

Working Title Calgary-area Team Lead	Name
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	Division, Branch/Unit Resource Stewardship/Water Infrastructure Operations Branch, Bow Operations	Ministry
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Present Classification Technologies 7	Requested Classification
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Dept ID	Program Code	Project Code (if applicable)
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PURPOSE: Give a brief summary of the job, covering the main responsibilities; the framework within which the job has to operate and the main contribution to the organization (see [Section 2.3](#)).

Reporting to the Bow Operations Infrastructure Manager, this position leads the operation, maintenance and surveillance of provincially-owned water management infrastructure located throughout the Calgary region of the Bow Basin Operations, Water Infrastructure Operations Branch (WIOB). Working closely with the Bow Operations Infrastructure Manager, this position delivers critical water infrastructure operations, operational and non-operational maintenance, infrastructure repairs and rehabilitation ensuring operational readiness and secured water supplies. This position is a critical resource for various dam and canal surveillance activities, engineering assessment and capital planning design and construction projects, working with a multi-disciplinary team of engineers, technologists, and contract operators. Key clients and stakeholders whom rely completely on this infrastructure for water supply includes numerous urban and rural municipalities, private industries, rural domestic users, and irrigation water users, along with regulatory requirements for aquatic environments through provision of riparian instream flows. During high flow events this position will lead the flood operations response for the Calgary-area projects.

Operations is delivered primarily through management of contract staff resources, which requires detailed oversight, performance monitoring, budget management and administration as well as ongoing training. Projects supported by this position include high consequence dams, canals and major river diversions representing a direct and immediate risk to the public, irrigation districts and industry through day-to-day water supply assurance and flood and drought management. The infrastructure in this area is unique in that it is located within the City of Calgary, Town of High River, Town of Drumheller, and the Town of Canmore, which further increases levels of risk with respect to public safety and water security, and requires a high level of collaboration and integration with municipal departments. All functions must adhere to guidelines of the Federal and Provincial Fisheries Acts, Water Act of Alberta, Public Lands Act, Navigable Waters Protection Act and the OH&S Act of Alberta to ensure a safe and sustainable water supply for this and future generations of Albertans.

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 major activities should be described (see [Sections 2.1](#) and [2.2](#)).

- 1. Operations, Maintenance and Surveillance of Water Infrastructure Headworks Systems:**
 - This position is responsible for the safe and efficient operation and maintenance of Alberta Environment’s diverse water infrastructure as per operational guidelines and best practices within the Calgary area. This includes major river diversions, headworks canals, water pipeline, dams, reservoirs and extensive electro-mechanical systems that includes gates, valves, actuators, hoists, turnouts, crossings, and many appurtenance structures
 - Specific projects includes the Western Headworks System in the City of Calgary including the Calgary Weir, Harvie Passage, and headworks system. Little Bow Headworks in the Town of High River, Women’s Coulee headwoks and water pipeline west of High River, Canmore river Dykes in the Town of Canmore, Drumheller river dykes in the Town of Drumheller, and various small to medium sized dams located throughout the region.

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2. Public Safety

- Lead a team of professionals that ensures dams, canals, river diversions and dykes are inspected, maintained, and operated to retain structural integrity and are operated within design criteria and the accepted Operations, Maintenance and Surveillance guidelines of Dam Safety Management Program.

3. Assured Water Supply

- Provide an assured water supply and effectively managing basins, water supply downstream, water quantity and quality for various municipal, industrial and riparian uses, including recreation and fish habitat.

4. Managing Floods

- Lead a team of operations experts to provide excellent decisions in very high stress conditions such as flood and drought emergencies
- Manage flood waters to protect communities including the City of Calgary, Town of High River and Town of Canmore

5. Managing Public Expectations

- The incumbent would provide necessary information that provides understanding of operational necessities and why certain decisions are made.

6. Local Workgroup and Contractor Safety

- Administer processes that work towards excellence in safety as it applies to all day-to-day activities
- The site and team members meet Certificate of Recognition OH&S safety requirements.

