

Chapter 5.6 Completing Application Information Details: Environmental Stewardship

5.6 Environmental Stewardship

Submission of an application for an energy resource or associated activity must include additional application deliverables specific to environmental stewardship. The required stewardship deliverables vary based on the planned activity.

The stewardship tab requires specific application information details. This section includes a brief overview of stewardship, guidance regarding stewardship planning and design, details related to stewardship information requirements and detailed instructions for completing the data fields within the stewardship tab.

The Regulator's [Environmental Protection and Management Guideline](#) (EPMG) provides specific guidance for applicants and should be thoroughly reviewed in addition to this section of the manual.

Please Note:

This manual is written as a whole and provided to industry in sections to allow permit holders to access activity chapters. It is prudent of the permit holder to review the manual in its entirety and be aware of the content in other sections of the manual.

5.6.1 Environmental Stewardship Planning & Design

Companies must adhere to the [Environmental Protection and Management Regulation](#) (EPMR) of the [Energy Resource Activities Act](#) (ERAA) in order to conduct oil and gas activities. Section 25(1) of ERAA states:

- The Regulator may issue a permit if, after considering government's environmental objectives, the applicant meets the requirements of those objectives.

The Environmental Protection and Management Regulation (EPMR) establishes the regulatory requirements for stewardship of environmental values and features in the course of carrying out energy resource activities. The EPMR applies to energy resource activities on Crown land but does not apply to subsurface aspects of energy resource activities nor private land.

The EPMG provides guidance for applicants and permit holders in meeting the requirements of the Environmental Protection and Management Regulation.

Applicants and permit holders must plan energy resource activities to avoid and/or minimize impacts to environmental values, mitigate impact where no realistic opportunity exists to avoid, and/or restore the impacted area to its pre-development state. General protection and management approaches must continue during the operational stages so adequate management controls are in place and monitor operations to identify further opportunities to reduce environmental impacts.

Government Environmental Objectives

Government's environmental objectives requiring management and protection are identified in the EPMR and further explained in the EMPG and includes:

- Water supply well.
- Riparian reserve zones.

- Wildlife and wildlife habitat areas:
 - Ungulate winter range.
 - High priority wildlife.
 - Wildlife tree retention areas.
 - Wildlife habitat features.
- Old growth management areas.
- Fisheries sensitive watersheds.
- Resource features.
- Cultural heritage resources.

Applicants should provide all relevant information with the application so the Regulator may make an informed decision while maintaining the values identified as Government environmental objectives. The consideration of a material adverse effect or change to an environmental value, whether material or adverse, is considered based on all available information.

Area-based Analysis to Guide Planning and Design

The Regulator's Area-based Analysis (ABA) approach should be utilized when planning for energy resource activity. ABA approach helps to minimize cumulative impacts on the landscape, reduce the footprint of activities, and shorten restoration / reclamation timeframes on specific resource values.

The Regulator gathers and analyzes existing information and data on development activities in identified areas. Specific resource values such as old forest and riparian reserve zones wildlife areas and old growth management areas are made available at the [area-based analysis information page](#) on the Regulator's website. Applicants should review the information when planning the location of energy resource activities including:

- Spatial datasets showing the location of enhanced management and regulatory policy areas for use in development planning.
- Current area-based conditions in the development planning area.
- Area-based analysis frequently asked questions.

Projects should be planned to minimize disturbance where possible. For example:

- Use existing disturbance, unless doing so would result in a greater disturbance, greater safety risk, significant operational difficulty and/or negative environmental impacts.
- Consider low impact seismic techniques such as wireless technology and meandering lines.
- Use common access and shared corridors.
- Consider using winter access in old forest and riparian reserve zones.
- Leverage use of directional drilling and multiwell pads to minimize disturbance.
- Implement strategies to expedite reclamation.

During the development planning process applicants should review existing disturbance on the landscape and coordinate where possible to minimize impact on the resource values identified in the area-based analysis.

If an activity proposed in Northeast British Columbia is impacting an ABA enhanced management or regulatory policy area, an ABA specific mitigation plan prepared by a Qualified Professional must be attached to the application. Guidance on completing mitigation requirements is available in the Regulator's [Supplementary Information for Area-based Analysis](#) document.

5.6.2 Environmental Protection and Management Requirements

Part 3 of the EPMR prescribes operational requirements applicants must consider and applications must adhere to in relation to:

- Water quality (for operating areas and adjacent areas).
- Aquifers.

- Crossings of streams, wetlands and lakes.
- Deleterious materials into streams, wetlands or lakes (energy resource activities must not result in any deleterious material deposited).
- Operations within wetlands.
- Natural range barriers.
- Invasive plants.
- Forest health.
- Soil conservation.
- Seismic lines.
- Restoration of operating areas.

Applications must meet these operating requirements. If an applicant requires an exemption on the application according to the provisions of Part 3, an exemption request must be included in the permit application submission to the Regulator.

5.6.3 Application Requirements Specific to Environmental Stewardship

Environmental Features Established by Order

The EPMR (Part 4, Division 2) identifies and establishes environmental features defined through legislative acts and provincial ministerial orders.

