

Update

Ministry

Environment and Parks

Describe: Basic Job Details

Position Name (30 characters)

Water Projects Management

Current Class

Senior Manager (Zone 1)

Job Focus

Operations/Program

Supervisory Level

01 - Yes Supervisory

Organizational Structure

Division, Branch/Unit

WIOB/Infrastructure Technical Services

Job Purpose and Organizational Context

Why the job exists:

Reporting to the head of Infrastructure Technical Services (ITS), this position manages 6 staff in the Water Projects Management Team which is responsible for providing technical services to Operations staff of the Water Infrastructure and Operations Branch (WIOB) for management and rehabilitation of Alberta Agriculture and Irrigation's (AGI) water management infrastructure including dams, canals, headworks, weirs, pump stations and drainage works.

This position provides a high level of technical leadership and management to a team of hydrotechnical and geotechnical engineers and technologists. This position must have extensive knowledge of the department owned water management infrastructure. The position requires a strong working relationship with WIOB management and Operations staff, to have a clear understanding of the operation, maintenance and rehabilitation requirements of the department water infrastructure. This position requires a strong working relationship with Alberta Transportation and Economic Corridors (TRAN) to support the partnership that exists between the two departments to implement the design and construction for rehabilitation of AGI's water infrastructure.

Responsibilities

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

As Manager of the Water Projects Management team, establish a unified team of professional engineers and technologists to carry out the duties and responsibilities of the team.

This position is responsible for managing and coordinating the activities of the Water Projects Management team, related to rehabilitation of the AGI's water management infrastructure projects in partnership with TRAN to provide the province with safe and effective water management infrastructure.

The position is responsible for coordinating technical support for maintenance of the water management infrastructure to address deficiencies and non-conformances and to establish requirements for rehabilitation of the AGI's water management infrastructure.

This position is responsible for the management of projects including technical studies, assessments and evaluations performed by the independent qualified consultants, related to the safety deficiencies non-conformances of the water management infrastructure in accordance with Canadian Dam Association (CDA) guidelines.

As Chair of the Water Capital Committee, this position provides technical leadership and coordination for annual prioritization of the water capital projects for rehabilitation of the AGI's water management infrastructure for submission to TRAN for implementation.

This position provides liaison between AGI and TRAN for the implementation of the water capital projects for rehabilitation of the water management infrastructure as well as represents AGI's interests by participating in the capital project implementation meetings with TRAN and their consultants.

This position is responsible for coordinating and reporting annually on the performance measures for the water management infrastructure, related to physical condition, functional adequacy, utilization and risk.

This position manages the annual submission for the Capital Planning Process (CPP) funding requests for the water management infrastructure to the Treasury Board. These submissions reflect the current project priorities and risks.

Problem Solving

Typical problems solved:

Much of the department's water management infrastructure is aging and is in need of significant repairs, rehabilitation or replacement. Considerable engineering investigations, analyses and professional/ management judgment is required including assessment and evaluation of condition of the infrastructure, identification of project deficiencies and non-conformances, prioritization of portfolio risk, management of available capital funds, establishment of rehabilitation requirements and scheduling of the projects considering required approvals. This position manages provision of technical support to assist the Water Capital Committee in establishing project priorities. This position manages the engineering technical review of design reports and tender documents prepared by the consultants. In order to facilitate this review considerable engineering knowledge and judgment is required to evaluate and address the multidisciplinary nature of Water Management Projects to arrive at the most appropriate cost effective solution for rehabilitation of the water infrastructure by taking into account not only initial construction costs, but also operation and maintenance requirements for the life cycle of the projects. This position also provides management of the consultants for multidisciplinary investigations for the assessment of the existing water management infrastructure and provides Albertans with appropriate management of water resources in support of CEMS. The position must possess ability to assess study recommendations and to translate those into meaningful implementation plans for the water infrastructure rehabilitation.

