

## Update

Ministry

Environment and Protected Areas

### Describe: Basic Job Details

#### Position

Position ID

Position Name (30 characters)

Regional Sup. Water Monitoring

Current Class

Technologies 7

Job Focus

Operations/Program

Supervisory Level

01 - Yes Supervisory

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

#### Employee

Employee Name (or Vacant)

#### Organizational Structure

Division, Branch/Unit

RSD/AWS/Prov Airshed & Watershed Monitoring

☐

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Sr. Mgr, Prov. Watershed Mon.

Supervisor's Current Class

### Design: Identify Job Duties and Value

#### Changes Since Last Reviewed

Date yyyy-mm-dd

2023-07-31

Responsibilities Added:

none

Responsibilities Removed:

none

#### Job Purpose and Organizational Context

Why the job exists:

This position reports to the Senior Manager, Provincial Water Monitoring within the Airshed & Watershed Stewardship Branch in the Resource Stewardship Division. Responsibilities include direct supervision of permanent staff in an assigned geographical region of Alberta, implementing Occupational Health and Safety requirements for all staff under their direction, scheduling program execution, coordinating office

resources and assigning work priorities as required.

This position also provides vital and timely water quantity, water quality, and meteorological information that supports partnerships with Federal, Provincial, and Municipal levels of government, as well as industry, various agencies and non-governmental organizations, and the Alberta public. Abiding by approved standards and guidelines, this position provides unique technological services and expertise in support of programs that investigate, manage, and sustain Alberta's surface and subsurface water resources and related infrastructure. The major responsibilities are to ensure that data is collected, processed, analyzed, and verified in a safe and efficient manner.

This position is an emergency response position that provides Albertans with critical data in the event of a flood, water shortage, toxic spill or other event related to public safety or watershed protection. The data provided is also the early warning system that emergency staff watch for signs of trouble, to determine whether an event will occur and the progress of the event. This position delivers one of the identified critical services of the Department's business plan, thereby helping to ensure all Albertans a safe and sustainable supply of water now and in the future.

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## **Responsibilities**

Job outcomes (4-6 core results), and for each outcome, 4-6 corresponding activities:

### **Team Lead/Supervision**

- Work with Provincial Water Monitoring Manager to set provincial standards and guidelines for the activities conducted by monitoring staff and provide input on program priorities based on available resources.
- Plan and schedule water monitoring work for the regional office, ensuring that all work is carried out as scheduled, within budget and within the current manpower constraints, and verifying and signing timesheets and authorizing overtime.
- Manage the use, repair, and maintenance of all facilities, equipment, and vehicles for the regional office
- Complete performance agreements with direct-report staff.
- Guide and lead as necessary the resolution of conflicts and problems with personnel and work functions
- Ensure that all staff are trained and follow procedures set out in the Safe Operating and Procedures guide in addition to Occupational Health and Safety regulations.
- Train and mentor staff in areas of expertise with regional office as well as provincial staff and providing opportunities for staff development.

### **Network Operation/Programs and Projects**

- Conduct field sampling, process data and information with a thorough analysis, verification, and approval QA/QC process.
- Evaluate and report on data, dissemination of data and reports to various clients, data managers and publishers who are reliant upon the data for important water management decisions.
- Complete projects in their entirety for various disciplines, updating clients and advising on any concerns with project activities.
- Provide training and instruction on sampling techniques, electronic field instrumentation, and various mobile equipment including boats, ATV's, and snowmobiles.
- Construct and upgrade complete network stations.
- Perform quality assurance/quality control (QA/QC) and evaluation and analysis of environmental data, and enter water quantity, water quality, and meteorological data to various specialized databases to be used for flood forecasting, drought monitoring, watershed management, water supply outlook, water

licensing compliance and evaluations, hydrological research and evaluation, and project analysis.

- Research and evaluate, procure, operate, calibrate, test, maintain, troubleshoot, and repair specialized scientific and electronic equipment for environmental data collection; maintain proficiency in specialized software.