The majority of the features are spatially identified. Where an activity is planned within a spatially identified environmental feature area, the Application Management System automatically indicates the intersecting or overlapping features.

While some features established in Section 25 of the EPMR are not spatially identified, all features must be identified during activity planning and included on the activity application construction plan.

Some Part 4, Division 2 features are not formally identified by order; however, applicants should consult the EPMG as some features are established through other mechanisms for planning and operations, when known to the applicant or encountered in the field. Examples include wildlife habitat features and Old Grown Management Areas (OGMA).

If activities are planned to intersect features identified in EPMR Part 4, Division 2, a rationale and mitigation plan prepared by a Qualified Professional must be included as part of the permit application.

Areas Established by BCER

The Regulator has identified environmental features and established these areas as requiring specific application guidance. They include:

- Peace Island Park area is identified as a sensitive area, having high public use and recreation value. For all applications, the Regulator encourages industry to avoid operations in this area. While applications in Peace Island Park are accepted, they are subject to an enhanced review and engagement process.
- Pink Mountain Borrow Pit is identified as an emergency source of water for fire suppression for the town of Pink Mountain. For all applications, the Regulator encourages industry to avoid operations in this area.
- Lynx Creek Boat Launch is identified as an area with recreational value built and maintained by the District of Hudson's Hope. For all applications, the Regulator encourages industry to avoid operations in this area. While applications in the Lynx Creek Boat Launch area are accepted, they are subject to an enhanced review and engagement process.
- Twidwell Bend is identified as an area with public use and recreational value. While applications in Twidwell Bend are accepted, they are subject to an enhanced review and engagement process.

- Wonowon Borrow Pit is identified as an emergency source of water for fire suppression for the town of Wonowon. For all applications, the Regulator encourages industry to avoid operations in this area.
- Aitken Creek Gas Storage Reservoir area is subject to a special project order under ERAA. Well applications in this area which are identified as having planned drilling near or through this gas storage reservoir are subject to an enhanced review. Special permit conditions may be attached to well approvals in this area to protect the integrity of the gas storage reservoir.

Applications in areas established by the Regulator must be submitted with a mitigation plan prepared by a Qualified Professional indicating the strategy for protection of the values identified for the area. Applicants may provide a short explanation in the rationale text box; however, the attached mitigation plans must be prepared and signed by a Qualified Professional.

Identifying Water Works, Water Supply Wells and Aquifers

- Water works and water supply wells: identify all known waterworks and water supply wells within 100 metres of the proposed operating area (excluding geophysical operations) as part of the activity application construction plan. Known waterworks information is obtained from the [BC Geographic Warehouse](#) (BCGW). For private land, waterworks location information is obtained from land owners.
- Aquifers and groundwater recharge areas: Applicants must identify in permit applications all known aquifers potentially impacted by the activity, regardless of the distance from the proposed operating area.

Where water works or water supply wells are within 100 metres of a proposed development, a mitigation plan prepared by a Qualified Professional must be included in the corresponding permit application to the Regulator.

Activities Intersecting with Resource Management Zones

B.C. Land or Coastal Marine Plans provide increased assurance of, and form the foundation for, balanced solutions meeting economic, environmental, social and cultural needs throughout the province. The plans inform both government decision makers and persons seeking natural resource development opportunities.

Proposed energy resource activities should be reviewed before application in the context of any applicable Land or Coastal Marine Plan. Projects should conform to the objectives established for the plan management zone in which the project is proposed.

Where projects fall within special management zones or the equivalent, applicants are expected to provide a rationale and mitigation plan prepared by a Qualified Professional detailing:

- Why the activity must occur within the special management zone or equivalent.
- What planning and/or operational measures (present and future) are being taken to mitigate impacts to the values identified for the zone.
- What planning and/or operational measures (present and future) are being proposed to mitigate impacts to the values identified for the zone.

Applicants may provide a short explanation in the rationale text box; however, the attached mitigation plans must be prepared and signed by a Qualified Professional.

Activities Intersecting Parks, Protected Areas or Ecological Reserves

Energy resource activity is not generally allowed within parks, protected areas or ecological reserves. However, there are extenuating circumstances where the Regulator may consider applications for activities proposed within these areas.

Before submitting an application for activity within a park, protected area or ecological reserve, applicants should contact the Regulator.

If energy resource activities cannot adhere to the guidance and recommendations, then justification and a mitigation plan prepared by a Qualified Professional is required. The justification should detail why it is necessary to operate within the park, protected area or ecological reserve, and the mitigation measures that will be implemented to minimize impacts. Park Use Permits issued by the [BC Ministry of Environment](#) and must also be attached to the permit application.

5.6.4 Regulatory Exemptions

Exemptions occur where applicants and/or permit holders are pursuing approval for non-compliance with the regulation. If an exemption is requested from regulatory requirements, an exemption must be prepared at the time of application and include:

- Specific regulatory provision requiring an exemption.
- Rationale for exemption (explanation of why an exemption is required).
- Proposed plan prepared by a Qualified Professional showing mitigation strategies to reduce impacts.