Types of guidance available for problem solving:

- Support from Sr. Management and Executive Leadership
- Technical and management training/ development opportunities

Direct or indirect impacts of decisions:

Significant risk and consequence is associated with ownership and operation of water management infrastructure. Establishing priorities for rehabilitation of water management projects requires consideration of technical and

operational requirements and public safety concerns. Failure of water management infrastructure could result in significant loss of life and substantial economic and environmental impact. Directly or indirectly the water management infrastructure affects a large segment of the public, industry, municipal governments, AGI, TRAN and other departments.

Key Relationships

Major stakeholders and purpose of interactions:

Internal - WIOB and other AGI staff
 External - TRAN staff and private consultants

Required Education, Experience and Technical Competencies

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

If other, specify:

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

- Must have strong leadership, decision making and project management skills.
- Must have extensive knowledge and expertise in the design, construction, operation and maintenance of water management infrastructure including dams, canals, headworks, weirs, dykes and other appartanent works.
- Must have strong technical skills in civil engineering related to hydraulics, hydrology, structural, geotechnical and construction aspects of dam design.
- Knowledge of Water Act, Dam and Canal Safety Regulation and Guidelines and CDA guidelines.
- Must be able to motivate, coordinate and lead a team of engineers and technologists.
- Must be able to recognize and manage issues and make decisions to resolve problems.
- Must be aware of regional and provincial water management issues and initiatives and provide direction to staff in meeting department objectives.
- Must be able to communicate up and down in the organizational structure and with external stakeholders.
- Must be able to adapt to a continually changing business environment.

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 type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Integrates broader context into planning: <ul style="list-style-type: none"> • Plans for how current situation is affected by broader trends • Integrates issues, political environment and risks when considering possible actions • Supports organization vision and goals through strategy • Addresses behaviours that challenge progress 	Global events such as dam failures and their impacts on risk to factors at risk highlight the need for maintenance and rehabilitation of the water management infrastructure that plays a key role in Alberta's economy. It is critical that broader system thinking processes be applied when assessing the technical, public safety, economic and political impacts of potential failure of the infrastructure. Awareness and application of technical advancements or innovation is a critical

			systems competency for this position.
Develop Networks	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<p>Makes working with a wide range of parties an imperative:</p> <ul style="list-style-type: none"> • Creates impactful relationships with the right people • Ensures needs of varying groups are represented • Goes beyond to meet stakeholder needs • Ensures all needs are heard and understood 	<p>Relationship and network development is an essential element of this position. Many of the technical issues that arise are not unique to WIOB/ AGI and collaboration and information sharing with other stakeholder is critical. Broader collaboration, engagement and networking with the key professional associations including Canadian Dam Association and Canadian Water Resources Association is also critical to advance professional development and to build technical capacity.</p>
Creative Problem Solving	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<p>Works in open teams to share ideas and process issues:</p> <ul style="list-style-type: none"> • Uses wide range of techniques to break down problems • Allows others to think creatively and voice ideas • Brings the right people together to solve issues • Identifies new solutions for the organization 	<p>Solutions and techniques used to solve technical issues and problems are not straight forward in most cases. Considerable evaluation, judgment and input techniques are required to optimize solutions. Team collaboration, both internal and external is required to breakdown problems and develop and implement incremental solutions.</p>
Drive for Results	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>	<p>Works to remove barriers to outcomes, sticking to principles:</p> <ul style="list-style-type: none"> • Forecasts and proactively addresses project challenges • Removes barriers to collaboration and achievement of outcomes • Upholds principles and confronts problems directly • Considers complex factors and aligns solutions with broader organization mission 	<p>Most of the job description tasks associated with this position is team and project management oriented. In order to achieve the intended outcomes and to meet project advancement and financial resource objectives, barriers both current and future must be identified and addressed in timely manner. Complex issues are addressed with the end state in mind and</p>

			experience with the achievement of both project and broader organizational goals are critical.
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