

Working Title <b>Biodiversity Specialist</b>		Name	
Position Number	Reports to Position No., Class & Level  <b>Lead, Science Team</b>	Division, Branch/Unit <b>Lands Division/ Lands Planning Branch, Cumulative Effects Management Planning Section</b>	Ministry  <b>Environment and Parks</b>
Present Class <b>Scientific 3</b>		Requested Class	
Dept ID	Program Code	Project Code (if applicable)	

**PURPOSE:**

The *Land-use Framework* (LUF) is a key Government of Alberta policy and foundational to the development of a provincial Integrated Resource Management System. The Lands Planning Branch leads Alberta Environment and Parks' (AEP) contribution to implementation of the LUF and works to coordinate and establish departmental positions and input to LUF regional plans, strategies and policy initiatives. As part of this effort, the Branch also has responsibility for leading the development of environmental management frameworks, regional strategic assessment and other tools designed to support decisions to achieve LUF outcomes and objectives and evaluate performance. A key responsibility is to ensure that the Government of Alberta's assessment of cumulative environmental, social and economic effects is sound, credible and effective, also includes consideration of cultural values.

Reporting to the Lead, Science Team, incumbent will provide the necessary scientific expertise to support structured evaluation of cumulative effects on biodiversity associated with development at regional and subregional scales. This science position will support development and implementation of biodiversity management frameworks for all regional plans (South Saskatchewan, North Saskatchewan, Upper and Lower Peace, Upper and Lower Athabasca, Red Deer) and for sub-regional plans when required. The incumbent will have thorough understanding of biodiversity issues in planning regions across the province and will lead the identification of land and ecosystem indicators and associated metrics and provide support to the development of management thresholds. The incumbent will provide support for the application of habitat models and other assessment tools, and integrate these works where practical with other media to provide integrated scenario analyses to support planning activities. The incumbent will ensure that assessment of land and biodiversity are considered in regional and sub-regional plans and management frameworks, and ensure they reflect existing and emergent policies, and are developed using scientifically-credible approaches.

This science position contributes an understanding of state-of-the-art methodologies and applies various assessment tools in regional planning and cumulative effects management. In addition to being a professional in biodiversity, the position supports other team, branch and cross-ministry members in addressing ecosystem impact and risk assessment. The incumbent is therefore also knowledgeable in terrestrial and aquatic fate of contaminants as well as human health impacts of anthropogenic activities.

The Biodiversity Specialist is expected to maintain collaborative relationships with biodiversity experts, biologists and limnologists within the department and Government of Alberta and externally (i.e. academia, industry, non-government organizations, etc.) to ensure scientific credibility of approaches used in regional planning. The incumbent will work closely with counterparts from across AEP and the broader Integrated Resource Management System from the development to implementation stages of regional plans and associated environmental management frameworks. Key connections will need to be made departmental branches responsible for monitoring and with the Alberta Biodiversity Monitoring Institute (ABMI), who inventory wildlife and ecosystem resources in Alberta.

## **RESPONSIBILITIES AND ACTIVITIES:**

The position is a terrestrial and aquatic biodiversity expert who ensures the scientific integrity of the department's biodiversity-related contributions to regional and sub-regional plans and supporting management frameworks.

### **1. Provide scientific leadership in the field of terrestrial and aquatic ecosystem biodiversity.**

Activities include:

- Leading/facilitating research in collaboration with scientific professionals from within government (Government of Alberta, Government of Canada, and other jurisdictions), academia, industry and/or non-profit organizations in support of cumulative effects assessment and management.
- Acting as a departmental scientific expert in biodiversity by providing advice to executive and senior management.
- Representing the Ministry at senior levels in negotiations with industry and other stakeholders on technical and scientific issues related to biodiversity assessment and management, as needed.
- Building relationships and successful partnerships with other scientific experts and being recognized as a specialist in the field, in particular as it related to biodiversity and environmental management.
- Incorporating research findings to enhance Government of Alberta cumulative effects assessment and management practices.
- Producing scientific papers for publication in peer-reviewed journals and presenting at scientific conferences.

### **2. Provide scientific leadership on the development of biodiversity indicators and associated methods. This provides the foundation for the ministry's regional planning and biodiversity management frameworks, and impacts regional and sub-regional planning across the province.**

Activities include:

- Leading the selection of indicators and development of associated methods for environmental management frameworks in support of regional plans in collaboration with members of the Policy, Lands, Resource Stewardship, Strategy and Governance Divisions, , Alberta Agriculture and Forestry, other government departments and ABMI. This may require leading/facilitating scientific research where knowledge gaps are identified.
- Providing the scientific expertise required for the development of the quantitative triggers, limits and targets for inclusion in biodiversity management frameworks for all seven regional plans, and any supporting sub-regional plans.
- Support the development of integrated environmental indicators and support the development of models that allow for the assessment of cumulative effects across environmental media (e.g. impacts of water abstraction on wetland health and/or habitat for wildlife).

