Draft Proposal: Interim Guidance for Renewable Energy Permit Applications

DECEMBER 2025

BRITISH COLUMBIA ENERGY REGULATOR

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About this Document

This **draft proposal of interim guidance** is intended to provide proponents interested in developing renewable energy projects with an initial overview of the framework within which the BC Energy Regulator (BCER) may operate once its authorities under the Energy Resource Activities Act (ERAA) come into force. It outlines early considerations for proponents as they prepare for future project application requirements and is intended to give preliminary clarity on what may reasonably be expected as the regulatory framework is developed.

This document is **not final guidance or policy;** rather, it is a **proposal** informed by the ***Discussion Paper: Proposed Policies for Renewable Energy Projects***, and reflects the direction currently under consideration. Its purpose is to offer **preliminary, non-binding guidance** to support proponents' early planning and preparation during this transition period, recognizing that BCER's authorities, processes, and regulatory requirements remain subject to decisions by the Province of B.C. and the finalization of associated regulations.

Accordingly, the information presented here should be understood as **conceptual and draft**, and not a definitive statement of BCER's regulatory expectations. This proposal will be refined and updated as feedback is received through ongoing engagement on the renewable energy regulatory framework, including through the consultation and cooperation with First Nations as per alignment of law Section 3 of the Declaration Act. A finalized version of the guidance will be developed and published following the coming into force of the BCER's Board Regulation, currently anticipated in spring 2026.

As with all BCER documents, this document does not take the place of applicable legislation. Readers are encouraged to become familiar with the acts and regulations and seek direction from BCER staff for clarification. Some activities may require additional requirements and approvals from other regulators or create obligations under other statutes. It is the applicant and permit holder's responsibility to know and uphold all legal obligations and responsibilities.

Questions about this document should be directed to: **info@rep-spa.ca**

About the BC Energy Regulator

The BCER oversees the full life cycle of energy resource activities in British Columbia (B.C.), from site planning to restoration. We ensure activities are undertaken in a manner that protects public safety and the environment, supports reconciliation with Indigenous peoples, conserves energy resources and fosters a sound economy and social well-being. We work collaboratively across government and industry sharing policy and technical expertise in support of B.C.'s transition to low-carbon energy and helping meet future global energy needs.

Vision, Mission and Values

Vision

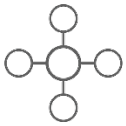
A resilient energy future where B.C.'s energy resource activities are safe, environmentally leading and socially responsible.

Mission

We regulate the life cycle of energy resource activities in B.C., from site planning to restoration, ensuring activities are undertaken in a manner that:

Protects public safety and the environment

Supports reconciliation with Indigenous peoples and the transition to low-carbon energy



Conserves energy resources

Fosters a sound economy and social well-being

Values

Respect is our commitment to listen, accept and value diverse perspectives.

Integrity is our commitment to the principles of fairness, trust and accountability.

Transparency is our commitment to be open and provide clear information on decisions, operations and actions.

Innovation is our commitment to learn, adapt, act and grow.

Responsiveness is our commitment to listening and timely and meaningful action.

Chapter 1: Introduction

In 2025, the Province passed Bill 14, bringing the **Renewable Energy Projects (Streamlined Permitting) Act** (REPA) into force and assigning the BC Energy Regulator responsibility for regulating land-based renewable energy projects. Centralizing this work within the BCER creates a coordinated, "one-window" regulatory approach that provides a clearer and more predictable path for project review. When applicants combine all necessary requests for natural resource authorizations into a "bundled application", this model reduces duplication across agencies and supports timely, transparent processes that integrate environmental, technical and First Nations considerations.

1.1 Activities Regulated by the BC Energy Regulator

The BCER regulates "Energy Resource Activities" as defined under section 1 of the **Energy Resource Activities Act** (ERAA). For the purpose of this guide, the definition of "Energy Resource Activities" includes the construction or operation of a renewable energy project as defined under the Renewable Energy Projects (Streamlined Permitting) Act (REPA).

If an applicant is unsure whether a specific project meets the definition of an "Energy Resource Activity", please contact the BCER for guidance.

The BCER has responsibility for life cycle regulatory oversight of renewable energy projects prescribed as Level 3 Streamlined Projects under REPA and associated regulations.

ERAA and the BC Energy Regulator Regulatory Framework

REPA established Wind and Solar Energy Projects as Level 1 Streamlined Projects, which allows the BCER to issue authorizations under delegated authorities for such projects. The scope of renewable energy projects that fall under BCER oversight are defined in the Renewable Energy Projects (Streamlined Permitting) Regulation.

The BCER operates within a legal framework embodied in the collection of acts, regulations, standards, practice requirements and management plans governing the mandate of the BCER and provides a single-window model for energy resource and related activity operating permits. Any proponent undertaking an Energy Resource Activity is required to hold a permit issued by the BCER that gives them permission to carry out that activity. Activities must be undertaken in accordance with BCER regulations and specific conditions placed on individual permits.

At present, proponents should be aware of several BCER regulations that apply or partially apply to renewable energy projects. In some cases, these regulations will be disapplied when the BCER implements comprehensive regulations for renewable energy projects in Spring 2026. These include, but are not limited to, the following:

- **Requirements for Consultation and Notification Regulation**
- **Energy Resource Road Regulation**
- **Service Regulation**
- **Energy Resource Activities General Regulation**
- **Environmental Protection and Management Regulation**

A full list of regulations can be found on the BCER's website under **Legislative Framework**.

Conditions placed on permits will be used to regulate additional requirements specific to renewable energy projects. The BCER will seek to understand a wide range of factors related to a project in determining what conditions might need to be imposed on a permit. These considerations are discussed within this document.

1.2 Investigative Work

The BCER has responsibility for life cycle regulatory oversight of renewable energy projects, including investigative work. Geotechnical assessments and installation of monitoring equipment on the land for more than one year on Crown land requires an applicant to hold a valid Investigative Use Licence (IUL) under the Land Act. For applications for investigative work, please see the BCER's **Interim Guidance for Submitting Investigative Use Licence Applications for Renewable Energy Projects**.

1.3 Professional Reliance

This manual specifies instances where the BCER will rely on Qualified Professionals (QPs) to conduct necessary works and provide the necessary information the BCER requires to adjudicate applications and to confirm the proposed development activities conform with regulation.

The BCER considers a QP to be those individuals who are registered members of a Regulatory Body regulated under the **Professional Governance Act**.

All submissions made to the BCER in support of an application or a regulatory requirement that include work relating to the practice of professional engineering or professional geoscience are expected to accord with the Professional Governance Act [SBC 2018], c. 47 and the Bylaws of Engineers and Geoscientists British Columbia (EGBC). This includes any requirements relating to authentication of documents.

The BCER requires appropriate QPs sign off any environmental impact and management works. Please refer to Section 1.7 of the **Energy Resource Activity Application Manual** for further information.

1.4 Pre-Application

Before submitting an application for a renewable energy project, proponents are encouraged to meet with the BCER to introduce themselves and their project concept and to build an understanding of the regulatory

framework. Early engagement can support efficient planning and help identify and plan sufficient time for any subsequent application processing based on the specifics of the proposal.

To support such early engagement with the BCER, it is helpful to share information about the project in advance of any meeting (we recommend at least a week), including a general description and any proposed codes and standards that may be utilized in project design, construction or operation. Requests for a meeting and information should be directed to: renewables@bc-er.ca.

1.5 Other Authorizations and Approvals

When applying for an ERAA permit, applicants can also apply for certain authorizations under the Land Act, the Forest Act, the Mines Act, the Agricultural Land Commission Act, the Heritage Conservation Act, the Wildlife Act and the Water Sustainability Act.

Proponents apply to the BCER, and the BCER reviews, assesses and makes decisions on applications. This consolidated single-window authority provides not only a one-stop place for most energy resource and associated activity requirements, but a consistent application, decision, regulatory and compliance authority. Stakeholders work with one agency, therefore serving the public interest by having an all-encompassing review process for energy resource activities.

Applications for related activities should be made with the ERAA application. Table 1 outlines proposed activities, related acts and links to guidance for further information on making applications to the BCER, noting this list may not be comprehensive. For additional information on applications for related activities, please refer to Chapter 4.6 (Associated Activity) of the Energy Resource Activity Application Manual.

Table 1 Regulatory Guidance for making applications for other authorizations and approvals

Proposed Related Activity	Related Act	Guidance
Investigative Use Licence	Land Act	Interim Guidance for Submitting Investigative Use Licence Applications for Renewable Energy Projects
Short-term surface water or groundwater withdrawal (up to 24 months in duration)	Water Sustainability Act	Energy Resource Activity Application Manual, Chapter 4.7: Short-term Water Use
Access to water exceeding 24 months in duration	Water Sustainability Act	Water Licence Application Manual
Changes in and about a stream, or activities that may have an impact on a stream	Water Sustainability Act	Energy Resource Activity Application Manual, Chapter 8.4: Changes in and About a Stream
Discharge of waste	Environmental Management Act	Waste Discharge Authorization Application section of the BCER's website

Proposed Related Activity	Related Act	Guidance
Roads	Energy Resources Activities Act	Energy Resource Activity Application Manual, Chapter 4.5: Road Activity
Forestry activities	Forest Act	Energy Resource Activity Application Manual, Chapter 2.2 Master License to Cut and Energy Resource Activity Application Manual, Chapter 5.4: Forestry Information
Archaeological inspections and investigations	Heritage Conservation Act (Section 12.2 - Heritage Inspection Permit)	Heritage Conservation Program Guidelines
Any activity that will alter or disturb a known archaeological site	Heritage Conservation Act (Section 12.4 - Heritage Alteration Permit)	Heritage Conservation Program Guidelines
Wildlife permits for scientific fish collection, fish salvage, amphibian salvage, nest removal or relocation, beaver dam removal and possession of dead wildlife	Wildlife Act	Updates to the *Wildlife Act* application type in AMS for Renewable Energy and Prescribed Transmission Line Proponents (TU 2025-15)
Borrow pits/aggregate operations under the Mines Act for up to 100,000 tonnes per year	Mines Act	Energy Resource Activity Application Manual, Chapter 4.6.4 and Appendix E: Aggregate Operation Application Process
Non-farm use of land in the Agricultural Land Reserve	Agricultural Land Commission Act	Interim guidance is provided in Chapter 4.3 of this document.

