

Ministry

Environment and Protected Areas

Position

Position ID

~~00287548~~

Position Name (30 characters)

Water Policy Specialist

Requested Class

Scientific 3

Job Focus

Pdicy

Supervisory level

00 - No Supervision

Agency (ministry) code

Q402

Cost Centre

6048023

Program Code: (enter if required)

Employee Name (or Vacant)

Vacant

Division, Branch/Unit

Policy Division, Water and Waste Policy Branch

☐ Organizational chart attached?

Supervisor's Position ID

50822093X

Supervisor's Position Name (30 characters)

Kim Westcott

Supervise r'sCu rneClass

Scientific 4

Job Purpose and Organizational Context

Why the job exists:

This intermediate science position provides analyses and assessments in support of Alberta's water policies, so they are informed by credible scientific information and knowledge. The position contributes to the scientific and evidence-based credibility of the province's water policy across the entire policy cycle - research, design, control, evaluation and education. The position undertakes a variety of assessments (e.g., chemical, toxicological, ecological) to evaluate policy options for managing Alberta's water quality in support of human and ecosystem uses. It requires significant scientific and technical assessment capabilities and the ability to consider these and other factors in the analysis and development of policy options.

With broad knowledge of Alberta's water quality and aquatic ecosystems, growth and development pressures, water and watershed management principles and practices, the position supports an array of program areas and initiatives across the department, in addition to providing core responsibilities of water policy support.

Core functions include:

Assessing policy and management implications of issues like point source pollution (municipal and industrial), non-point source pollution, emerging contaminants, oil sands mine reclamation (aquatic landforms), land-use change, climate change, and cumulative effects on water quality and aquatic ecosystems.

Understanding and applying western science and traditional knowledge of natural versus human-induced changes in water quality and aquatic ecosystems to support cumulative effects management.

Identifying opportunities to advance or refine existing approaches and tools to manage risks to water quality and aquatic ecosystems within the context of Alberta's water policy and regulatory framework.

Understanding and conveying knowledge of Alberta's regulatory framework for water including the *Environmental Protection and Enhancement Act* (EPEA), the *Water Act*, the *Alberta Land Stewardship Act*, and associated regulations and codes of practice.

Responsibilities

1. Policy Research. Provide information, analysis and advice to inform the design, control, implementation and evaluation of water policies that support department goals. Activities include:

- Apply extensive background knowledge of Alberta's water quality and aquatic ecosystems to evaluate, interpret and inform provincial conditions, trends and issues.
- Compile, review and summarize technical data and information relevant to the development or refinement of legislative and policy instruments. Identify emerging environmental issues and trends in water policy and their potential impacts on existing policy.
- Research policies and practices used in other jurisdictions including policy control mechanisms and evaluation metrics. Identify significant water policy shifts that may have an impact on water policy and governance in Alberta.
- Identify and generate information necessary to address uncertainties and data gaps. Apply innovative tools and approaches to address policy issues.
- Evaluate the scientific and technical basis for conclusions or recommendations submitted to the government, in media or produced by stakeholder organizations with water management interests. Analyze and evaluate data and other information on water policy from a variety of sources (e.g., academic journals, technical and administrative publications, government studies, books, newspapers).
- Maintain current awareness of academic literature and research related to water quality and aquatic ecosystem stressors and responses. Cultivate and maintain professional contacts with peers in research and academic organizations.
- Provide scientific and interpretive support within the department on aquatic science, water quality models, watershed modeling, climate modeling, and cumulative effects on water quality, aquatic ecosystems and human uses of water.

2. Policy Design. Develop recommendations and options to identify alternate courses of action and implications for water policies. Activities include:

- Provide analysis and assessments ensuring that policy options and design are supported by sound scientific principles and credible information. Provide advice and input into the development of a provincial policy agenda on surface water quality and aquatic ecosystem management.
- Provide leadership on water quality assessments supporting other policy and planning area-related projects (e.g., hydrology, fisheries, groundwater).
- Provide analysis and information for research reports, position papers and other documents about water issues, policies and programs by compiling, reviewing and summarizing technical data and relevant information. Research/compare requirements or processes in other jurisdictions and assist in

writing comprehensive and scientifically defensible policies and standards.

