Ecology Action Centre believes that the 30-day comment period is not enough time to provide a full response. Many of those who are interested in reviewing the documents and submitting comments do so on a volunteer basis and must dedicate a significant amount of time outside of their work and home life to write their comments. Please extend future public comment periods to at least 60 days so that organizations, groups and members of the public have a sufficient opportunity to review the relevant documents and form comments in response. This would also bring the EA public consultation period in line with another Nova Scotia Environment and Climate Changes comment period. NSECC seeks public input on propo sed Wilderness Area designation through a public consultation process that is open for 60 days. Land footprint In reviewing the Environmental Assessment, we wanted to raise concern regarding the amount of land the study and project area encompasses in Guysborough County. Seeing the study area, and distribution of turbines within this area raises significant concerns. The configuration of the wind turbines should be reconsidered to reduce the total study area, and subsequent project footprint. This study area encompasses significant portions of the Crown land in the geographic area, and Guysborough County. Considering the additional industrial projects currently under consideration within Guysborough county- two of the largest being the EverWind Point Tupper Hydrogen/Ammonia project, and the Bear Head Energy Green Hydrogen and Ammonia project, we are concerned that if a wind project for 29 turbines is allocated this much land, with the proposed turbine spacing, wind developments in the region will result in significant strain on the natural environment. This would result in significant adverse effects on wildlife, habitat and ecological connectivity in Guysborough Country. With Bear Head and Everwind citing a need for several hundreds of turbines, if a precedent is set that this is appropriate spacing of turbines in a wind farm in Nova Scotia, then these additional project would not only significantly affect Guysborough County, but also other neighbouring counties, resulting in large portion of Nova Scotiaâ?Ts already strained Crown land being slated for industrial development. Therefore, the proponent should reconfigure the study area, and reduce turbine spacing through grouping of turbines, or another appropriate means to minimize the project footprint and impacts on this area, and that the project only be accepted after a substantive review has been completed to evaluate whether

the project area can be adequately reduced. The EAC has repeatedly recommended to government that a holistic approach to Crown land use planning should be undertaken to consider all the competing demands for Crown land. We reiterate this advice/request again here. The potential to overwhelm our limited Crown land base with one-off projects that are considered in isolation from one another and other responsibilities including wildlife habitat protection and connectivity is very real and very concerning. Name:
@ecologyaction.ca Address: 2705 Fern Lane, Halifax, NS, B3K 4L3
Municipality: Halifax email_message: Privacy-Statement: agree x: 37 y: 25

From:
To: Environment Assessment Web Account
Cc: @mapcorg.ca
Subject: Goose Harbour Lake Wind Project EARD - MAPC Commentary
Date: February 27, 2023 4:39:31 PM
Attachments: Goose Harbour Wind - MAPC Commentary.pdf

To Whom It May Concern,

Attached is the written submission, provided on behalf of the Maritime Aboriginal Aquatic Resources Secretariate and the Native Council of Nova Scotia, as it relates to the Goose Harbour Lake Wind Project.

Thank you,

Fish and Fish Habitat Coordinator
Maritime Aboriginal Aquatic Resources Secretariate
80 Walker Street, Suite 3
Truro, Nova Scotia, B2N 4A7

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
- IKANAWTIKET SARA
- MAPC Administration

MAPC Regional
Administrative Office
80 Walker Street, Suite 3
Truro, Nova Scotia
B2N 4A7

Tel: 902-895-2982
Fax: 902-895-3844
Toll Free: 1-855-858-7240
Email: frontdesk@mapcorg.ca

Governmental
APRO Councils

Native Council of
Nova Scotia
P.O. Box 1320
Truro, Nova Scotia
B2N 5N2

Tel: 902-895-1523
Fax: 902-895-0024
Email: chieflaugustine@ncns.ca

New Brunswick Aboriginal
Peoples Council
320 St. Mary's Street
Fredericton, New Brunswick
E3A 2S4

Tel: 506-458-8422
Fax: 506-451-6130
Email: chief@nbapc.org

Native Council of
Prince Edward Island
6 F.J. McAuley Court
Charlottetown
Prince Edward Island
C1A 9M7

Tel: 902-892-5314
Fax: 902-368-7464
Email: chief@ncpei.com

February 27th, 2023

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

RE: Goose Harbour Lake Wind Farm 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 Goose Harbour Lake Wind Farm Project Environmental Assessment Registration Document (EARD). Our comments primarily relate to the matters of significant wetland impacts from the project and the consequences of habitat loss for Mainland Moose.

While we can appreciate that there have been significant efforts to maximize existing disturbed areas, the assessments indicate a significant impact to the wetlands within the project footprint. These wetland habitats provide important ecosystem functions, as well as habitat for numerous aquatic, terrestrial, and plant species. As stated in the EARD (Section 7.3.3.6, Page 109), the analysis indicates the potential for 11.89 ha of wetland habitat to be directly impacted by this development and subsequently that despite these impacts the watershed's hydrology is not expected to be affected (Section 7.3.3.6, Page 113). We would request that Port Hawkesbury Paper and Strum Consulting provide further details on how this conclusion was reached given the amount of wetland habitat expected to be directly impacted by this development.

The Mainland Moose Recovery Plan indicates that Core Habitat to meet the recovery objectives overlaps with the Study Area for this project. It was also stated in the EARD the majority of mainland moose habitat within the study area is considered to be of high quality. Given the potential for use of this area by Mainland Moose, and use of the wetland areas within the project footprint the claim that the direct impacts on

moose habitat 'are expected to be low' seems presumptuous given the sensitivity of this species and its cultural significance to Mi'kmaq people.

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 Indian, and Lands reserved for the Indians" and that the "word Indians' in s.91(24) includes Métis and non-Status Indians"[1]. Since 2004, in multiple decisions 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 has 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 to consult with all Indians extends beyond that only with Indian Act Bands, or as through the truncated Terms of Reference for a Mi'kmaq Nova Scotia Canada Consultation Process.

For contextual purposes, 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

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

community members left unrepresented by Indian Act-created Band Councils and Chiefs. Based on the Aboriginal Identity question, Statistics Canada (2016 Census - 25% sample) enumerate 21,915 off-Reserve Aboriginal Persons in New Brunswick, 42,145 in Nova Scotia, and 2,210 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).

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 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 the Mi'kma'ki now known as Nova Scotia.

We appreciate this opportunity to engage on the Goose Harbour Lake Wind Farm Project and the Environmental Assessment Review. We look forward to continued 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. To continue to represent the interests and needs of the off-Reserve Aboriginal Community in Nova Scotia, we would like to request the opportunity to participate in early engagement in future Environmental Assessment Reviews.

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

Fish and Fish Habitat Coordinator, MAARS

CC: Chief & President, NCNS
Netukulimkewe'l Commission, NCNS
Vanessa MAARS and MAPC Projects