In some instances, proponents may need to apply for federal permits to Fisheries and Oceans Canada if harm to fish or fish habitat is possible, or to the Canadian Wildlife Service if migratory or listed species will be impacted. It is the applicant's responsibility to know and uphold all legal and regulatory responsibilities.

For wind facilities, proponents should also contact the following agencies early in the project development process to verify wind turbine siting does not disrupt signals used for communication, air navigation or radar systems:

- NAV Canada
- Canadian Armed Forces
- Royal Canadian Mounted Police Mobile Communication Services
- Radio Advisory Board of Canada

Chapter 2: Minimum Application Expectations for Renewable Energy Projects

An application to construct or operate a renewable energy project must be submitted via the BCER's **Application Management System (AMS)**. AMS is the BCER's online portal for the submission and payment of single or multiple activity energy resource applications. Prior to applying through AMS, applicants must ensure they are set up as an energy resource operator and have assigned the proper security roles to the representatives that require access to their applications. For more information on how to become an energy operator, please refer to the **Permit Operations and Administration Manual**.

Please see the **Energy Resource Activity Application Manual** and the **AMS User Manual** for a comprehensive how-to document for applications. The AMS activity type "Wind Facility or Solar Facility" should be selected. Applicants are encouraged to review **Chapter 3**: Application Management System Submission Process in the Energy Resources Activity Application Manual.

The following information must be submitted through AMS through applicable information tabs and supplementary attachments, as noted in the following sections.

Spatial Data

Spatial data must be uploaded. File requirements are specific to activity types. Please refer to the **AMS Spatial Data Submission Standards Manual**.

Turbine locations must be provided for wind projects. These points can be encompassed within a construction corridor to have some flexibility in the exact placement in the field.

Application Overview

Details of the project are captured in the Application Overview screen of AMS. Additional project description information can be uploaded as an attachment. Minimum expectations for information to be included are:

A Project description that details the design and range of siting configurations that may be constructed ("design envelope" or "construction corridor" approach).

Project description information on the maximum buildout (i.e., maximum number of turbines, turbine height, blade diameter, MW output) to enable a "construction corridor" approach.

The project description should specify which elements of the facility design are final and what are still under consideration.

This allows for flexibility in precise turbine siting and design after a permit has been issued, so long as it is within the thresholds of the "construction corridor" submitted with an application and does not interact with sensitive areas (e.g., environmental, cultural, or otherwise).

Please refer to **Section 3.2.2** of the Energy Resource Activity Application Manual for further information on construction corridors.

Activity Information

Activities included in the application must be specified in AMS. Multi-activity applications that provide a complete picture of the project are strongly encouraged.

Each activity selected in an application will have a unique tab and require activity-specific information.

- Wind Facility: activity description must include total maximum power capacity, maximum hub height and rotor diameter, design standard and approximate turbine locations
- Solar Facility: activity description must include total maximum power capacity, design standard, approximate panel locations
- Related Activities: includes other land uses associated with the project, e.g. construction workspaces, access, power lines to the point of interconnection and log deck sites

Administrative (Proponent Representatives)

Please refer to **Chapter 5.1** of the Energy Resource Activity Application Manual for information on completing the Administrative Tab.

Land Type

Please refer to **Chapter 5.2** of the Energy Resource Activity Application Manual for information on completing the Land Type tab. Note: Activities located on private land require the consent of the landowner.

Forestry (New Cut)

Please refer to **Chapter 5.4** of the Energy Resource Activity Application Manual for information on completing the Forestry (New Cut) tab.

Stewardship

Please refer to **Chapter 5.6** of the Energy Resource Activity Application Manual, the **Environmental Protection and Management Guideline**, and Chapter 4 of this document for information on completing the Stewardship Tab and uploading supporting attachments.

Agriculture

Please refer to Section 4.3 of this document for information expectations for use of agricultural land, including an agricultural assessment report to be uploaded as a supporting attachment.

Archaeology

The BCER is undertaking a Heritage Conservation Program Modernization Project to strengthen internal guidance and processes, develop external standards and guidance, working with the Archaeology Branch and align with the provincial Heritage Conservation Act (HCA) Transformation

Project. The BCER will communicate any changes to processes pending the outcome of the Heritage Conservation Program Modernization Project.

For current processes refer to **Chapter 5.5** of the Energy Resource Activity Application Manual for information on completing the Archaeology tab. Information on the Heritage Conservation Program can be found on the BCER's **website** and in the **Heritage Conservation Program Guidelines**. Requests for additional guidance or questions can be directed to **ArchaeologyDL@bc-er.ca**.

Consultation and Notification

Please refer to Chapter 5 of this document.

First Nations

Please refer to Chapter 3 of this document for further information on expectations for proponent engagement, including submission of pre-engagement records.

Maps and Plans

Please refer to **Chapter 5.7** of the Energy Resource Activities Application Manual for information on completing the Maps and Plans tab.

Key Attachments

Information to support the application can be uploaded as "Attachments" in AMS. To receive the full benefits from the BCER's "single window" approach, the following application deliverables are expected to be uploaded as part of an application. Further detail on expectations for these deliverables can be found in the sections that follow.

Please note: A proponent may request submission of some of the Key Attachments, outlined below, be deferred, modified or not required. Please include rationale with the request to the BCER. A request for deferral of a submission should include a proposed timeline (e.g., deferred for two weeks and will be submitted prior to a permit decision, deferred for six months and will be completed prior to operation, etc.).

- **Project Life Cycle Summary:** Summary that briefly describes anticipated life cycle (e.g., construction, operation, decommissioning) impacts to the area surrounding the proposed project. This summary should include reference to any relevant by-laws.
- **Noise Impact Assessment:** As per Chapter 3 of the BCER's **British Columbia Noise Control Best Practices**, a noise impact assessment is required to be submitted if there is a receptor (building regularly occupied by persons) within 1.5 km of potential noise sources.
- **Shadow Flicker Assessment:** For wind facilities, a shadow flicker assessment is required to be submitted if there is a receptor (building regularly occupied by persons) within 1.5 km of proposed operating area.

- **Glare Assessment:** For solar facilities, a glare assessment is required to be submitted if there is a receptor (including roads and railways) within 1.5 km or an aerodrome within 4 km of the proposed operating area.
- **Environmental Impact Form** (Appendix A): Describing the presence or absence of potential environmental impacts throughout the project life cycle. Please refer to Chapter 4 of this document for more information.
- **Environmental Impact Report(s):** A report that identifies the nature and extent of environmental impacts from the project and recommendations for mitigation. Please refer to Chapter 4 of this document for more information.
- **Cumulative Effects Assessment Report:** A cumulative effects assessment must be completed by an appropriate QP. Please refer to Chapter 4.2 of this document for more information.
- **Socio-economic Report:** A report that identifies and evaluates the nature and extent of expected socio-economic impacts across the full life cycle of the proposed project. Please refer to Chapter 5 of this document for more information.
- **Quality of Life Evaluation:** A report that identifies the nature and extent of the quality-of-life impacts. Please refer to Chapter 5 of this document for more information.
- **Community Engagement Report:** A summary of all engagement activities. Please refer to Chapter 5 of this document for more information.
- **Construction Schedule:** Level 1 construction schedule is typically sufficient.
- **Preliminary Plot Plans:** Provide, as required, proposed locations of wind turbines, solar arrays, substations, switchgear, collectors, roads, associated buildings and any other key components of the facility. Please refer to Chapter 6 of this document for more information.
- **Preliminary Design Basis Memorandum:** Please refer to Chapter 6 of this document for more information.
- **Hazard Analysis and Siting Study:** For projects that include Energy Storage Systems (battery or other type), a hazard analysis and siting study is required to be submitted. Please refer to Chapter 6 of this document for more information.
- **Decommissioning and Restoration Plan:** A summary of activities to be undertaken as part of decommissioning and restoration, including a schedule for progressive restoration. Please refer to Chapter 4 of this document for more information.

Chapter 3: First Nations Engagement and Collaboration

First Nations engagement and collaboration is the foundation of responsible energy development in B.C., and both proponents and the BCER share a critical role in ensuring collaboration drives project certainty, environmental protection and reconciliation. Successful energy project development depends on strong relationships, clear communication and meaningful collaboration with First Nations. Both proponents and the BCER share responsibility for engaging with First Nations early and maintaining engagement throughout the entire project life cycle. Proponents are expected to lead respectful, proactive engagement, while the

BCER ensures compliance with regulatory requirements and engagement standards and fulfills the Crown's duty to consult on potential impacts to rights recognized under Section 35(1) of the Constitution Act, 1982. This approach directly supports BCER's mandate to ensure safe, responsible energy development, environmental protection and reconciliation with Indigenous Peoples. Together, all parties contribute to a fair, respectful and effective process.