7. Maintenance and Coordination with Alberta Transportation

- Assess, lead discussions and provide direction on major maintenance priorities and participate in long term planning.
- Offer direction in unique technical areas of expertise as required.
- Ensure critical day to day operation, maintenance and surveillance requirements are delivered to a high standard.
- Identify and coordinate non-operational maintenance for the various infrastructure systems the Alberta Transportation maintenance coordinator

8. Project Management and Contract Administration:

- Prepare scope of work, RFP, RFQ and tender or contract documents
- Contract manager or administrator for operational and non-operational contracts
- Supervise and coordinate critical work and address contract issues, prepare progress payment claim, prepare deficiencies, certify invoices for payment and participate in warranty inspections

9. Dam Safety Management Program

- To meet or exceeds the requirements under Dam Safety Management program, the incumbent will:
 - Perform technical inspections and identify deficiencies related to dam safety
 - Work as Project coordinator or site representative for dam safety initiatives or study projects
 - Provide information regarding project completion, critical deficiencies or concerns
 - Participate in Dam Safety Management Program activities such as DSRs, FMEA and APRs
 - Implement recommendations or outcomes of the project at operations or strategic level

10. Infrastructure Performance Monitoring, Management and Reporting

- Evaluate and document the performance (physical condition, functional Adequacy, utilization and consequences of failure) of the water management infrastructure and report in EIMS
- Participate in capital planning initiative based on the performance measures of Peace Athabasca area
- Prepare project implementation reports, scope of work in RFP and work as regional representative in capital projects such as replacement or rehabilitation of water management infrastructure

11. Administrative

- Provide a means of communicating corporate messages, local objectives, and act as an advocate for the team as necessary.
- Mentor and assist staff in their career planning, annual reviews, and provide direction as to how they can help achieve future personal and group goals.
- Monitor and collaboratively work to shape the business tone of the work group. Ensure that each member is treated with professionalism, dignity and respect

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Senior Water Infrastructure Operator

- In addition to the above, act as the Senior Operator, assuming all responsibilities with the other Operators in case of emergency or day to day operation requirements.

12. Water-based or Structural Emergencies

- Depending upon the emergency, act as Site Commander or Coordinator as defined in the emergency response plans (ERP) and the Regional Emergency Operation Center for dam emergencies.

SCOPE: List specific information that illustrates what internal or external areas the job impacts, and the diversity, complexity, and creativity of the job (see [Section 2.4](#)).

13. Public Safety

- Assess and manage risk to the public visiting and recreating at our facilities. Managing also departmental liability by operating the facility in a safe public conscious manner, ensuring signage is well managed to communicate and manage risks.

14. Team Leadership

- Lead a group of professionals towards continuous improvement in the business of water and infrastructure management.
- The incumbent independently supervises, directs, implements, and coordinates: contractors, trades people, technologists, professionals, other department and government staff and various other workers in construction, safety, maintenance, repair and/or rehabilitation of complex multiphase Water Management infrastructure
- Provide guidance on standard technical mechanical and civil inspection procedures

15. Water Quality and Water for Life Objectives

- Interpret the “Water For Life” objectives and plan our operations to meet its goals through careful consideration and implementation of new learned behaviours.
- Assure water quality is improved downstream by following minimum flow-by requirements

16. Equipment reliability and integrity

- Provide expert advise on equipment maintenance techniques. To monitor records of maintenance and inspections performed. To provide feedback as to effectiveness of maintenance program.

17. Civil Structural Integrity

- Provide leadership and real time evaluations on dams, canals, water pipelines, dykes, groynes, fuse plugs and other associated water retention assets. To provide highly technical condition reports and capital planning initiatives to specialized engineering staff or consultants based on many years of experience.

18. Stakeholder Relationships and Community Connection

- The position deals with stakeholders including the general public, public advisory committees, industrial and agricultural representatives, landowners, contractors, engineering and environmental consultants, local administrators, politicians, commercial and recreation representatives and various government departments both provincial and federal
- Assume responsibility for, develop and maintain good relationships with stakeholder groups, or individuals, by regular meetings and presentations designed to meet varying levels of expertise

KNOWLEDGE, SKILLS & ABILITIES: Provide a list of the most important knowledge factors, skills and abilities including knowledge about practical procedures, specialized techniques, etc.; analytical and conceptual skills and abilities; and skills needed for direct interaction with others not only diplomas and degrees. Specific training if it is an occupational certification/registration required for the job.

Operational Knowledge Requirements:

- Concepts of hydraulic and earth structure design, construction, operation, maintenance and surveillance. Dam, canal, and hydraulic structure practical operation.
- Contract administration, procedures & manuals.
- Earth and concrete construction methods, materials and equipment
- Financial management procedures.