### **Program Planning and Project Supervision**

- Provide lead hand supervision in any projects directly assigned.
- Provide manpower and budget estimates and administration, resource, and scheduling requirements, and make recommendations on environmental data collection methods, site selection, and safety related issues on assigned projects.
- Provide contract administration services for water monitoring projects and supervise contractors employed or partnered for GoA work.
- Provide guidance, direction, and technical expertise to consultants and other agencies regarding water monitoring work in the province of Alberta, including water quality, water quantity, and QA/QC.
- Participate in and conduct audits as required to ensure that data being collected meets the current standard and ensures contractors/partners/NGO's adhere to protocols and guidelines established by Alberta Environment and Protected Areas (AEPA).
- Organize and maintain data storage for regional office, including electronic and paper data files according to department and branch standards.
- Provide full capital asset management support including assessing needs and requesting capital assets and equipment for regional office facilities, overseeing RFP/RFQ processes including evaluation and approval of RFP's/RFQ's, asset/equipment inventory management, and risk management processes for damaged/lost/stolen equipment/assets.
- Write responses to Action Requests (AR's) and/or briefing notes for senior/executive management on special projects or regional water concerns/issues.

### **Environmental Emergency Response**

- Participate in environmental emergencies, applying Incident Command System principles and methods
- Oversee standby schedules and emergency response preparedness for environmental emergencies and emergency repair requests for network or program area data.
- Supervise and assign duties to regional office water monitoring staff for response to environmental emergencies (droughts, floods, spill response) as requested by the River Forecast Centre or other recognized authority to provide accurate field data and observations, as well as confirmation of real-time data that will define the severity of an emergency.
- Ensure regional office staff are trained and able to respond safely to environmental emergencies.
- Lead Facility Emergency Response planning and coordination for the McIntyre Water Monitoring Warehouse and the McIntyre Water Quality Lab.
- Provide quantitative and qualitative guidance and support to River Forecast Center, Water Supply, Infrastructure Operations Branch, Compliance and Approvals, and Incident Command teams based on data collection for emergency and critical event monitoring.

### **Problem Solving**

Typical problems solved:

- Assurance of data accuracy by computation, analysis, and interpretation of complex water data for evaluating and reporting to clients and stakeholders to be used for operational planning, water supply forecasting, and emergency response.
- Work often requires creative problem-solving skills to solve equipment related problems in an efficient and effective manner to avoid lost data and costly return field trips to remote locations; this may be complicated by adverse or extreme conditions.
- Must exercise sound judgment in the performance of all technical aspects of the job; finding new, innovative ways to solve old problems and ability to address new problems amid emerging issues and changing environments and priorities.
- Creative problem solving is required for addressing needs of varied groups and stakeholders, sometimes with competing interests, and within pressures such as budget and manpower constraints.

• Program planning, scheduling, and prioritizing of staff time and water monitoring resources requires complex problem solving, especially in times of critical emergencies such as floods, droughts, and environmental spills.

Types of guidance available for problem solving:

Guidance for problem solving includes direction from management, standards and protocols, equipment technical support, and peer support, as well as from existing legislation and business plans. Professional knowledge, experience and precedent also inform problem-solving. Attention to detail, critical thinking, communication skills are all routinely applied to deal with the complexities of this position. For more complex issues the incumbent assesses the issue from different perspectives and considers the long-and short-term impacts of various options before recommending a path forward. Solutions might require the creation or reorganization of information, or clarification of existing requirements.

As the Regional Supervisor, guidance and support are provided to Technologists to support their problem-solving.

This position works within the parameters of established GoA HR frameworks, and Branch and Section plans and priorities. Within this framework, the Regional Supervisor has discretion and independence to determine and adjust workload priorities, assignments, and how responsibilities are performed. The Provincial Water Monitoring Manager provides general direction and guidance.

Direct or indirect impacts of decisions:

**Externally, the work of this position impacts:**

- the availability of high-quality data/information for environmental assessments and analysis by AEPA and outside agencies including other provincial government departments (Alberta Agriculture and Irrigation, Forestry, Parks & Tourism), federal government departments (Environment Canada and Agriculture and Agri-food Canada), municipalities, industry, NGO's and agencies, and universities/academia.
- the availability of information for water supply and water management decisions, impacts to the River Forecast Centre and the Infrastructure Operations Branch who operate Alberta's water management infrastructure such as dams and canals for use by irrigators, municipalities, industry, and the public.
- the availability of accurate, timely, and high-quality environmental data and information for critical decision making in emergencies such as floods, droughts, and spill response supporting the protection of life, property, watersheds, natural resources, and infrastructure.
- provision of high quality, complete, and accurate data for long-term datasets and environmental analysis.
- maintenance of multiple external relationships that contribute to an integrated and robust water monitoring network across the region and province.

