

Update

Ministry

Environment and Protected Areas

Describe: Basic Job Details

Position

Position ID

Position Name

Muni/Ind Water Data Supervisor

Current Class

Technologies 6

Job Focus

Supervisory Level

Operations/Program

01 - Yes Supervisory

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Organizational Structure

Division, Branch/Unit

RSD, Airshed and Watershed Stewardship

Supervisor's Position ID

Supervisor's Position Name

Supervisor's Current Class

Information Services Manager

Manager (Zone 2)

Design: Identify Job Duties and Value

Changes Since Last Reviewed

Date yyyy-mm-dd

2024-11-25

Responsibilities Added:

none

Responsibilities Removed:

none

Job Purpose and Organizational Context

Why the job exists:

The Municipal and Industrial Water Data Supervisor plays a crucial role in mentoring and leading a team of subject matter experts dedicated to the comprehensive management of municipal drinking water, municipal wastewater, industrial wastewater data and hazardous waste manifests. This data is essential for effective environmental monitoring, informed decision-making, and accurate reporting, serving as a key component in

demonstrating regulatory compliance and mitigating environmental and public health risks. The Supervisor is responsible for overseeing the acquisition, quality assurance and control, storage, optimization, and distribution of data submitted to Alberta Environment and Protected Areas (EPA) by facilities, ensuring adherence to the standards and requirements outlined in their Environmental Protection and Enhancement Act (EPEA) approvals.

In addition to data management, the Supervisor contributes to the design, enhancement, and maintenance of databases that house municipal and industrial water, and hazardous waste manifest, data. The incumbent is responsible for ensuring the integrity and compliance of data in accordance with governmental Information Management and Technology (IMT) policies. The role also involves supporting all phases of system improvements, including the design, development, testing, implementation, and training associated with new and existing tools, while ensuring that data assets are secure, improved, and aligned with government standards.

As a steward of municipal and industrial water data, and hazardous waste manifests, the Supervisor provides expert advice on the suitability of data for various uses. The incumbent strives to ensure that data from municipal and industrial activities, along with the resulting information products and services, are accurate, timely, and meaningful. This position requires direct collaboration with a diverse range of stakeholders, including citizens, policy developers, regulatory assurance approvers, water managers, and program scientists, and emphasizes the fostering of strong relationships to facilitate effective data stewardship.

The data managed by the team forms the foundation for critical functions such as monitoring, risk assessment, predictive modeling, approvals, operational oversight, compliance enforcement, emergency response, and scientific reporting. The work of the Supervisor and the team is essential for protecting the environment, sustaining the economy, and ensuring public health and safety across provincial, federal, and municipal governments, approved operators, industries, commercial businesses, indigenous and community organizations, environmental associations, contracted service providers, and Albertans.

Responsibilities

1. Supervises, mentors, and coordinates subject matter experts in data stewardship activities
 - Provides guidance and leadership to subject matter experts in the team, including professional development, and diversity and inclusion.
 - Supervises and coordinates subject matter experts in data stewardship activities, including but not limited to data acquisition, validation, access and dissemination. This includes:
 - Electronic reporting of potable water, three different streams of waterworks data (including bacteriological quality, operating data, and accredited laboratory data).
 - Stewards unstructured data such as municipal and industrial wastewater discharges that come to the department as pdf reports.
 - Coordinates and actions data requests from shared EPA mailboxes.
 - Coordinates training to internal and external stakeholders on the use of the data databases.
 - Coordinates and collaborates with subject matter experts on water data management problems and emerging issues.
2. Leads the acquisition, storage and maintenance of electronic data from waterworks and wastewater facilities, and information from hazardous waste manifests.
 - Operates as a key contact and user coordinator for municipal and industrial facilities by registering approved operators, providing training, notifying them and resolving data submission problems.
 - Monitors the database system logs to identify problems with data submissions then diagnoses the problems and takes or recommends corrective actions depending on the scope of the problem.
 - Confirms and updates monitoring and reporting requirements.
 - Provides one-on-one assistance to approval holders to ensure submitted data files are meeting data quality and validation standards.

- Monitors the data loader system, diagnoses problems and implements solutions to ensure data files are processed and loaded into the system correctly, and
- Ensures that data is available to support the enforceability of standards and departmental requirements.

3. Maintains monitoring and associated business data in current databases and systems, and supports the design, development, testing, implementation and training phases for new initiatives and systems.

- Assesses business requirements relative to the functionality of existing systems and makes recommendations to enhance these systems in order to meet new and emerging data needs.
- Contributes to the design, development, testing, training and implementation of new information systems.
- Participates in data communities and committees, and serves as a representative on business users committees.
- Receives and reviews notifications of new approvals or amendments to existing approvals from the EPA approval coordinators.
- Confirms and updates approval operating, monitoring and reporting requirements in the database.
- Duties include stewarding the data while assuring data assets are protected, improved and aligned with government standards.

4. Provides access to data, analyses and reports needed to inform EPA, partners, stakeholders and Albertans.

- Provides support services and advice to EPA staff accessing municipal and industrial water data, and hazardous waste manifests, within existing systems and optimizes the data for use by aggregating, analyzing, integrating, visually representing, and reporting it.
- Distributes data via EPA reports, websites, data platforms, sharepoint sites, and portals to partners, stakeholders and citizens.
- Develops standard and custom queries upon request to ensure data needed by EPA staff, and external stakeholders particularly those involved in monitoring, assessment, approvals, compliance, investigation, emergency response, reporting and stakeholder engagement is readily available.