### **3. Evaluate and report on the environmental performance of LUF environmental management frameworks from a biodiversity perspective.**

Activities include:

- Supporting regional plan implementation, including fulfilment of annual reporting requirements of regional plans and Minister's determinations on the exceedance of thresholds established in biodiversity management frameworks.
- Liaising/collaborating with other government departments, ABMI, academic institutions and other organizations that play a role in biodiversity monitoring and evaluation to review and assess performance of biodiversity management frameworks.
- Coordinating, tracking and reporting of departmental implementation progress regarding biodiversity management across Divisions and ministries.
- Supporting AEP Divisions on the design and application of regulatory and non-regulatory tools for terrestrial and aquatic ecosystem management to ensure achievement of regional plan outcomes.
- Working collaboratively with environmental modellers (e.g. Land and Biodiversity Modeller) to develop model assumptions, analyse and interpret model outputs and evaluate implications within the context of regional and sub-regional plans.

### **4. Provide scientific expertise in the assessment of cumulative impacts to biodiversity as a part of integrated regional strategic assessment approaches or other innovative tools**

Activities include:

- Developing new tools and approaches to support assessments of biodiversity in regional cumulative effects

**RESPONSIBILITIES AND ACTIVITIES:** The purpose of the job can be broken down in different responsibilities and end results. Each end result shows what the job is accountable for, within what framework and what the added value is. Normally a job has 4-8 core end results. For each end result, approximately 3-6 activities should be described (see Writing Guide Pages 9-10).

management. These tools may be unique to Alberta and require significant innovation.

- Evaluating potential impacts to land and biodiversity in regional strategic assessments, applying and interpreting results from a variety of assessment tools and models. Integrating biodiversity assessment tools and results with other media (e.g., air quality) and with socio-economic and cultural considerations to ensure robust and holistic assessment of cumulative environmental, social, cultural, and economic effects.
- Supporting biodiversity-related input to the development of sub-regional plans.
- Identifying key areas for conservation management (with sufficient credible scientific rationale) to ensure that land disturbance limits and management are in the most effective locations to achieve objectives identified in biodiversity management frameworks.
- Supporting the evaluation of existing departmental assessment process (e.g. project environmental impact assessment) and the development of effective and efficient regulatory review processes in the context of cumulative impacts to biodiversity.

**5. Support the department's strategic priorities, implementation of cumulative effects management, and biodiversity management.**

Activities include:

- Supporting biodiversity and ecosystem-related strategy, policy and program priorities of the department, as necessary. Providing advice to department and government on alignment and development of policies, approaches and tools for cumulative effects management.
- Develop and maintain a key relationship with the Alberta Biodiversity Monitoring Institute to ensure advancement of the species, habitat, and human footprint inventories in Alberta as the key foundation for biodiversity management frameworks to manage regional cumulative effects.
- Working, as necessary, with the Land Use Secretariat and cross-ministry partners to provide department input regarding "provincial policy gaps and areas of provincial interest" as listed in the *Land-use Framework*.
- Working to ensure congruence between the *Land-use Framework* policies and emergent provincial and federal biodiversity or species-at-risk management strategies and policies (e.g. Biodiversity Policy, Wetland Policy, Caribou Range Plans).

**SCOPE:** List specific information that illustrates the challenges, problem solving and creativity requirements and decision making capacity of the position. Also identify the internal or external areas the job impacts (see Writing Guide Pages 11-12).

Dealing with competing and changing priorities, building the trust of staff and government partners, responding effectively and in a timely manner, and managing a range of diverse opinions are typical challenges faced. The issues managed are numerous, inter-related, and potentially cumulative. Time management, organization, and coordination skills are essential as the incumbent will work with many staff from different backgrounds. Effective integration of traditional ecological knowledge will be a key challenge for this position as many indicators of biodiversity are of interest to Indigenous peoples, but not all require setting of objectives in the biodiversity management frameworks. Working through this tension will be critical for success.

The incumbent must draw on collaboration with a network of government and public partners to assess and manage regional land and ecosystem issues that address local to international concerns. It requires integrating departmental policies and direction into government-wide plans. Client and stakeholder groups as well as their priorities and requirements are diverse, including: department Executive and Senior Director staff from all divisions; other ministries and boards; multi-stakeholder partners (biodiversity/ecosystem related); municipal and federal governments; industry; non-government organizations; researchers; Indigenous peoples; and members of the public.

**KNOWLEDGE, SKILLS & ABILITIES:** Important knowledge factors including technical, scientific or program related areas

**Technical Knowledge, Skills and Abilities:**

- A university degree in biology or natural resource science, or a field related to management and biodiversity. Post-

## **KNOWLEDGE, SKILLS & ABILITIES:**

graduate degree preferred.