**Internally, the work of this position impacts:**

- capacity and ability of the regional team to meet goals of regional and provincial Water Monitoring Plans through effective supervision and team leadership.
- Assurance that required training is completed for all team members and work management programs (e.g., OH&S) are implemented in line with Branch, Department and GoA requirements.
- information sharing with other supervisors across the province to integrate regional perspectives, plans and results to a provincial level.

**Key Relationships**

Major stakeholders and purpose of interactions:

• **Provincial Water Monitoring Manager**

provide regional inputs to provincial plans and reports; advise on standards and protocols; provide assurance for effective management of staff; support escalated HR issues.

• **Regional Team**

Supervises staff involved with surface water quality, groundwater quality and quantity, and surface water

quantity including hydrometric, lake level, meteorological, and snow survey station networks.

### Other Supervisors

Liaise and share information; collaborate on provincial initiatives; provide regional perspectives and intelligence

- Corporate services (e.g., IT, Finance, Procurement, HR) - engage on matters related to team supervision (e.g., recruitment); procurement; gaining access to IT; addressing issues

This position is required to communicate with stakeholders across the department (AEPA) and outside the department in all the disciplines for collaboration, training/education, providing information and services, program planning, scheduling, and prioritizing of staff time and shared resources and expertise.

**Internal stakeholders** (GoA) include the River Forecast Centre and Water Supply, IOB (water management), Alberta Agriculture and Infrastructure, Fish & Wildlife, Alberta Forestry, Tourism & Parks, Aquatic Invasive Species, Drinking Water Branch, Land Management, Air Monitoring and Airshed Sciences, Regional Services (hydrologists, limnologists, and hydrogeologists), Service Alberta, Finance and Human Resources, Risk Management, Environmental Compliance and Licensing/Approvals

**External relationships** include partnerships with federal, provincial, and municipal levels of government (Environment Canada and Agri-food Canada, cities and municipalities in the region), industry and consultants/contractors, emergency personnel, various agencies and NGO's including watershed groups and the Alberta Conservation Association, and the Alberta public.

The purpose of the interactions and communication vary and include:

- Organizing and overseeing space allocation between numerous internal and external groups, facility OH&S requirements, building/facility maintenance requirements, and facility emergency response planning at the Lethbridge Environment Shop and Lethbridge Water Lab facilities.
- Providing technical expertise, guidance, and direction on environmental data collection, use, quality control, evaluation, and reporting to internal and external stakeholders.
- Assist with and provide support and technical expertise for research for AEPA regional services, Airshed and Watershed Stewardship sciences, Office of the Chief Scientist, Agriculture Canada/Environment Canada, watershed groups, universities and colleges, and other academia as required.
- Providing support services for environmental emergencies, new projects, and special requests from various groups and departments both internal and external.
- Partnering with internal and external stakeholders for efficient data collection and cost savings.
- Providing data and data/information reporting to both internal and external clients.

### Required Education, Experience and Technical Competencies

Education Level	Focus/Major	2nd Major/Minor if applicable	Designation
Diploma (2 year)	Science	Other	

If other, specify:

Technical Diploma/Post Secondary Degree in Biological/Environmental Sciences

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

### Education and Experience

- 7 years direct experience, or equivalent combination of education and experience.
- Required safety training and knowledge includes: AEPA Safe Operating Procedures Guide and Appendices, AEPA Water Monitoring Standard Operating Procedures, Transportation of Dangerous Goods (TDG), Global Harmonization System (GHS), Hazard Assessment and Control Reports (HACRs) and Field Level Risk Assessments (FLRAs), Defensive Driving and Collision Avoidance, First Aid/CPR, Small Vessel Operator Proficiency (SVOP), AST1 Avalanche Safety, ATV and Snowmobile Safety courses, Working Alone



legislation, Swiftwater Rescue Technician, Fall Arrest/Tower Rescue Training, Ice Safety and Rescue training, Outdoor/Winter Survival, Wilderness First Aid, Aircraft Underwater Egress, Trailer Towing, Chainsaw operation/safety, various GoA safety and security courses, and discipline specific training (i.e. Acoustic Doppler Current Profiler accreditation, under-ice measurement training, construction and electrical for building network stations, etc.).