- Participate in multi-disciplinary teams of professionals and in stakeholder groups to resolve complex issues and develop guidelines and procedures with broad stakeholder and regulatory support. Contribute scientific and technical expertise and represent the department on committees involved in developing: environmental objectives, water and watershed management plans, management frameworks, national and provincial action plans, or other water management tools and approaches.
- Ensure policy control, implementation and evaluation aspects are considered in the policy design phase. Collaborate across the department and with other ministries in conducting research and analysis to develop thorough and consistent water policies, frameworks, regulatory instruments and formal plans. Consult and collaborate with regional and operations staff to integrate and align policy decisions with operational practices and procedures such as licences and approvals, codes of practice and other regulatory tools.
- Participate in and provide scientific support to multi-stakeholder committees, workshops and initiatives that provide opportunities for public and stakeholder input into departmental activities and policy development processes (i.e., provide the scientific, technical and regulatory foundation to support discussion of broader societal and economic considerations brought by other participants). Clearly document and analyze public and stakeholder perspectives and consider this feedback in the policy design process.

3. Policy Control. Support the implementation of an effective policy management system. Activities include:

- Support development and reporting of department performance measures, environmental indicators, monitoring systems and management frameworks. Support assurance and reporting metrics for policy goals and implementation; identify data, science, monitoring and indicators to assure policy controls are achieving the desired intent and indicate when policy adjustments may be needed.
- Contribute to the regular review and revision of water quality and aquatic ecosystem policies. Ensure the department's policy registry is current and accurately reflects provincial water policies. Ensure good file management procedures are in place to document the policy development and approval process and best practices are in use (e.g., document version control). Assist with internal policy communications and staff training to enhance policy compliance.
- Participate (if required) in hearings under the Environmental Appeals Board, Alberta Energy Regulator or Natural Resources Conservation Board to provide policy expertise.

4. Policy Evaluation. Develop and maintain policy-related information for the department and provide updates on the status of the water policy controls in Alberta. Activities include:

- Identify policy performance gaps, issues and unintended consequences using the metrics and indicators developed to support robust policy implementation. Assess trends (magnitude, direction) for metrics and performance measures. Identify data gaps (frequency, parameters and location of monitoring) as well as emerging risks and opportunities.
- Describe regulatory goals and requirements and develop written briefings and presentations when providing advice and interpretations.
- Identify concerns and issues relevant to the department's water management mandate and evaluate issues raised by stakeholders. Analyze issues based on scientific principles and prepare proposals and advice to address concerns.

5. Policy Education. Contribute to the creation and dissemination of water management system knowledge. Activities include:

- Develop supporting information for leadership briefings and action requests as well as in response to news reports and release of major water management-related studies. Assist in preparing key messages for executive, communications and education staff.
 - Collaborate with department regional staff and other specialists in multi-disciplinary areas to incorporate advancements in water quality science and management and promote consistency in practice and standards across the department (e.g., the Limnology Community of Practice).
 - Work with communications and education business areas to develop educational and informational products and materials including documents, fact sheets, reference materials, reports and web pages. Use knowledge and education to prepare government, the public and stakeholders for upcoming policy initiatives and priorities.
 - Coordinate and respond to requests for information about water policies and programs from other divisions, ministries, jurisdictions and external stakeholders and communities. Organize and attend provincial/national technical and policy workshops and conferences as required.
 - Represent the department's perspective on various committees, teams and working groups. Interact with academic, watershed, professional and research institutions (e.g., present lectures and seminars) to share information so the wider practitioner community is aware and involved in department interests.
6. Support other policy research, development and implementation, to support branch, division, department, and government.
- Support and lead other initiatives, as needed, to support other government of Alberta priorities.

Problem Solving

Typical problems solved:

Evaluate and provide recommendations on the design and execution of scientifically defensible water policies.

Analyze water quality and aquatic ecosystem conditions to inform water policies, regulatory decision-making, and watershed management planning.

Advise on water quality and aquatic ecosystem impacts arising from urban, agricultural, energy (oil sands), and other industrial development.

Recommend actions to improve the management of water quality, aquatic and riparian ecosystems and fisheries in Alberta.

Identify actions to improve Alberta's preparedness, adaptation, and resiliency in planning for extreme events (droughts, floods, climate change).

Consider impacts of water policy on communities, industries, and downstream users.