The steps in this chapter help proponents meet regulatory expectations while keeping projects on track, reducing risks, avoiding delays and supporting efficient, collaborative development, including:

- Stronger relationships: Building trust supports long-term, constructive partnerships.
- Better project outcomes: Early engagement helps identify and address potential impacts before they become issues.
- Greater efficiency: Proactive communication can reduce risks, minimize delays and streamline project planning.
- Transparency and accountability: Open dialogue improves understanding and confidence among all parties.

By approaching engagement in this way, proponents not only meet regulatory requirements but also reduce the likelihood of compliance issues, project delays and permit application challenges. At the same time, the BCER contributes by providing clear guidance, monitoring adherence to engagement standards, and fulfilling consultation obligations - ensuring projects proceed responsibly, protect environmental and cultural values and align with provincial regulations. This collaborative approach is essential for project certainty, risk management and advancing reconciliation and sustainable energy development across the province.

3.1 Pre-Engagement

Before submitting an application, proponents must conduct pre-engagement with affected First Nations early in the project planning stage and prior to application submission. Pre-engagement is most effective when initiated at the earliest opportunity, such as during the development or project planning stage, well before key milestones, so that there is flexibility to design a project that will avoid or mitigate potential impacts.

The purpose of pre-engagement is to:

- Establish respectful relationships early to build trust at the beginning of a project and establish clear expectations for ongoing engagement.
- Offer opportunities for First Nations to participate in project planning.
- Identify and address potential impacts on First Nations' rights, interests and cultural values.
- Collaboratively develop measures to avoid, mitigate or monitor potential impacts.
- Support collaborative problem-solving and integration of Indigenous Knowledge.

Early engagement is critical for project success because it helps avoid regulatory delays, ensures compliance with BCER adjudication requirements and fulfills the Crown's duty to consult.

The **Guidance for Pre-engaging with First Nations** is intended to provide a basic reference document for proponents engaging with First Nations to avoid and/or mitigate potential impacts to Indigenous interests prior to submitting applications to the BCER for adjudication.

Proponents are encouraged to follow this document which outlines:

- Minimum information requirements for First Nations (e.g., project description, maps, GIS data, potential impacts).
- How to document and track engagement efforts.
- Requirements for submitting pre-engagement records as part of the permit application.
- If Indigenous Knowledge is shared during pre-engagement, proponents must clearly communicate their intent to use and document this information and obtain explicit approval from the First Nation before its use and storage.

Complete and transparent documentation of engagement efforts is essential for regulatory review and demonstrates accountability, which is a cornerstone of BCER's mandate.

3.1.1 BCER Approach to Consultation

The BCER is committed to a consensus-seeking approach to consultation that upholds the principles of the Declaration on the Rights of Indigenous Peoples Act (DRIPA) and fulfills the Crown's duty to consult on potential impacts to rights recognized under Section 35(1) of the Constitution Act. This approach is grounded in collaboration, transparency, and respect for First Nations governance and knowledge systems.

During consultation, the BCER works in partnership with First Nations to ensure their rights, interests, and knowledge systems are meaningfully reflected in project planning and regulatory decisions. The BCER's role includes:

- Upholding the legal obligation of the Crown's duty to consult and, where appropriate, accommodate First Nations when activities may adversely impact their Aboriginal or Treaty Rights.
- Facilitating meaningful dialogue between proponents and First Nations to identify and address potential impacts early and effectively.
- Reviewing pre-engagement commitments to confirm proponents uphold any commitments that were made.

Expectations for Proponents:

Applicants are expected to actively engage with First Nations throughout the consultation process, beyond pre-engagement, and to demonstrate how feedback has influenced project design and mitigation measures. Engagement should be respectful, timely, and documented.

Addressing Concerns:

If the BCER receives concerns that are not addressed through legislation or submitted application materials,

the BCER will seek clarification from the proponent. The proponent is expected to respond promptly and work collaboratively with both the First Nation and the BCER to resolve outstanding issues. This may include revising project plans, providing additional information, or developing mitigation measures consistent with the provincial mitigation hierarchy.

3.2 Protection of Cultural Heritage Resources

The **Environmental Protection and Management Regulation** (EPMR) defines a Cultural Heritage Resource as an object, a site, or the location of traditional societal practices, not regulated under the Heritage Conservation Act, and is of historical, cultural, or archaeological significance to First Nations.

Applicants are expected to familiarize themselves with the requirements for Cultural Heritage Resources outlined in Section 1.13 of the **Environmental Protection and Management Guideline** (EPMG). Expectations include:

- Engagement of potentially affected First Nations early in the planning process.
- Collaboration with First Nations to identify appropriate approaches for considering cultural heritage values.
- Supporting the development of datasets or management measures, where First Nations choose to share cultural heritage information.

Note: Proponents must prepare a mitigation plan for any cultural heritage resources identified within the operating area of the proposed project. Please refer to Section 1.13 of the EMPG for further information.

3.3 Indigenous Knowledge

The BCER recognizes Indigenous Knowledge provides valuable insight into potential project impacts, informs meaningful mitigation and accommodation measures and contributes to ongoing monitoring and oversight across the regulatory life cycle of energy activities in B.C. Proponents play an essential role in ensuring Indigenous Knowledge is treated with respect, used appropriately and protected throughout all project phases. Incorporating Indigenous Knowledge into project design and regulatory processes leads to better outcomes for all parties, as it provides critical insights that inform decisions and strengthen environmental and cultural stewardship.

Practical examples of Indigenous Knowledge integration include adjusting project routes to avoid sensitive areas, modifying construction schedules to respect cultural practices and identifying wildlife habitats for enhanced environmental protection.

Respectful Use and Protection of Indigenous Knowledge

- Indigenous Knowledge is vital for identifying and addressing potential impacts throughout all stages of project development. The BCER expects proponents to incorporate shared Indigenous Knowledge, where appropriate, into project planning, design and development activities.

- Indigenous Knowledge must only be used with proper consent and in alignment with First Nations governance, laws and protocols.
- Proponents and First Nations should work together to determine how knowledge is shared and protected, potentially through agreements and community protocols.
- The principles of **Ownership, Control, Access and Possession (OCAP)**, developed by the First Nations Information Governance Centre (FNIGC), provide a framework for respectful handling of Indigenous Knowledge.
- The **Freedom of Information and Protection of Privacy Act (FOIPPA)** safeguards sensitive information from disclosure:
    - **Section 16:** Protects information that could harm relations with First Nations (valid for 15 years from date of disclosure).
    - **Section 18:** Protects data related to natural, anthropological, heritage or endangered sites and species.

The BCER's established framework for Indigenous Knowledge integration is embedded in several key documents and regulations including:

- **Ecologically Suitable Species Guide**
- **Treaty 8 Planning and Mitigation Measures**
- **Guidance for Pre-engaging First Nation**
- **Processing Facility Regulation and Guideline**

By embedding Indigenous Knowledge into project planning and regulatory processes, proponents and the BCER not only minimize environmental and cultural impacts but also enhance project design and decision-making. The more information available about a project, the better the outcomes, reducing risks, improving efficiency and strengthening trust with First Nations and rights holders. These are key factors for project certainty and essential components of delivering the BCER's mandate for safe, responsible energy development and reconciliation.

Chapter 4: Environmental Protection

4.1 Environmental Impact Report

Permit holders must mitigate, and limit environmental impacts identified throughout the life cycle of the project through the implementation of an environmental management plan or program. Permit holders are expected to implement adaptive management strategies as needed and in response to results of monitoring. Records of implementation and monitoring of environmental impact management must be kept and made available to the BCER upon request.

The **EPMR** applies to Renewable Energy Projects. The **EPMG** outlines expectations for requirements of the EPMR, and in addition to information and knowledge from pre-engagement work with First Nations, should be referenced when developing application materials related to environmental assessment and protection. Renewable Energy Projects pose unique risks to additional environmental values, as outlined in subsections 4.1.1 to 4.1.3 of this document.

An application for a Renewable Energy Project and its related activities must include an Environmental Impact Report that considers all applicable environmental values, assesses potential impacts to those values, assesses the risk of impacts occurring and provides an overview of how impacts will be mitigated (in alignment with the provincial mitigation hierarchy) through management strategies. For projects located within the Treaty 8 Territory, applicants must also consider **Treaty 8 Planning and Mitigation Measures** in the development of mitigation measures.

The Environmental Impact Form (Appendix A: Environmental Impact Form) lists environmental values from both the EPMR and this document and can be used by applicants to demonstrate all values identified in those documents have been considered and to inform the expected content of the Environmental Impact Report. Applicants are expected to review the environmental setting for the project, along with project details and Indigenous Knowledge, and indicate whether the environmental values presented in the form are subject to the risk of impacts from the project. Early engagement of First Nations is a way in which Indigenous Knowledge can inform environmental impact reports and identify environmental values. Collaboration with QPs with demonstrated knowledge and expertise as per the **Professional Governance Act** is recommended when identifying environmental values.

It is expected applicants will follow the Province of B.C.'s **mitigation hierarchy**, beginning with avoidance, and therefore, provide rationale for situations where impacts cannot be avoided. The level of detail in the report should be commensurate with the magnitude of the risk and the level of effort required to ensure proper mitigation.