### Technical Competencies, Certification and/or Training:

- Effective organizational and time management skills.
- Project management skills.
- Program planning and implementation skills.
- Strong leadership skills for leading team of Technologists, including training and mentoring junior staff and providing technical expertise and knowledge to stakeholders and clients.
- Strong communication skills for communicating with team, managers/directors, and stakeholders and for critical knowledge transfer during emergency events.
- Advanced knowledge and skills associated with water quality and quantity data collection methods, real-time meteorological data collection, hydrometric monitoring methods and discharge computations and publication, groundwater monitoring methods, and snow survey methodologies, as well as a general knowledge about the instrumentation and programs used to gather and report this data.
- Ability to train junior staff in data collection, analysis, and reporting for all supervised disciplines.
- Extensive understanding of, adherence to, and/or input into the standards and techniques used to measure surface and sub-surface water quantity parameters: including AEPA Standard Operating Procedures, the Water Survey of Canada Hydrometric Technician Career Development Program Manual, groundwater monitoring procedures and standards, and the snow survey manual.
- Advanced knowledge of water quality sampling techniques and a good understanding of the theory used to determine these techniques including the AEPA Water Quality Sampling Methods Manual, principles of limnology and water chemistry, sample preparation and operational requirements of private labs, documenting and tracking samples and data from collection through to validation and reporting.
- Advanced knowledge and proficiency in the operation of all equipment required to measure, collect, and transmit water quantity and water quality data from rivers, lakes, wetlands, and groundwater aquifers including mechanical flow meters, survey level and rod, snow samplers, precipitation gauges, temperature/RH/wind sensors, water quality sensors and samplers, acoustic doppler current profilers and acoustic velocity profilers, dataloggers and data collection platforms (DCP's), satellite and cellular data transmitters, and various water level sensors including automatic bubbler sensors and pressure transducers.
- Personal computer skills including proficiency in Microsoft Word, Excel, Access, and Outlook as well as custom in-house software and databases.
- Laboratory skills to assist in preparation of samples in accordance with accepted analytical standards to support water quality programs, including calibration of water quality multiprobes and sample filtering, proper storage and handling of samples, chemicals, and reagents.
- Strong communication skills allow for effective liaison with reporting staff, clients, partners, co-workers, supervisors, volunteers, equipment vendors, and the public.
- Competency to operate and maintain vehicles, boats, snowmobiles, quads and side x sides, motorized kayaks, and trailers as well as power tools and other mechanical equipment safely and efficiently.

### Behavioral Competencies

Pick 4-5 representative behavioral competencies and their level.

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"/>	Takes a long-term view towards organization’s objectives and how to achieve them: <ul style="list-style-type: none"> <li>• Takes holistic long-term view of challenges and</li> </ul>	- Station network and program planning require being prepared for a changing environment (changes in water supply, more frequent and

		<p>opportunities</p> <ul style="list-style-type: none"> <li>• Anticipates outcomes and potential impacts, seeks stakeholder perspectives</li> <li>• Works towards actions and plans aligned with APS values</li> <li>• Works with others to identify areas for collaboration</li> </ul>	<p>intense environmental emergencies like floods and droughts), and must look beyond regional office to meet needs of provincial networks and programs.</p> <ul style="list-style-type: none"> <li>- Position must understand, stay abreast of, and champion improvements in processes and technologies to meet changing needs of clients and the Alberta public.</li> <li>- Leadership position that must foster innovation and prevent stagnation of processes and technologies in water monitoring to meet changing needs of GoA and Albertans.</li> <li>- Position must be aware of and be able to address challenges to progress such as budget constraints, hiring freezes through proactive critical mass staffing and training, etc.</li> </ul>
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"> <li>• Engages perspective to seek root causes</li> <li>• Finds ways to improve complex systems</li> <li>• Employs resources from other areas to solve problems</li> <li>• Engages others and encourages debate and idea generation to solve problems while addressing risks</li> </ul>	<ul style="list-style-type: none"> <li>- Position must encourage innovation and efficiencies in processes and technologies at all levels including among reporting staff, peers, and managers.</li> <li>- Needs to share knowledge and experiences to improve communication and collaboration among varied partners and clients.</li> <li>- Position involved in multiple committees, working groups, and teams, must share knowledge and expertise openly and encourage diverse perspective for shared problem solving for continually changing work and environment.</li> </ul>