If exemptions are approved prior to the application, this approval must be attached to the application.

The Regulator may exempt energy resource operators from one or more of the environmental protection and management requirements for a specific operating area or an adjacent area. The exemption request must demonstrate that it is not reasonably practicable for the activity to comply with the requirement, and must be reviewed and approved by the Regulator.

5.6.5 Guidance Variations

If energy resource activities cannot adhere to the Regulator's guidance recommendations, a rationale must be included in the permit application, along with specifics of the guidelines not followed, an explanation of why they cannot be followed, proposed plan and mitigation strategies. This rationale and mitigation must be prepared by a Qualified Professional

5.6.6 Mitigation Plan Requirements

Mitigation plans outline how potential adverse impacts to a feature, species or value are to be avoided or minimized. This section provides guidance to prepare and submit a mitigation plan as part of a permit application.

Mitigation plans must be completed by the applicant and a Qualified Professional, hired by the applicant. The Qualified Professional must have an appropriate background relevant to the species, feature or value being addressed in the mitigation plan. The mitigation plan relies on a professional reliance model, whereby the professional presents and upholds the appropriate mitigation and the applicant upholds the terms of the mitigation plan as part of the permit.

Mitigation Hierarchy

In planning energy resource activities, environmental values should be avoided, minimized, mitigated and/or restored (in that order). The mitigation hierarchy must be followed and a rationale for moving through the order hierarchy must be provided. Strategies should describe the science that supports the effectiveness of the types of mitigation measures being proposed and the validity and reliability of that science. This should include a description of any potential barriers to the mitigation measures being implemented including logistical uncertainty. The mitigation hierarchy is further detailed as:

- Avoidance means to fully avert any potential impact on one or more environmental values resulting from a project or activity. The first priority in mitigation planning is to avoid the impacts to the environmental values

and associated components occurring within the footprint area of influence for the duration of the proposed project or activity.

Please Note:

If the value cannot be avoided, the proponent must demonstrate the alternative options explored in the location planning stages for the project or activity.

- Minimization means to partially avoid or reduce the level of impacts on one or more environmental values resulting from a project or activity. Minimize is the second level in the mitigation hierarchy, and should be considered only when measures to fully avoid impacts on environmental values and associated components have been duly exhausted, or where avoidance is not practicable given the situation.
- Mitigation includes measures aimed at lessening impacts on environmental components, after steps have been taken to avoid and minimize potential impacts. Measures should consider the same parameters as minimization techniques (above), and should also identify the desired end condition, and how the proposed mitigations will meet those desired end conditions.
- Restoration includes measures carried out within the footprint of the energy resource activity and would be over and above any restoration requirements under Section 19 of the EPMR. Restoration must attempt to counterbalance or compensate any losses due to impacts on ecological systems. On-site restoration measures should include a description of the future site condition and planning for the future state relative to the current condition. The plan should include time frames to achieve future site condition targets.

A rationale should describe how the various steps in the mitigation hierarchy were considered and why it was considered reasonable to move to the next step in the hierarchy. Moving through the hierarchy may be more of an iterative process and not completely linear, but the intent is to document the rationale and thinking.

Multiple Environmental Values

Government's environmental objectives include water, riparian reserve zones, wildlife and wildlife habitat areas, old growth management areas, fisheries sensitive watersheds, resource features and cultural heritage resources.

Where multiple environmental values are identified, a mitigation hierarchy rationale and plan must be provided for each value.

Mitigation Plan Requirements

All mitigation plans must include the following key components:

- Value identification. Identify the species, feature or value potentially impacted by the proposed activity.
- Rationale for the energy resource activity to operate in a location or in a timeframe that cannot be avoided. When the operations impact a species or value and the location or timing of project cannot be moved, an explanation of why activities are unavoidable and a rationale for not being able to avoid impacting the value must be presented in the plan.
- Site specific information as it directly relates to the project. Include photos and any information to justify the activity.
- Operational modifications and strategies to minimize, mitigate and restore impact to the species, feature or valued identified should be explained. Include an explanation of how the modifications are expected to minimize impacts or reduce risk.
- Project monitoring plan to outline how the effectiveness of the proposed operational modifications are measured, monitored and reported. Include specific benchmarks for measuring and monitoring and contingency plans for alternative planning needs and reporting timelines and responsibilities.

Include any other information including data, information sources, and other relevant information to support the mitigation plan and assist the Regulator in

rendering a decision on the application. Missing components or information not applicable to the specific mitigation plan must be explained and justification for the omission provided within the plan. Indicate component and provide an explanation of why it is not applicable, within the plan. Mitigation plans with missing or incomplete components from the list above will be deemed incomplete and will not be accepted by the Regulator.

All plans must be prepared and signed by a Qualified Professional relevant to the environmental component(s) addressed in the mitigation plan. The Qualified Professional must make a clear determination as to how the proposed mitigation strategy will minimise impacts to the environmental component(s) addressed and provide recommendations of additional monitoring activities that should be implemented to ensure the objectives of the mitigation strategy are met.