The minimum expectations for the Environmental Impact Report include:

- Description of values identified
- Description of the current environmental conditions

  Note: Assessments of environmental conditions must be current at the time of application. If there is a significant delay between data collection and application submission, updated fieldwork may be required. Assessments older than two years must be validated by a QP.
- Indigenous Knowledge and other relevant information shared during pre-engagement with First Nations
- Activity and type (examples: construction/operation, permanent/temporary, land disturbance/subsurface work) and the extent of potential impacts to identified values
- Risk assessment/potential consequence and likelihood of impacts

- Discussion of how the mitigation hierarchy will be used to address potential impacts and how mitigation measures will be integrated into an ongoing environmental impact management plan, including:
    - How siting or placement of activity will avoid impacts
    - How design and construction of activity will avoid impacts
    - Where impacts can potentially be minimized
    - Where impacts will be addressed through restoration
- Description of anticipated monitoring that will be used to assess effectiveness of impact mitigation and trigger adaptive management responses

The Environmental Impact Form and Environmental Impact Report must be prepared by an appropriate QP and include a professional declaration. Please refer to the **Energy Resource Activity Application Manual, Section 1.7**, for further information on expectations for Professional Reliance.

The Environmental Impact Form and Environmental Impact Report can be submitted as a single comprehensive document or be comprised of multiple documents. Where multiple separate assessment or mitigation plans are uploaded, reference to additional supporting report(s) for specific values must be provided on the form or in a concordance table.

Environmental Impact Management

During construction and operation permit holders are expected to implement an environmental management plan. The mitigation measures and management strategies in the plan should be informed by the Environmental Impact Report and developed by appropriate QPs. Permit holders are strongly encouraged to implement the Planning, Operational and Monitoring Measures (POMs or POMMs) from the EMPG and **Environmental Information Management System** where appropriate. Implemented mitigation measures and management strategies must have associated measurable objectives that are monitored for effectiveness.

The BCER may condition the requirement to develop and implement an environmental management plan and maintain records of implementation, monitoring and adaptive management strategies.

Please note: As outlined in the EPMG, site specific mitigation plans are triggered when an activity occurs in designated or sensitive environmental areas. Site-specific mitigation plans required by the EMPG must be submitted at the time of application. Please refer to Appendix B of the EPMG for detailed requirements for site-specific mitigation plans. Site-specific mitigation plans should be integrated into the permit holder's environmental impact management plan or program.

4.1.1 Water and Land

The EPMR includes Government Environmental Objectives for Water, Riparian Areas and Resource Features and Operating Area Requirements. Applicants are encouraged to review and understand the EPMR and the corresponding guidance in the EMPG.

If power line related activities cannot be carried out in accordance with the guidance recommendations in this document, then a rationale must be included in the application. The rationale must include specifics of the guidelines not followed, an explanation of why they cannot be followed, as well as outline any planning strategies or operations measures that have been or will be implemented to mitigate impacts on associated environmental values.

The following subsections discuss consideration of karst and metal leaching / acid rock drainage (ML/ARD), which are at heightened risk from renewable energy projects.

Karst

Applicants are encouraged to contact the BCER as soon as possible if karst features are identified. Please refer to the EMPG, Section 1.12.1, for further information.

Metal Leaching / Acid Rock Drainage

An assessment of ML/ARD potential is required as part of an application when more than 1,000 m^3 of rock will be excavated or imported during the project. The assessment must include a risk assessment based on ML/ARD potential and project-specific factors.

Where there is potential for ML/ARD, a management plan must be in place prior to construction. At the time of application, a draft of the anticipated plan should be provided. Please contact the BCER to discuss ML/ARD requirements in more detail.

4.1.2 Wildlife and Wildlife Habitat

The EPMR includes Government Environmental Objectives for Wildlife and Wildlife Habitat. Applicants are encouraged to review and understand the EPMR and the corresponding guidance for Wildlife Habitat Areas (WHAs), Ungulate Winter Ranges (UWRs) and Fisheries Sensitive Watersheds; High Priority Wildlife; Wildlife Tree Retention Area; and Wildlife Habitat Features.

Assessments of wildlife species and habitats can be done by using publicly available spatial layers and field survey data. Mitigation strategies should rely on best available scientific and Indigenous Knowledge, Best Management Practices, and be developed by QPs with relevant expertise. Proponents are encouraged to review Appendix B of the EMPG for further information on mitigation plans.

Culturally Important Wildlife Species

Culturally important wildlife species identified during pre-engagement with First Nations should be included in wildlife assessments. Key habitat features should be identified using appropriate measures (i.e., QP direction, local and Indigenous Knowledge, desktop review, field surveys). Applicants should work with First Nations in developing mitigative measures to manage impacts to the identified species. Application requirements for the culturally important wildlife species should align with requirements for High Priority Wildlife, as outlined in Section 1.8 of the EPMG.

Bats

Bats are at heightened risk of mortality when wind projects are in operation. This section outlines the requirements for wind energy projects with respect to bats, in addition to requirements outlined in the EPMG, such as High Priority Wildlife.

Impact Assessment

A bat impact assessment will be informed by at least one year of completed bat surveys for a wind energy project. The assessment must be completed by a QP and consider the entire project area (or "construction corridor") plus a buffer distance as determined by the QP. This buffer distance must consider topography, land cover features and the possible attraction of bats to turbines from nearby habitats. A rationale for the study area selected and surveys completed must be provided.

When preparing bat surveys to support applications, the following guidance should be considered and followed:

- **Inventory Methods for Bats, Standards for Components of British Columbia's Biodiversity No. 20** (RISC 2022)
- **Best Management Practices for Bats in British Columbia, Chapter 4: Wind Power Developments** (WLRS 2025)

At minimum, the bat assessment must describe:

- Bat species present in the study area
- Locally significant species, as informed by the best available science and Indigenous Knowledge
- Timing and spatial distribution of bat activity
- Key habitat features and sensitive areas for bats
- The potential adverse effects to bats across the life cycle of the project including consideration of:
  - Habitat loss and degradation
  - Disturbance (including sensory disturbance)
  - Mortality
- How the project avoids and minimizes adverse effects to bats through site selection, project design and turbine siting

Mitigation and Management

Permit holders are expected to mitigate impacts to bats. Environmental Management Plans must include bat mitigations, developed by a QP and that detail the processes and procedures to mitigate and manage adverse effects to bats. Applicants are encouraged to adopt the POMMs outlined below, indicate their commitment to do so in the environmental impact report and document them in their environmental management. When deviation from recommended POMMs is necessary, a QP-supported alternative and rationale may be provided at the time of application for assessment by the BCER.

The BCER may condition mitigative actions and monitoring requirements, including the POMMs outlined below or the QP-supported alternative.

Planning Measures:

- Identify key habitat features using appropriate measures (i.e., QP direction, Indigenous Knowledge, desktop review, field surveys, etc.) and plan activities within the area accordingly.
- Avoid sensitive areas such as large maternity colonies, high quality roosting habitat (e.g., mature and old forest, karst, cliffs), potential migratory routes (e.g., ridgelines, coastlines, river valleys), hibernacula, swarming sites and key foraging areas (e.g., wetlands, riparian corridors).
- Schedule tree removal and blasting works such that they occur outside of critical timing windows.

Operational Measures:

- Slow or stop turbine blades (e.g., feathering) at wind speeds below the recommended cut-in speed at night during the active season for bats as per the **provincial BMP**.
- Implement precautionary curtailment beginning at the outset of project operations during periods of high risk for bats either by basic curtailment as defined in the provincial BMP or by a smart curtailment approach that provides an equivalent level of protection for bats.

Applicants proposing a QP-supported alternative to the recommended POMMs are expected to:

- Submit a QP-developed alternative mitigation approach with the application that demonstrates an equivalent level of protectiveness for bats compared to the recommended POMMs and is subject to review and approval by the BCER at the permitting stage.
- Adhere to provincial target fatality thresholds defined in the provincial BMP.
- Develop an adaptive management strategy with escalating mitigation and monitoring effort based on fatality monitoring results compared to provincial target fatality thresholds as per the provincial BMP, until a sub-threshold three-year average is reached.

Post-Permit Monitoring Measures

Permit holders will be expected to conduct post-construction bat acoustic surveys and fatality monitoring that follow guidance in the provincial BMP. For applicants adhering to the recommended POMMs, and therefore demonstrating clear effort to implement precautionary curtailment as the best available mitigation strategy, a three-year post-construction monitoring period will be required and flexibility will be applied to the application of provincial target fatality thresholds (i.e., as a mechanism for demonstrating mitigation effectiveness, as a reference point for tailoring the curtailment strategy over the post-construction monitoring period and as a measure of the project's residual effect on bats following implementation of mitigation). For projects implementing a QP-supported alternative to the recommended

POMMs, additional post-construction monitoring may be required until a sub-threshold three-year fatality average is reached, at the discretion of the BCER. Permit holders will be expected to maintain and submit records of mitigation measures implemented (e.g., actual bat curtailment compared to proposed curtailment), annual bat fatality, and acoustic monitoring results for each required monitoring year and any incidental bat mortality. The bat management plan must include a commitment to conduct a minimum of one year of maintenance monitoring every five years while the project is operational.

Permit holders will notify the BCER immediately in the case of the death or injury of:

- A threatened or endangered bat species listed in Schedule 1 of the *Species at Risk Act* (SARA),
- A Hoary Bat (priority species at risk, as per the BMP),
- A locally significant species as defined by the BCER in permit conditions, or
- Three or more bats at any one turbine in a single year (uncorrected, as per the BMP).

A final bat mitigation and management plan must be submitted to the BCER for approval at the end of the final year of required post-construction monitoring.

A permit holder will be expected to notify the BCER of a material change likely to result in an increased risk of material adverse effects to bats, as determined by a QP. Examples of material changes with respect to bats that may require notification to BCER include, but are not limited to:

- Reduction in the approved turbine curtailment regime in the bat mitigation and management plan
- Addition, relocation, or change of a turbine beyond the approved "construction corridor"
- Maintenance fatality monitoring results that are significantly higher than the three-year average post-construction fatality results for the project

Birds

Birds may be at heightened risk of mortality when wind projects are in operations. This section outlines the requirements for wind energy projects with respect to birds in addition to requirements outlined in the EPMG, such as High Priority Wildlife and Wildlife Habitat Features.