			<ul style="list-style-type: none"> <li>- Position must review and expand and improve network and collaborations as necessary to meet changing goals and needs of the organization.</li> </ul>
Build Collaborative Environments	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	<p>Collaborates across functional areas and proactively addresses conflict:</p> <ul style="list-style-type: none"> <li>• Encourages broad thinking on projects, and works to eliminate barriers to progress</li> <li>• Facilitates communication and collaboration</li> <li>• Anticipates and reduces conflict at the outset</li> <li>• Credits others and gets talent recognized</li> <li>• Promotes collaboration and commitment</li> </ul>	<ul style="list-style-type: none"> <li>- Position should initiate meetings and knowledge sharing with partners, clients and stakeholders.</li> <li>- Leadership position must be proactive in limiting conflict among staff and peers as well as between varied groups using shared facility spaces.</li> <li>- Position must look at all perspectives among clients, stakeholders, and partners and make decisions and problem solve to find best outcomes for all.</li> <li>- Position must look beyond regional office to provincial perspective to ensure staff and resource sharing for effective and efficient program delivery.</li> </ul>
Drive for Results	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	<p>Takes and delegates responsibility for outcomes:</p> <ul style="list-style-type: none"> <li>• Uses variety of resources to monitor own performance standards</li> <li>• Acknowledges even indirect responsibility</li> <li>• Commits to what is good for Albertans even if not immediately accepted</li> <li>• Reaches goals consistent with APS direction</li> </ul>	<ul style="list-style-type: none"> <li>- Must work with different groups and initiate problem solving, client updates and addressing client concerns, and project/program reviews with clients and partners to ensure results are meeting diverse needs.</li> <li>- Must have drive for continual performance improvement and initiate improvements and innovation of processes and technologies to meet emerging needs in changing environment.</li> <li>- Must act quickly and decisively to respond to environmental emergencies and ensure</li> </ul>



			<p>staff, resources, and support are provided where they are most needed.</p> <ul style="list-style-type: none"> <li>- Must consider APS goals and strategic plans when considering future program and project planning.</li> <li>- Position must ensure standards and guidelines are adhered to for data collection and reporting, and provide input into improvements to standards, guidelines, and policies.</li> </ul>
Develop Self and Others	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	<p>Plans according to career goals and regular development:</p> <ul style="list-style-type: none"> <li>• Aligns personal goals with career goals</li> <li>• Leverages strengths; attempts stretch goals</li> <li>• Provides feedback and openly discusses team performance</li> <li>• Values team diversity, and supports personal development</li> </ul>	<ul style="list-style-type: none"> <li>- Water monitoring is a continually evolving field that requires continual learning and improvement to meet client, partner, and stakeholder needs.</li> <li>- Position is leadership position that must bring others together both with reporting staff, peers, and diverse people and groups across GoA and outside of GoA to ensure client needs are understood and met (ex. MVLA project year-end reviews, discipline working group participation and leadership).</li> <li>- Position develops and builds leadership among reporting staff and supports development of province-wide monitoring staff by supporting cross-training initiatives and providing challenging assignments and tasks.</li> <li>- Position must engage in systems thinking by participating on diverse committees and working groups such as Water Futures working group and Water Shortages team.</li> </ul>

## Benchmarks

List 1-2 potential comparable Government of Alberta: [Benchmark](#)

**Technical Supervisor, Breeding and Genetics (128TN01- Technologies 7)**  
**Provincial Weather Meteorologist (057MT010- Meteorologist 1)**