- Eligibility for membership in professional associations (e.g., ASPB ) and willingness to meet professional requirements on an ongoing basis and increase knowledge through professional and continuing education opportunities.
- Knowledge of systems approaches, including the development of outcomes, environmental monitoring and performance measurement, as applied to biodiversity and ecosystem management.
- Knowledge of environmental management and provincial legislation, strategies and policies (e.g., *Alberta Land Stewardship Act, Land-use Framework*, integrated resource management planning and cumulative effects management systems etc.), and understanding of regional issues in order to implement them within the different regions.
- Knowledge of development of environmental objectives, policies and regulatory alternatives to manage biodiversity and ecosystems, including understanding practices in other jurisdictions.
- Experience in selecting ecological indicators, evaluating and applying various biodiversity and ecosystem assessment tools, and ability to integrate such tools with those for other media.
- Ability to evaluate and interpret scientific and technical information, integrate new information as it arises, and develop creative approaches and provide recommendations for action to manage a wide variety of biodiversity and ecosystem issues.
- Familiarity with relevant fields of statistics, biodiversity, ecosystem, and social science as well as the ability to assess socio-economic or cost-benefit analyses.
- Understanding of the roles, responsibilities and programs across the Government of Alberta, other governments, and external partners and stakeholders for setting environmental policy and outcomes.
- Thorough knowledge of the operations of the Integrated Resource Management System, AEP and the Lands Division, coupled with knowledge of the government's organization and direction in general, including sustainable resource and environmental management.

### **Leadership and Project Management:**

- Strategic and lateral thinking skills to develop and encourage commitment to new approaches, and work within a broadly defined conceptual framework to identify emerging issues, and develop options for resolution.
- Ability to develop innovative approaches and adapt them to assessment and management of ecosystems and biodiversity quality in regional plans.
- Leadership skills to motivate multi-disciplinary groups of professionals (within and outside the Government) and build confidence and credibility across government, industries and communities.
- Strong project, time, and organizational management skills to effectively balance multiple demands.
- Ability to respond to changing priorities and timelines as well as handle multiple tasks.
- Experience preparing, reviewing and managing contracts to support work priorities.

### **Communication and Partnerships:**

- Ability to establish contacts and build relationships in the research and professional community to resolve scientific issues.
- Relationship-building skills to develop and maintain collaborative working relationships within the ministry and across government to identify and understand the issues faced by partners, their decision-making processes, and preferred means of interaction.
- Ability to integrate diverse and multi-disciplinary environmental perspectives and initiatives with a wide range of stakeholders (staff and departments) who may have competing interests.
- Ability to effectively communicate verbally and in writing with individuals at different levels of Government on various aspects of development and implementation progress (including presentations to key decision-makers, etc.).
- Experience in consultation and collaboration with partners and the ability to influence, convince and motivate various stakeholders. Leadership and influencing skills to promote innovation, build consensus, and motivate others to accept and adopt innovative concepts and approaches, and strive for continual improvement
- Strong interpersonal skills, and capable of working independently or in a multi-disciplinary team environment, as the situation requires.

<b>CONTACTS:</b>		
<i><b>Clients</b></i>	<i><b>Frequency</b></i>	<i><b>Nature and Purpose of Contact</b></i>
Other members of the Lands Planning Branch	Daily	Work collaboratively to effectively build regional strategic assessment approaches and tools and transform environmental assessment in Alberta. Drive linkages between regional strategic assessment and regional planning as well as linkages across environmental media (air, surface water, groundwater, land, ecosystem and biodiversity).
Alberta Environment and Parks Directors and staff from Policy, Lands, Strategy and Governance, Resource Stewardship Corporate Divisions, Communications, and Environmental Law Teams	Regular and ongoing	Collaborate to establish department input to regional plan development, implementation and renewal, and realize strategic opportunities for the Ministry, with a focus on assessing and managing regional biodiversity. Provide advice and direction and communicate progress regarding <i>Land-use Framework</i> implementation. Foster development of various approaches and tools to assess and manage cumulative effects. This includes working closely with policy and governance specialists across the department to establish and work to assess biodiversity and ecosystem issues and performance, achieve regional objectives, and fulfill other ecosystem and biodiversity priorities.
Senior Ministry and Government officials, including Minister, Deputy Minister, Executive	As required	Provide advice to strategic planning and decision-making relating to <i>Land-use Framework</i> , environmental assessment, and Ministry business plan goals, operations and governance processes as they pertain to biodiversity.
Land-Use Secretariat and representatives from other ministries (Energy, AER, Health, Culture and Tourism, Municipal Affairs, Agriculture and Forestry, Treasury Board & Finance, etc.)	Regular and ongoing	Develop strategies and provide advice and input regarding <i>Land-use Framework</i> implementation as related to biodiversity and ecosystem and cumulative effects assessment and management. Identify policy gaps and conflicts and mechanisms for alignment – in regional plans and other GoA strategies and policies.
Senior officials and representatives of: <ul style="list-style-type: none"> <li>• Various cross-ministry committees</li> <li>• Federal government departments and municipal, provincial and territorial governments</li> <li>• Industry and industry associations</li> <li>• Non-governmental organizations</li> <li>• Indigenous groups</li> <li>• Multi-stakeholder organizations and partnerships</li> </ul>	As required	Identify and resolve complex issues regarding cumulative effects assessment and management. Share information, communicate ministry's priorities and positions, develop partnerships and working relationships, identify opportunities for collaboration, propose strategies, encourage innovation, exchange best practices and opportunities relating to development of plans and environmental assessment.

<b>SUPERVISION EXERCISED:</b>
N/A