Assessment

A bird assessment will be required for the adjudication of wind energy project applications. The assessment must be completed by a QP and should consider, at minimum, the entire project area (or "construction corridor"). Bird surveys must occur over a minimum of one year in all seasons where there is potential for a material adverse effect to birds from the project, including consideration of breeding, migration (stopover sites and passage routes) and overwintering, as determined by a QP. Rationale for the study area and survey seasons selected must be provided.

The bird assessment should follow guidance in:

- **Recommended Protocols for Monitoring Impacts of Wind Turbines on Birds** (EC CWS 2007)
- **Guidelines to Avoid Harm to Migratory Birds** (ECCC 2023)

- **General Nesting Periods of Migratory Birds** (ECCC 2024)
- Applicable **Resources Information Standards Committee** (RISC) inventory methods for bird taxa with the potential to experience material adverse effects from the project, as determined by a QP

At minimum, the bird assessment should describe:

- Presence, seasonality and abundance of bird species in the study area
- Locally significant species, as informed by the best available western science, Indigenous Knowledge and local expertise
- Key habitat features and sensitive areas for birds
- Proximity to significant bird areas
- Site factors that may increase bird mortality risk
- Potential adverse effects to birds across the life cycle of the project
- How the project avoids and minimizes adverse effects to birds through site selection and project design

Mitigation and Management

The primary mechanism for mitigating material adverse effects to birds from wind energy projects is through appropriate project siting, design and planning that avoids or minimizes adverse interactions with birds. Permit holders are expected to mitigate impacts to birds and Environmental Management Plans must include bird mitigations, developed by a QP and detail the processes and procedures to mitigate and manage adverse effects to birds across the life cycle of the project. Applicants are encouraged to include the POMMs outlined below in the bird assessment and integrate them into an Environmental Management Plan. When deviation from recommended POMMs is necessary, a QP-supported alternative and rationale must be provided.

The BCER may condition mitigative actions and monitoring requirements, including the POMMs outlined below or the QP-supported alternative.

Planning Measures:

- Identify key habitat features using appropriate measures (i.e., QP direction, local and Indigenous Knowledge, desktop review, field surveys, etc.) and plan activities within the operating area accordingly.
- Avoid sensitive areas such as critical habitat for bird species listed under Schedule 1 of SARA, bird colonies, significant staging or wintering areas for waterfowl or shorebirds, nationally important bird areas (e.g., migratory bird sanctuaries, important bird areas, etc.), known migration corridors, landforms that concentrate bird passage, wetlands, and large contiguous forest areas.

- Design project components to minimize potential bird attraction and mortality risk (i.e., turbine size and configuration, lighting, availability of perching structures, presence of guy wires, and design and configuration of above-ground collector lines).
- Schedule works such that they occur outside of critical timing windows.

Operational Measures:

- Employ an adaptive management approach to track and respond to bird fatality incidents.
- Undertake construction and operation in a manner that minimizes impacts to key habitat features and sensitive areas for birds.
- Avoid vegetation management and clearing activities during critical timing windows.

Post-Permit Monitoring Measures

Permit holders will be expected to conduct post-construction bird surveys and fatality monitoring for a minimum of one year in seasons where there is potential for a material adverse effect to birds from the project, as determined by a QP. Surveys should follow guidance in Recommended Protocols for Monitoring Impacts of Wind Turbines on Birds (EC CWS 2007). Permit holders must define an adaptive management strategy to track and respond to bird fatality incidents. Additional post-construction monitoring may be required at the discretion of the BCER based on bird survey and fatality monitoring results. Permit holders will be expected to maintain and submit records of mitigation measures implemented, bird fatality monitoring results for each required monitoring year and records of any incidental bird mortality.

Permit holders will be expected to notify the BCER immediately in the case of the death or injury of:

- A threatened or endangered bird species listed in Schedule 1 of SARA, or
- A locally significant species as defined by the BCER in permit conditions.

  A permit holder will also be expected to notify the BCER of a material change likely to result in an increased risk of material adverse effects to birds, as determined by a QP.

4.2 Cumulative Effects Assessment

Cumulative effects are the combined effects of past, present and potential future human activities and natural processes on environmental, social and economic values. While individual projects can be mitigated, their collective impact over time can adversely affect ecosystems, communities and First Nations' ability to exercise their rights.

Applicants must assess and manage cumulative effects associated with renewable energy development. The BCER promotes a consistent, transparent and collaborative approach, drawing on the provincial Cumulative Effects Framework (CEF) and/or co-developed assessments. Applications for wind and solar projects must include a cumulative effects assessment report, completed using the best available scientific and Indigenous Knowledge. The report must document how the project may incrementally contribute to existing cumulative

effects from other past, present and reasonably foreseeable future projects and activities and outline any mitigation measures applied or proposed during siting, design, construction, or operation following the mitigation hierarchy.

4.2.1 Cumulative Effects Assessment Report

Cumulative effects assessments must be completed by an appropriate QP and should consider the following core principles:

- **Proportionality**: The scope and depth of cumulative effects assessment should align with the project's scale, the sensitivity of affected values and the regional condition of those values.
- **Collaboration**: Cumulative effects indicators vary across B.C., making early engagement with First Nations essential to identify key values of concern and support proactive avoidance of adverse cumulative effects.
- **Support for Indigenous values**: Cumulative effects assessments should consider Indigenous values, governance and knowledge systems. First Nation-led cumulative effects processes are recognized through proponent pre-engagement with potentially impacted First Nations.
- **Consistency and simplicity**: Cumulative effects assessments can be complex, with numerous possible indicators and approaches. To support consistency, the BCER has identified four core indicators (Table 2) that must be used in every assessment to reflect key impact pathways[1] from renewable energy development.

Early Engagement and Scoping

Applicants are directed to engage with First Nations, local governments and local stakeholders early to identify:

- Key values of concern (environmental, social, cultural),
- Preferred approaches (including indicators) associated with values of concern,
- Preferred spatial and temporal boundaries, and
- Data sources and user expectations.

The assessment must detail how engagement influenced project design, site selection and avoidance measures.

First Nation-led and Co-developed Assessment Approaches

BCER recognizes First Nations may choose to lead or co-lead cumulative effects assessments of their own. These Nation-led approaches may include qualitative narratives, geospatial analyses, Indigenous Knowledge frameworks, cumulative cultural opportunity assessments or other Nation-specific tools or

[1] Also referred to as Pathways of Effects, the key impact pathways are the chain of events linking a human activity to its potential effects on the environment or human health.

datasets. Inputs may also include indicators and approaches developed through the Environmental Stewardship Initiative (ESI) **Collaborative Stewardship Forums**.

If early engagement and scoping identify a First Nation-led approach, the cumulative effects assessment report should include a description of the methodology used, including:

- The scope, values, and assessment methods used, and
- Clear documentation of any First Nation-defined indicators or interpretations.

Where both proponent-led and First Nation-led assessments are undertaken and made available, the BCER expects joint interpretation and submission of a summary of areas of alignment and divergence. Figure 1 outlines the overall approach applicants should follow when integrating First Nation input into the cumulative effects assessment report for their project, starting with pre-engagement with First Nations. It is recommended proponents come prepared to pre-engagement with an understanding of current conditions for the project area using the CEF core indicators (Figure 1, Table 2).

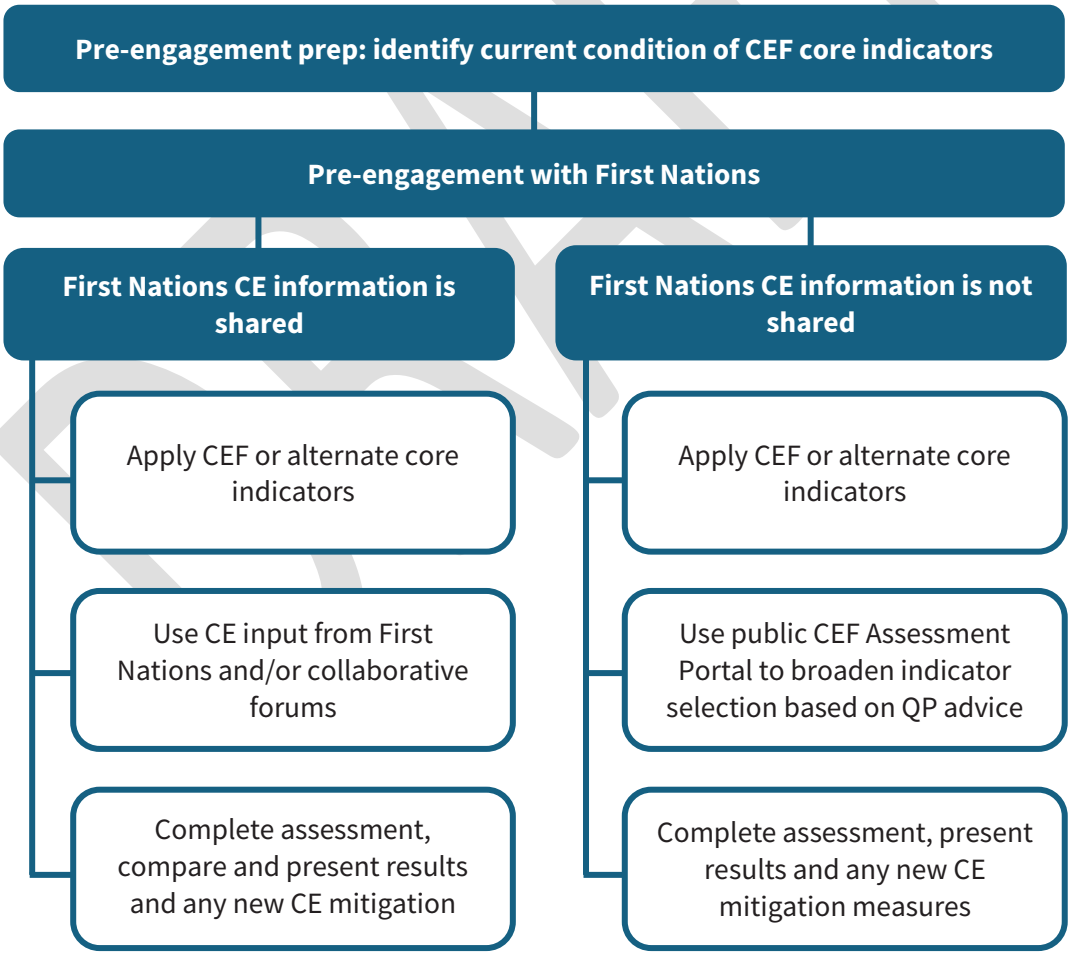


Figure 1 Proposed approach for incorporating First Nation input into cumulative effects assessment