Types of guidance available for problem solving:

Environmental Enhancement and Protection Act (EPEA), EPEA regulations and codes of practice, *Water Act*, *Water Act* regulations and codes of practice, regional plans, Alberta Energy Regulator directives, Water for Life, Environmental Quality Guidelines for Alberta Surface Waters, transboundary agreements, department water, wastewater and environmental policies, performance measures, principles of cumulative effects management.

Direct or indirect impacts of decisions:

Decisions in this role will impact:

- regulatory decisions (regulatory approval staff seek policy advice on unusual or new-concept applications)
- other divisions and functions in the department (e.g., monitoring and evaluation, transboundary, regional

planning, contaminated sites, intergovernmental relations)

- legislative and regulatory updates and amendments (e.g., identify areas of improvement, red tape reduction)
- other Government of Alberta ministries (e.g., energy, health, agriculture, municipal affairs)
- the Alberta Energy Regulator
- water stakeholders including industry, municipalities and environmental groups
- Indigenous communities

Key Relationships

Major stakeholders and purpose of interactions:

Internal to provincial government:

Other water units within Environment and Protected Areas (e.g., Water Allocation and Quantity Section, Watershed Sciences). Other government departments including Integrated Resource Management System partners (e.g., Energy & Minerals, Agriculture & Irrigation, Indigenous Relations, Alberta Energy Regulator).

External to provincial government:

Industry: purpose of interactions is to analyze and provide expert opinion on new and proposed water management solutions, provide advice to regulatory approvals (Environment and Protected Areas and Alberta Energy Regulator), engagement during policy development process. Meeting frequency: project dependent; at least 3-6 times/year.

Federal government: purpose of interactions is bilateral discussions on regulations and national initiatives. Meeting frequency: project dependent; at least 3-6 times/year.

Indigenous communities and organizations: purpose of interactions is to provide or seek advice on new and emerging water management issues, engagement during policy development cycle. Meeting frequency: project dependent; at least 3-6 times/year.

Municipalities: purpose of interactions is to provide or seek advice on new and emerging water management and regulatory issues, engagement during policy development cycle. Meeting frequency: project dependent; at least 1-2 times/year.

Partners and water umbrella organizations (Alberta Water Council; Watershed Planning and Advisory Councils). Purpose of interaction is policy co-development, engagement, performance measurement and reporting. Meeting frequency: at least 1-2 times/year.

Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Bachelor's Degree (4 year)	Science		

If other, specify:

Job-specific experience, technical competencies, certification and/or training:

Specialization in limnology, aquatic ecology, or aquatic toxicology is preferred. Experience developing, administering or complying with environmental regulations is an asset.

Behavioral Competencies

Competency	Level					Level Definition	Examples of how this level best represents the job
	A	B	C	D	E		
Systems Thinking	☐	☐	☐	☒	☐	Integrates broader context into planning: • Plans for how current situation is affected by	The complexity of this job is high; the incumbent must have knowledge of Alberta's surface water

		broader trends • Integrates issues, political environment and risks when considering possible actions • Supports organization vision and goals through strategy • Addresses behaviours that challenge progress	resources and environmental management systems, and be able to apply that knowledge to achieve departmental goals and outcomes.
Creative Problem Solving	○ ○ ● ○ ○	Engages the community and resources at hand to address issues: • Engages perspective to seek root causes • Finds ways to improve complex systems • Employs resources from other areas to solve problems • Engages others and encourages debate and idea generation to solve problems while addressing risks	This program area is tasked with developing policy for highly complex issues. Solutions require technical and policy expertise from within and outside of the department. In many cases the policy issue may not be well defined or easily isolated from other issues.
Agility	○ ○ ● ○ ○	Identifies and manages required change and the associated risks: • Identifies alternative approaches and supports others to do the same • Proactively explains impact of changes • Anticipates and mitigates emotions of others • Anticipates obstacles and stays focused on goals • Makes decisions and takes action in uncertain situations and creates a backup plan	This position involves work scope and projects with high levels of uncertainty and competing interests between stakeholder groups. Initiatives are often subject to changing priorities, timelines and resource availability.
Develop Networks	○ ○ ● ○ ○	Leverages relationships to build input and perspective: • Looks broadly to engage stakeholders • Open to perspectives towards long-term goals • Actively seeks input into change initiatives • Maintains stakeholder relationships	Work scope ranges from regional to province-wide, and could require input from national and international sources.