5. Leads in the stewardship of municipal and industrial water data, and hazardous waste manifests, to improve data quality.

- Conducts technical reviews through document and data audits of municipal and industrial water data, and hazardous waste manifest reports.
- Encourages the development and dissemination of quality data to staff and stakeholders through standard products and centralized systems.
- Serves as a key subject matter expert in development of policy, laboratory data, QA/QC and related data and information systems.
- Contributes to the general administration of the branch, division and ministry which includes participating in operational planning, priority initiatives, performance evaluation, training, team activities, occupational health and safety initiatives, Freedom of Information and Protection of Privacy requests, briefings and communications.

Problem Solving

Typical problems solved:

- This position provides leadership in planning and guiding the direction of the maintenance, upgrading and enhancements of the municipal and industrial water data, and hazardous waste manifests, to ensure continuous improvement.
- The Supervisor identifies problems, deficiencies and areas needing enhancements and develops possible solutions and strategies for implementation to achieve goals and objectives.
- The Supervisor ensures data is collected from approved operators, verified and validated and loaded into a system which helps maintain, optimize and distribute information needed to meet departmental

requirements and achieve environmental outcomes.

- Barriers that prevent data from flowing through this process must be identified and resolved by the incumbent. This includes daily problems encountered when scrutinizing submitted files containing error messages that must be resolved with the submitter.

Types of guidance available for problem solving:

The types of guidance available to this position include:

- Cross-functional advice from subject matter experts within and external to the department to provide context and information; program and policy team experts and departmental plans can be used to support project work.
- Guidance from the management and leadership team provide strategic insight and decision-making support
- Supporting information and guidance on similar issues within peer reviewed scientific journal articles, online courses, available research material, and network contacts.
- Opportunities for continuous learning through workshops and certification programs helps the Supervisor stay current with trends and advancements.

Direct or indirect impacts of decisions:

Decisions made by the Supervisor directly impact industry as the incumbent is responsible for providing guidance to these stakeholders and working with them to resolve technical issues and accept their submitted data reports. The Supervisor is regularly called upon to provide guidance to EPA approval coordinators and stakeholder facilities in order to resolve issues, streamline processes and improve systems.

Key Relationships

Major stakeholders and purpose of interactions:

On a daily basis, the Supervisor interacts with EPA approval coordinators, departmental staff, and facility representatives responsible for monitoring, compliance and reporting. The Supervisor frequently communicates with Technology and Innovation staff including records managers, Freedom of Information and Protection of Privacy staff, contracted technical service providers and related consultants. Additionally, the Supervisor may be asked by other government ministries to provide data and subject matter expertise.

Required Education, Experience and Technical Competencies

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

If other, specify:

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

- Degree from a recognized institute in environmental sciences or related disciplines plus a minimum 10 years of technical experience in a related field.
- Extensive knowledge and a minimum 10 years of experience managing data and information. This includes demonstrable experience in data capture and transfer procedures, quality assurance and control, metadata management, records systems and databases, standards, distribution, analysis, and maintaining and developing systems.
- Working knowledge of SQL, suite of Microsoft 365 and PowerBI, Geographical Information Systems (GIS), and adaptability to learn new technologies as required.
- Extensive knowledge of EPEA, related legislation, regulations, policies, standards and guidelines, Codes of Practices, which provide monitoring and reporting practices for industry. This is complemented by knowledge of QA/QC, EPA business needs, databases, systems and reports.
- Knowledge of the technology used to capture monitoring and analytical quality is an asset.
- Considerable knowledge of laboratory accreditation process.
- Well developed written and verbal communication skills as well as interpersonal skills for effectively

Behavioral Competencies

Competency	Level					Level Definition	Examples of how this level best represents the job
	A	B	C	D	E		
Systems Thinking	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Takes a long-term view towards organization's objectives and how to achieve them:</p> <ul style="list-style-type: none"> • Takes holistic long-term view of challenges and opportunities • Anticipates outcomes and potential impacts, seeks stakeholder perspectives • Works towards actions and plans aligned with APS values • Works with others to identify areas for collaboration 	Works to continually improve processes, standards and systems needed to support regulatory data stewardship.
Creative Problem Solving	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Engages the community and resources at hand to address issues:</p> <ul style="list-style-type: none"> • 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 	Resolves complex challenges surrounding the acquisition and validation of regulatory data from external parties into government systems that are continually evolving.
Agility	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<p>Identifies and manages required change and the associated risks:</p> <ul style="list-style-type: none"> • 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 	Changes to business, technology and environments are constant. It is important the incumbent within this position be able to anticipate, assess and adapt to changing priorities, and make effective decisions. It is also important that the team is engaged and part of the changing priorities.

		situations and creates a backup plan	
Build Collaborative Environments	○ ○ ● ○ ○	<p>Collaborates across functional areas and proactively addresses conflict:</p> <ul style="list-style-type: none"> • Encourages broad thinking on projects, and works to eliminate barriers to progress • Facilitates communication and collaboration • Anticipates and reduces conflict at the outset • Credits others and gets talent recognized • Promotes collaboration and commitment 	<p>Leads or participates in initiatives designed to ensure regulatory requirements are met while collaboratively working with external stakeholders, policy, operations, Service Alberta; toward a common goal of complete and validated regulatory data. This position requires a lot of interactions with internal and external stakeholders.</p>