4.2.2 Values and Core Indicators

All cumulative effects assessment reports must include core indicators associated with the values of forest biodiversity, aquatic ecosystems and grizzly bear (see Table 2). These core indicators were selected because they reflect the key impact pathways associated with renewable energy projects' potential contribution to cumulative effects. Where First Nations or local communities' cumulative effects information is not available (see Figure 1), applicants are expected to supplement the four core indicators in Table 2 with additional values from the CEF Assessment Portal relevant to their project, based on QP advice.

Core indicators are linked to objectives aimed at reducing wildlife disturbance and habitat fragmentation, protecting valuable forest areas, maintaining healthy aquatic ecosystems and mitigating effects to secure habitats for grizzly bears and other sensitive species.[2]

Table 2 presents two approaches for selecting core indicators:

- **Provincial CEF Core Indicators** are standard indicators used across most of the province. They allow for assessments to be more consistent and comparable. Proponents are encouraged to use these indicators first and foremost when the CEF information is relatively current.
- **Alternative Core Indicators** can be used when provincial CEF information is unavailable, when applicant engagement with communities (including First Nations) leads to a different approach, or when the data is less current. This allows for flexibility and respects locally defined methods.

[2] Note: if grizzly bears have been extirpated from the project area, then the grizzly bear value does not need to be assessed.

Table 2 Values, objectives and required Core Indicators

Values and related objectives		Core Indicators		Spatial scale of assessment
Core Value	**Objectives**	**CEF Indicators**	**Alternative Indicators**	
Forest biodiversity	Mitigate species disturbance and habitat fragmentation	Species disturbance hazard rating – forest biodiversity protocol	Linear development density (km/km^2)	Landscape unit
	Mitigate valuable forest habitat loss	Habitat change hazard rating – forest biodiversity protocol	Total land disturbance (%)	Landscape unit
Aquatic ecosystems	Mitigate aquatic habitat degradation	Sediment hazard rating – aquatic protocol	Road density (km/km^2)	Assessment watershed unit or stream reach in the BC Freshwater Atlas
Grizzly bear	Mitigate disturbance and access to grizzly habitat	Grizzly bear core security – grizzly bear protocol	Linear development density (km/km^2) – benchmarks in grizzly bear protocol	Landscape unit

As discussed, applicants are also expected to incorporate cumulative effects information shared by First Nations in pre-engagement. Local stakeholder information can also be integrated, when available.

If First Nations or local communities have not identified specific cumulative effects information, applicants should identify additional values and indicators relevant to the project's location or region. This includes considering supplementary provincial CEF data that may not be reflected in the core indicators. The CEF Assessment Portal [pending publication] can help identify available CEF data.

4.2.3 Indicator Assessment Methods

The following methods are intended as interim guidance for renewable energy applicants to consider and manage cumulative effects. More detailed guidance and data products from BCER and the provincial CEF team are forthcoming to further support and streamline the assessments.

Using the Table 2 indicators as the starting point, the cumulative effects assessment report should include the following elements:

- **Current condition and trend**: describe the current condition of the value (e.g., low, moderate, high hazard) and the direction of change or trend where available (e.g., improving, stable, declining) for each selected value.
- **Project contribution**: evaluate how the project may contribute incrementally to existing pressures or stressors (e.g., habitat fragmentation, habitat loss, aquatic habitat degradation, grizzly bear habitat, First Nation values). Methods of assessment may range from qualitative narrative assessments for low-risk projects to spatial overlays or habitat modelling for higher-risk projects.
- **Description of assumptions, uncertainties, and key sensitivities**: this may include documentation of the data sources and the current condition assessment used, uncertainty in characterizing reasonably foreseeable development and any key assumptions or uncertainties about the habitats and species considered and watershed or landscape processes that may influence the project contribution.

The analysis of the core indicators should address the primary impact pathways in which renewable energy projects may contribute to cumulative effects. These pathways include physical project footprints of the solar or wind facilities, as well as associated infrastructure such as access roads and power lines. The recommended process for assessing both the CEF Core Indicators and Alternative Core Indicators is outlined below.

CEF Core Indicators

The provincial CEF protocols for Forest Biodiversity, Aquatic Ecosystems, and Grizzly Bear account for detailed valued habitat types (e.g., old forest), natural disturbance regimes and watershed processes that may influence a project's contribution to cumulative effects. A qualitative evaluation of the project's contribution to cumulative effects is recommended and can be applied using the following steps:

- For each CEF indicator, refer to the respective cumulative effects protocols and access the CEF datasets at the provincial **Data Catalogue**.
- Conduct a spatial overlay of the project area with the relevant CEF indicators and document the current condition of each value (e.g., risk or hazard level) associated with the indicators.
- Conduct a qualitative evaluation of the project's potential contribution to cumulative effects for each assessment unit (landscape unit or watershed) overlapping with the project. The qualitative evaluation could be supported by engagement with local First Nations and regulators regarding how to interpret the project contribution given the current condition or hazard level.

Alternative Core Indicators

The alternative core indicators were selected because they also capture potential effects associated with the key impact pathways and are simpler to calculate and track quantitatively over time. This includes determining the current cumulative effects status of a given value accounting for reasonably foreseeable development and estimating the project-specific contribution to change. Proponents may choose to use these indicators as an alternative to the core CEF indicators with support from a QP, especially if these indicators are preferred by First Nations engaged in the project. A quantitative evaluation of change over time may be included to identify project specific contributions to cumulative effects. When this approach

is used, any simplifying assumptions must be clearly documented. This includes specifying the key habitats and species considered, benchmarks for hazard evaluation, and relevant watershed or landscape processes that may influence the response.

Spatial Scale of the Assessment

The spatial scale of the assessment – and any associated cumulative effects mitigations – should, at a minimum, include each landscape unit and watershed intersected by the proposed project. Each spatial unit must be evaluated individually and included in the overall assessment.

4.2.4 Other Industrial and Commercial Activities

Where an adverse cumulative effect is identified in the applicant's cumulative effects assessment, proponents should consider additional mitigation measures that follow the Province of B.C.'s **Environmental Mitigation Policy**. Depending on the adverse cumulative effect, applicants may need to develop mitigation measures and associated monitoring that reduce the overall cumulative effect.

Proposed mitigation measures to mitigate cumulative effects that may be beyond the care and control of the applicant and managed through broader regional actions or other initiatives (e.g., First Nation-led research or stewardship programs, individual negotiated agreements) will be considered by the BCER. Applicants will need to demonstrate clear linkage between the action or initiative and the adverse cumulative effect. The BCER may consider permit conditions to help manage cumulative effects or require monitoring or adaptive management.

4.3 Agricultural Land Reserve

The Agricultural Land Reserve (ALR) is a provincial zone in which agriculture is recognized as the priority use. ALR is a designation of land under the Agricultural Land Commission Act. The purpose of the ALR is to preserve agricultural land and its boundaries are based on the agricultural capability of the soil, not on the current use or ownership of the land.

Renewable Energy Projects may be proposed on ALR land. Where the BCER allows a non-farm use, soil or fill use or subdivision for the purposes of facilitating the carrying out of a streamlined project, certain sections of the Agricultural Land Commission Act (requiring additional approvals) do not apply. When a Renewable Energy Project requires non-farm use, soil or fill use or subdivision within ALR land, information should be submitted in AMS with the ERAA application. The required application materials are described in the following sections.

4.3.1 Non-Farm Use

An application that includes non-farm use of ALR land must include an agricultural assessment report comprised of a rationale, assessment, recommendations for mitigative actions and a brief reclamation plan. The assessment must be conducted by a QP, and the corresponding report must include a Professional Declaration. Please see Chapter 1.7 of the **Oil and Gas Application Manual** for further information on Professional Reliance.

Rationale

Rationale for the project location(s) must be discussed in the assessment report. The rationale must include why the project could not be located outside the ALR, with reference to alternative sites considered and how the impacts of the proposed activity have been minimized through siting.

Area and Site Assessment

An assessment of the area and site must be completed and documented. The baseline information captured in the assessment is used to inform mitigative actions and reclamation planning. Assessments are expected to include desktop and field work. The submitted report must include an overview of the area, site information, soil inspection procedures, soil assessment, photographs, identification of noxious weeds and maps. Additional assessment information can be found in Criteria for Agricultural Capability Assessments (**Policy P-10**). All assessments must be conducted by an appropriate QP.