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- Vegetation management practices, identifications and procedures.
- The Water Act, Navigable Waters Protection Act, Environment Protection & Enhancement Act, Public Lands Act, OH&S Act & Regulations and Provincial and Federal Fisheries Acts.
- Legal land surveys, civil surveys and construction surveys.
- Construction standards, codes and practices.
- Project scheduling and cost estimation.
- An understanding of the principals of hydrology, hydraulics, urban and agricultural drainage systems, river engineering and erosion control.
- Working knowledge of the Water Act of Alberta

Operational Software Knowledge requirements:

- WISKI software or related for real time data access.
- SCADA operational software for real time monitoring and operations, and alarming
- Standard MS Windows bundled software (Word, Excel, PowerPoint)

Operational/Maintenance Requirements:

- Knowledge of geotechnical instrumentations including Piezometric and weir readings and data interpretation
- Knowledge of computer hardware and IT requirements.
- Extensive knowledge of motors, hoists, gear reducers, pumps, generators, electrical systems, cranes and instruct workers on correct maintenance techniques.
- Knowledge of various communication systems.
- Knowledge of Programmable Logic Controllers.
- Knowledge of legislation controlling hazardous and non-hazardous materials around water bodies.

Occupational Health and Safety Training and Knowledge:

- Working knowledge of the OH&S Regulation and Act
- Working knowledge of the OH&S Code
- Standard First Aid
- Confined Space Entry Competency
- Defensive Driving
- Hazard Assessment/Risk Analysis

General Skill Sets/Knowledge Factors/Specialized techniques:

- The incumbent must possess a Diploma or Degree in Civil Engineering or related, with knowledge of civil design and construction and extensive experience related to operation, maintenance and surveillance of water management infrastructure
- The incumbent must have experience dealing with stakeholders, including the general public
- The incumbent must have a strong understanding of the Occupational Health and Safety Act and Regulations.
- The incumbent must use analytical skills when performing flow calculations and interpreting in-coming real time data and be willing to assume full responsibility for Operations decisions.
- The incumbent must be able to make sound decisions for extended periods of time in a stressful environment.
- Must be a team player to promote various department and branch objectives.
- Analytical and problem solving.

Ability to:

- Work independently and in high stress environments.
- Interpret technical reports, drawings, air photos and land titles.
- Communicate effectively, in both written and verbal forms with technical and non-technical groups or individuals.
- Apply professional judgement.
- Responsibly represent the department's position in public forums.
- Translate highly technical information into a form understandable by the public.

CONTACTS: The main contacts of this position and the purpose of those contacts.

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<ul style="list-style-type: none">➤ Bow Operations Infrastructure Manager – Working closely, coordinating all aspects of daily work.➤ C/N Operations Manager – Periodic updates and collaboration on core work.➤ Land Management , Lethbridge – Coordinate land access and issues resolutions➤ River Forecasting Centre- To coordinate forecasting flow scenario info for operations decisions during high flow➤ Regional Infrastructure Support Group in Edmonton.➤ Local Authorities Communicating operations, maintenance, emergency preparedness, emergency response requirements and educational opportunities to local authority stakeholders➤ Bow Infrastructure Operations Engineer and Technologist – coordinate daily operational flows and decisions in harmony with downstream projects managed from the Vulcan office.➤ Bow Infrastructure Engineer and Technologist – coordinate surveillance and core dam safety management program functions, as well as infrastructure issue identification, inspections, and follow-up assessments.➤ Many licensed irrigation water users – coordinating delivery of water allocations.➤ Capital Project consultants – Provide detailed operational and maintenance information to ensure capital work meets project needs.➤ Various Emergency Response personnel at annual emergency response plan practice sessions

SUPERVISION EXERCISED: List position numbers, class titles, and working titles of positions directly supervised.
<ol style="list-style-type: none">1) Highwood Systems Operations Contract operator staff2) Western Headworks System Operations Contract operator staff3) Supervises various individuals and firms hired to complete operational maintenance.

CHANGES SINCE LAST CLASSIFICATION REVIEW: This section is not required to be completed if the job description is being written for the conversion to PREP. It should be completed for any subsequent classification requests under PREP.

ORGANIZATION CHART: An organization chart that includes supervisor, peers and staff MUST be attached.

Incumbent	_____	_____	_____
	Name	Signature	Date
Manager	_____	_____	_____
	Name	Signature	Date
Division Director/ADM	_____	_____	_____
	Name	Signature	Date