Recommended Mitigative Actions

The assessment should discuss recommendations for soil handing, soil conservation, and surface water management in relation to the assessment findings. Mitigative actions should be site specific and measurable. A description of anticipated monitoring that will be used to assess effectiveness of mitigative actions must be included.

The BCER may condition the requirement to develop and implement an agricultural management plan and maintain records of implementation, monitoring, and any adaptive management strategies.

Reclamation Plan

For assessment at the application stage, the agricultural assessment report must briefly outline the following information related to reclamation:

- Timeline for restoration of areas impacted by construction but not needed for operation
- The land use objective post-activity
- Anticipated soil handling and revegetation activities

4.3.2 Soil and Fill Use

Where soil or fill use on ALR lands is required (such as where fill will be placed or soil removed from the site), information regarding the impacts and mitigative measures related to the soil and fill use must be included as part of an agricultural assessment.

Assessment and mitigation of soil and fill use should include:

- Impact on agricultural use and capability
- Rationale for the fill placement or soil removal
- Impacts to water ways or natural drainage
- Impacts to topography
- Duration of activities

4.3.3 Subdivision

Where subdivision of ALR lands is required, a site plan showing the proposed lots and their proposed roads, buildings and structures and descriptions of proposed lot sizes, current property uses and agricultural uses must be submitted.

4.4 Decommissioning and Restoration

Progressive restoration of Renewable Energy Projects is expected. While the expected lifetime for a wind or solar facility is currently approximately 25 - 35 years after operations begin, areas required for construction but not needed for operation will be expected to be restored as soon as possible. Any removal of site equipment or infrastructure throughout the life of the project must be responsibly disposed of in accordance with the requirements of a selected waste handling facility. Once operations conclude, project sites must be decommissioned, which involves the safe removal of site equipment and infrastructure. Once decommissioning is complete, the site must be restored to a natural state or prepared for other uses such as agricultural, recreation, or First Nations traditional cultural practices. ERAA requires administrative and financial responsibility for decommissioning and restoration of projects rests with the permit holder.

4.4.1 Application Requirements

A decommissioning and restoration plan submitted at the time of application must document the proactive consideration of both progressive and end of life restoration requirements in project planning and design.

An applicant's decommissioning and restoration plan must be prepared by a QP. The decommissioning and restoration plan must contain the following information:

- Schedule and timing of progressive restoration activities to be completed post-construction.
- Descriptions of activities required, including decommissioning, assessment, remediation, reclamation and restoration.
- Timeline of all decommissioning and restoration activities to be completed post-operations and following suspension of the facility.
- Description of how materials and equipment removed from the site at anytime during the project's life will be responsibly disposed.
- Description of any materials to be left on site and how these will be safely managed.

- Inventory of all substances that could potentially cause pollution or contaminate the site and how any contamination will be prevented and/or remediated.
- Cost-estimate of all activities related to site decommissioning and restoration.
- Additional information may be requested by the BCER depending on the project design or siting.

4.4.2 Post-Permit Expectations

Permit holders will be expected to demonstrate ongoing decommissioning and reclamation management. The BCER may condition the following requirements:

- Review and, if necessary, update of decommissioning and restoration plans by a QP every five years.
- Permit holders may be required to provide annual audited financial statements to review the financial health of the company, which may help determine security requirements.
- Security in the form of cash or letter of credit to hold in the event a permit holder is in default of its decommissioning and restoration obligations. The financial health of a company will be considered and security collected annually over life of the project. When a project is ready for decommissioning and restoration, security may be accessed to fund the decommissioning and restoration activities.

Chapter 5: Community and Social Well-Being

Fostering community and social well-being is a core component of the BCER's mandate. With respect to renewable energy projects, proponents are required to consider potential impacts on landowners, rights holders and other stakeholders. They are also expected to identify and implement effective mitigation strategies to minimize any adverse effects of development on these groups. This section will outline expectations related to evaluation of socio-economic impacts, consultation, community engagement, evaluation of quality-of-life impacts and application requirements. These requirements do not apply to projects that receive an Environmental Assessment Certificate.

5.1 Evaluation of Socio-Economic Impacts

Renewable energy projects can bring positive and negative impacts to the communities and regions where they take place. Applicants are expected to identify and evaluate potential impacts of their project to three specific socio-economic themes:

1. Housing
2. Use of local resources (e.g. hospitals, landfills)
3. Vulnerable populations[3]

[3] Some populations may be more vulnerable to adverse effects from a project. Factors that may contribute to differential effects include demographic, socio-cultural, economic, geographic, or physiological.

Applicants must submit a socio-economic impact report with their application that identifies and evaluates the nature and extent of expected socio-economic impacts for the three themes noted above across the full life cycle of the proposed project. This report must also be provided to the local authority with jurisdiction over the location of the project (see below). For additional information on completing an evaluation of socio-economic impacts, please refer to Section 2.2.5 - Assessment of Social and Cultural Effects in the **Processing Facility Regulation Guideline**.

5.2 Evaluation of Quality-of-Life Impacts

Construction and operation of renewable energy facilities can have impacts that extend beyond the boundaries of the project. Applicants are required to undertake modeling to determine potential project impacts related to noise, light, traffic, dust, and access management and conduct a shadow flicker assessment (if a wind project) or glare assessment (if a solar project).

5.2.1 Requirements for Consultation

Effective and proactive communication between the applicant and affected persons is fundamental to the management of project impacts. The applicant is required to undertake a consultation process with those who may be directly affected by the proposed project. Consultation materials must be provided to the following recipients:

- Landowners, if all or part of their land is within 1.5 km of a project's operating area;
- Rights holders (e.g. guide outfitters, recreation and grazing lease holders) whose ability to exercise their rights may be impacted;
- The local authority of jurisdiction where the project is proposed to be sited; and
- Federal bodies whose interests or operations may experience impacts from a project.

To begin the consultation process, an invitation to consult must be sent in accordance with section 79(1) of ERAA or section 2 of the **Service Regulation**, and must contain the following:

- A description of the proposed project.
- A summary of the nature, geographic area, and timing of potential offsite quality of life impacts including noise[4], light[5], traffic, dust, access management, impacts of shadow flicker for wind energy projects and impacts of glare for solar projects.
- A statement the recipient may make a submission to the BCER under section 22(5) of ERAA.
- A statement clarifying the recipient may respond in writing with their concerns and reasons for those concerns within 30 days, including requesting a meeting with the applicant.
- When provided to a local authority, the invitation must also include the report discussing anticipated socio-economic impacts of the project, the decommissioning and restoration plan, and a summary of expected impacts to ALR lands within the boundaries of the local authority.

[4] Refer to **BCER Noise Control Best Practices** for details on BCER expectations and best practices.
[5] Refer to **BCER Light Control Best Practices** for details on BCER expectations and best practices.

The applicant must make all reasonable efforts to meet with a recipient who requests a meeting. In addition, applicants must respond to all submissions from a recipient by providing them a summary of the meeting (if applicable) and a description of project revisions that will be made based on the concerns raised by the recipient (if applicable).

5.3 Community Engagement

In addition to the formal consultation requirements, applicants may choose to undertake community engagement to share information about the project and hear any feedback that interested community members wish to offer. Community engagement is a complementary, proactive process that supports transparency and trust by providing opportunities for interested individuals, organizations, and communities to learn about the project, ask questions, and share feedback outside of formal consultation requirements. This section outlines expectations for documenting community engagement activities and demonstrating how input has been considered in project planning.

5.3.1 Application Requirements

- Socio-economic Report
- Quality of life evaluation report that identifies the nature and extent of quality-of-life impacts to receptors related to noise, light, traffic, dust, and access management
- Shadow flicker assessment for wind energy projects
- Glare assessment for solar projects
- Report(s) must include descriptions of the methodology used to assess impacts, detailed plans for mitigation(s), and a rationale for their adequacy, prepared by a QP
- Community engagement report:
- A summary report outlining all engagement with consultation recipients and, if applicable, community engagement efforts, the concerns raised, how the applicant has addressed them, and any outstanding issues
- A copy of the consultation materials distributed for the project and a list of all consultation recipients
- Access Management Plan, including a summary of access restrictions or allowances within the operating area, rationale respecting how access will be managed within the context of public safety, government's environmental objectives and First Nations interests, agreements or expectations for shared/overlapping use of land within the operating area, and how existing roads will be utilized to minimize new disturbance.

Note: After receiving the application and reviewing the consultation and engagement information provided, the BCER can require the applicant to carry out further consultation with additional persons or suggest further community engagement.

5.3.2 Written Submissions to the BCER

In addition to the consultation and community engagement processes, Section 22 (5) of ERAA allows anyone with an interest or concern about a proposed activity and/or its proposed location to make a written submission to the BCER.

Written submissions are made directly to the BCER, can happen at any time in the application process, and may be made by any person. This differs from the consultation process outlined above. The BCER forwards written submissions to applicants, along with a Case File Number. While an applicant is not required to reply, they are strongly encouraged to respond to assist in resolution of issues.

To ensure decisions are made with full knowledge, it is important any concerns remaining unresolved at the time of application submission, including those outside the BCER's regulatory jurisdiction (e.g. compensation), are identified by the applicant. When concerns are unresolved at the time of the application submission, the Case File Number(s) must be referenced in the engagement and consultation summary report. If concerns were raised and responded to verbally, these should also be included in the report. Case File Numbers should not be referenced in the report when concerns regarding the proposed activities have been resolved. If the concerns have been resolved, applicants should contact the Community Relations department to cancel the Case File Number.

Note: Applicants applying for multiple activities should review the guidance provided in the Energy Resource Activities Application Manual for requirements for consultation and notification. Depending on the activities being applied for, there may be additional steps/deliverables required to support a permit application

Chapter 6: Protecting Public Safety

This section outlines minimum expectations related to protecting public safety for renewable energy projects, including technical hazards and risks, natural hazards and climate risks and other considerations.

6.1 Permit Application Materials

The following documentation is required to be developed and submitted at the time of application (see Chapter 2 for a complete listing of requirements):

- Preliminary Design Basis Memorandum (DBM)
    - The DBM lays out the project's goals, approach to achieving those goals, applicable and adopted regulations, codes, standards and key assumptions and data used in the engineering design. The key assumptions and data would typically include information on the energy resource, project design life, geotechnical parameters, local climate conditions, assumed

equipment configuration, requirements for safety systems and any other information considered foundational to the design of the project.

- Plot Plan
  - The plot plan(s) show, as required, proposed locations of wind turbines, solar arrays, substations, switchgear, collectors, roads, associated buildings and any other key components of the facility, surrounding area and any relevant natural features (e.g. creeks). The plot plan(s) facilitate awareness of the site to aid in review processes. The plot plans are considered engineering deliverables and are to be completed with sufficient rigor.
- Hazard Analysis and Siting Study
  - Should a project include the use of energy storage systems (battery or otherwise), Hazard Analysis and Siting Studies are to be performed and submitted. These studies could include, as appropriate, Natural and Process Hazard Identification Studies, Quantitative Risk Analysis, Fire and Blast Modeling, or other studies reasonably required to demonstrate the risks associated with the energy storage system are understood and equipment has been sited in a way to manage the associated risks.

6.2 Plans and Programs

Permit holders must develop and implement the following plans and programs. These plans and programs are intended to be internal documents for the permit holders' use and do not need to be submitted to the BCER unless requested or audited. The plans and programs should be fit for purpose, documented, and maintained up-to-date. It is expected the permit holder's plans and programs are consistent with manufacturer's specifications as well as recognized and generally accepted good engineering practices.

- Prior to Construction
  - Physical Security Plan
  - Safe Storage and Spill Prevention Plan for Hazardous Materials
  - Fabrication and Construction Quality Management Program
  - Management of Change Program
- Prior to Operations
  - Ice Fall and Ice Throw Mitigation Plan
  - Operations, Inspection and Maintenance Plan / Manual

The plans and programs developed prior to construction should be updated for the operations phase prior to commencing operations.

6.3 Emergency Response Plan

Permit holders are required to develop, implement, and submit an Emergency Response Plan to the BCER prior to construction. Emergency Response Plans must be reviewed and updated annually, at a minimum, to ensure they remain responsive to evolving hazards and personnel changes.

Emergency preparedness should involve collaboration with local authorities, first responders, and First Nations, as well as ensure staff responsible for emergency response at the renewable energy project are properly equipped and trained to effectively manage incidents.

The plan must address both technical and natural hazards that could contribute to an emergency and must achieve the following outcomes:

- Coordinated planning between permit holders, local authorities, First Nations, and first responders for emergency preparedness and response procedures
- Clear, documented procedures for emergency response that inform training for facility staff
- Provision of relevant hazard information to first responders who may be involved in an emergency response

The Emergency Response Plan must be updated and submitted to the BCER prior to the commencement of operations.

6.4 Minimum Construction and Operational Expectations

This section outlines minimum construction and operational expectations for renewable energy projects. An applicant may request changes to the expectations described below. Requirements are dependent on the characteristics of each project and will be documented in permit conditions. Generally, the BCER expects:

1. The design, siting, construction, and operation to be consistent with the application material. It is expected wind projects are designed in accordance with CSA C61400-1.
2. All equipment be designed and sited such that the equipment can be used safely under all operating conditions anticipated during the life cycle of the project.
3. The permit holder implements design and operational mitigations to ensure construction and operation do not cause excessive noise, light, or glare.
4. Permit holders of wind facilities must limit the duration of shadow flicker experienced at identified receptors to 30 min/day and 30 hours/year.
5. Wind turbines must be sited in safe locations. The following minimum setbacks shall apply unless otherwise specified in the permit:
    a. Blade length +10 m for resource roads
    b. 1.1x total height[6] rom any other public roads

[6] Total height includes the tower and rotor blade, measured from the ground to the tip of the rotor blade when extended to its highest point.

c. 1.1x total height from non-affiliated property line
d. 2.0x total height from non-affiliated residence or occupancy

Permit holders may request smaller setbacks if justified by site specific considerations. Setbacks are to be measured from centre of turbine location.

6. The facility be maintained in a condition that minimizes hazards, including hazards associated with pits, holes, equipment, and storage of materials and remove garbage, debris and derelict equipment.
7. The permit holder maintains records of:
    a. Up-to-date design documentation and drawings
    b. All inspection and maintenance activities
    c. Changes to the facility (Management of Change)
    d. Implementation of all plans and programs identified in this guidance
8. Prior to operations, a permit holder must submit to the BCER a statement by the QP of record in the form and manner required by the BCER, that:
    a. The facility was constructed and tested in compliance with the design, codes and standards, and applicable regulations, and
    b. The facility has been verified safe for operation.
9. All temporary structures, and equipment not required for the operation of the facility be removed as soon as practicable.
10. Within nine months of beginning operation, the permit holder will submit record drawings (plot diagrams) signed and sealed by a person authorized under the Engineers and Geoscientists Regulation to use the reserved title "professional engineer" in B.C.
11. Permit holders register buried power lines or other underground infrastructure with BC One Call.
12. The following submission of notices to BCER:
    a. Fourteen days before site preparation.
    b. Fourteen days before construction.
    c. When an emergency occurs, a permit holder must notify the BCER within one hour of becoming aware of the incident.
    d. A permit holder must notify the BCER within 24 hours of becoming aware of an incident classified as a minor incident.

6.5 Minimum Suspension and Decommissioning Expectations

Within 12 months of the last date of operation for a renewable energy facility, a permit holder must implement a suspension plan prepared by a QP and consistent with parameters established by the BCER, or return the facility to operation.

The permit holder must implement the approved post-operations decommissioning and restoration plan consistent with parameters established by the BCER within 24 months of the last date of operation.

Appendix A: Environmental Impact Form

Notes: This form is intended to allow applicants to demonstrate their compliance with the environmental impact report requirement for Wind and Solar projects. In cases where the Environmental Impact Report is comprised of multiple documents or reports, reference to the appropriate document names should be supplied on the checklist. Alternatively, a concordance table can be submitted.

Project Information

1.1 Project Description	
Project Type:	
Legal Location:	
Application Number:	
Surface Ownership:	❒Crown and/or ❒Private
1.2 Applicant Information	
Qualified Professional (QP):	
QP Contact:	

Environmental Setting

Water and Land	**Yes**	**No**	**Comments / Attachments**
Karst	**Yes**	**No**	**Comments / Attachments**
Has potential for karst features been identified through mapping or field work?			
Mitigative Measures:			
Metal Leaching / Acid Rock Drainage	**Yes**	**No**	**Comments / Attachments**
ML/ARD potential: will there be in-situ disturbed bedrock and/or any imported rock or aggregates where the cumulative volume exceeds 1,000 m^3; or rock material placed in a sensitive environment?			
Mitigative Measures*:*			
Vegetation	**Yes**	**No**	**Comments / Attachments**
Have Plant Species of Conservation Concern been identified in proximity to or within the proposed development area?			
Have Culturally Sensitive Plant Species been identified in proximity to or within the proposed development area?			

Have invasive plant species been identified within the proposed development area?			
Have concerns to forest health been identified?			
Does the proposed development area overlap old growth forest?			
Mitigative Measures*:*			
Riparian Zones and Wetlands	**Yes**	**No**	**Comments / Attachments**
Does the proposed development area overlap with a riparian zone and/or a wetland?			
Mitigative Measures*:*			
Air Quality	**Yes**	**No**	**Comments / Attachments**
Are there planned air emissions?			
Mitigative Measures*:*			
Surface Water	**Yes**	**No**	**Comments / Attachments**
Are there classified surface water features in proximity to the proposed development area?			
Are there potential impacts to surface water quality?			
Are there potential impacts to surface water quantity?			
Are there planned effluent discharges?			
Mitigative Measures*:*			
Groundwater	**Yes**	**No**	**Comments / Attachments**
Is the proposed development area on top of any mapped aquifers?			
Does the project have the potential to impact groundwater quality?			
Does the project have the potential to impact groundwater quantity?			

Mitigative Measures*:*			
Soils	**Yes**	**No**	**Comments / Attachments**
Are there potential impacts to soils (including soil stability and productivity)?			
Will Natural Drainage Patterns be altered?			
Mitigative Measures*:*			
Wildlife and Wildlife Habitat	**Yes**	**No**	**Comments / Attachments**
Does the project have the potential to affect wildlife or wildlife habitat including but not limited to:			
Species Listed in B.C.			
Species at Risk			
Migratory Birds			
Bats			
Culturally Important Species			
Herptiles			
Fish and Fish Habitat			
Habitat Features (nests, dens, hibernacula, etc.)			
Designated habitat such as Ungulate Winter Range, Wildlife Habitat Area, Specified Area			
Mitigative Measures*:*			

Professional Declarations

Qualified Professionals signing off on any environmental assessment and mitigation works provide the following Professional Declaration:

- The assessment of activity referred to in this report has been conducted in accordance with the standards and practices of the professional organization of which the signer is a registered member.
- The reported information is true based on the signatory's current knowledge as of the date completed. Where data gaps exist in the report, the judgment of the Qualified Professional has been used.

The signatories have demonstrable experience within the field of work and/or practice for which the statement applies.