

Update

Ministry

Describe: Basic Job Details**Position**

Position ID

Position Name (30 characters)

Current Class

Job Focus

Supervisory Level

Agency (ministry) code

Cost Centre

Program Code: (enter if required)

Employee

Employee Name (or Vacant)

Organizational Structure

Division, Branch/Unit

 Current organizational chart attached?

Supervisor's Position ID

Supervisor's Position Name (30 characters)

Supervisor's Current Class

Design: Identify Job Duties and Value**Changes Since Last Reviewed**

Date yyyy-mm-dd

Responsibilities Added:

Responsibilities Removed:

Job Purpose and Organizational Context

Why the job exists:

Reporting to the Peace-Athabasca Operations & Maintenance (O&M) Team Lead, this role is critical in the on-going safe and efficient operation, maintenance, and inspections of large, complex, and high risk provincially owned water infrastructure projects over a large geographical area. These infrastructure systems vary significantly in scale and complexity, encompassing lake stabilization systems -- including dams classified as very high, high, significant, and

low consequence -- as well as other water management and drainage structures such as canals, lake outlet works, and stabilization infrastructure. Each of these assets requires sophisticated, proactive operational oversight to ensure optimal performance and public safety.

As part of a highly specialized team, the O&M Supervisor requires substantial knowledge, varied skills and work experience on major water infrastructure projects and so, the responsibilities of operations staff are multifaceted. They are tasked with conducting thorough inspections of infrastructure, identifying deficiencies, and planning and implementing maintenance activities to ensure structural integrity and operational reliability. Staff are also responsible for operating water control structures in accordance with approved operational plans to manage flows and meet regulatory and community needs. They also provide operational technical support input into capital rehabilitation projects, engineering investigations, and dam safety assessments - informing long-term investment and risk management strategies. Beyond technical duties, operations staff engage directly with stakeholders, including adjacent landowners and municipalities, to manage local interests and concerns. They also oversee procurement processes, obtain service contracts or quotations, and supervise contractors to ensure work is completed safely and to required standards.

Due to the implications to public safety, all water management infrastructure must always be operated and maintained to the highest standards with minimal allowance for downtime on critical operating components. Operations staff are heavily involved in emergency response and flood mitigation efforts, often responding to dynamic conditions across multiple sites. They participate in a rotational on-call/standby schedule to address urgent issues as they arise, ensuring around-the-clock operational readiness.

Responsibilities

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

The incumbent is responsible for the safe, efficient, and continuous operation, inspection, and maintenance of provincially owned water management infrastructure for their respective area. This includes high-risk, high-consequence dams, along with canals, lake stabilization systems, outlet structures, and drainage networks spread over a vast and diverse geographic region. This encompasses a large number of water management projects within the upper Athabasca and Pembina basins, including Pembina River Dykes, Paddle River Dykes, Thunder Lake Water Management, Fort Chipewyan Marina, Riviere Des Rochers Tramway, Bolloque Lake Stabilization Structure, as well as other various water infrastructure projects.

The incumbent ensures operational reliability by regulating infrastructure during both routine and emergency conditions particularly in flood and drought events and to protect public safety and water supply for domestic, agricultural, industrial, and recreational use. All operations are conducted in compliance with relevant federal and provincial legislation, including the **Water Act**, **Public Lands Act**, **Fisheries Act**, and **Occupational Health and Safety** regulations.

Below is a list of typical responsibilities overseen by the O&M Supervisor:

Maintenance

- Assists in the maintenance, repair and rehabilitation of all provincially owned water management infrastructure.
- Assists, directs and/or performs repair and maintenance activities on hydraulic infrastructure (dams, canals, dikes, drainage systems, etc.) and other specialized water control equipment.
- Participates in the development of on-site preventative maintenance programs.
- Must be able to perform hands-on operational maintenance with a variety of equipment as required in various situations.
- Participates in the planning and implementation of regular maintenance routines and major capital refurbishing of infrastructure as required.
- Participates in updating and compiling accurate maintenance records, maintenance manuals, files, plans and checklists.
- Provides input into yearly and long-term planning of civil and hydrological components of water

infrastructure.

- Identifies repair requirements, procures the resources required to effect repairs and coordinates on-site staff and/or contractors in the repair.
- Supervises, coordinates, and directs contractors, trades people, technical staff, professionals, consultants and various other workers in the maintenance and safety of complex infrastructure.
- Acts in a supervisory capacity for contractors and directs on-site progress as needed and in accordance with departmental guidelines and standards.
- Participates in identifying short and long-term maintenance requirements of infrastructure to Alberta Transportation and associated Highway Maintenance Contractors for implementation.
- Participates in the Environment Infrastructure Management (EIMS) system for documenting maintenance deficiencies, tracking work orders, and updating performance measures.

Surveillance

- Completes required scheduled inspections to determine changing site conditions, structural conditions and maintenance requirements.
- Inspects canals, rivers, dikes, drainage systems, reservoirs, dam structures, to ensure regulatory compliance.
- Participates in monitoring and accurately reporting downstream impacts from major flows.
- Performs all project inspections within encompassed area and identify any site maintenance requirements.

Operations

- Monitors projects to ensure operational objectives are being met during varied flow conditions, including floods and droughts. Operations must ensure project licensed and legislated water management objectives are met and that operating guidelines are followed.
- Completes inspections and operational adjustments to maintain required water flow and reservoir/lake levels as outlined by operating plans, guidelines, calculations, and supervisor input.
- Monitors and accurately record instrument readings as required.
- Records monitoring activities to ensure an accurate operational record is always available.
- Participates in release notifications to stakeholders as directed.

Workplace Occupational Health and Safety

- Participates in the on-site Workplace Occupational Health and Safety (OH&S) Program in accordance with the Department's Health and Safety policy, and to meet legislative requirements under the OH&S Act, Regulations, Code, and all other applicable Acts and Regulations.
- Effectively maintains site specific Health and Safety Programs to support employee and public safety in work activities as stipulated in the Government's OH&S Program and maintaining the Branch's Certificate of Recognition (CoR).
- Ensures proper safety devices and personal protective equipment is available and used, safety practices are adhered to on all job sites, and that any deviances from the standard are reported and corrected.
- Follows safety requirements (hazard assessments, safe work procedures, codes of practice, etc.) for each specific project site.
- Participates in development and review of Hazard Assessment, Risk Analysis, and Safe Work Procedures for sites.
- Participates in safety inspections in the area as required.

- Participates in safety training as required to ensure the safety of the worker, co-workers and contract staff.
- Provides safety orientations for new staff or contractors, and prior to any new work task being performed on-site.
- Ensures all department staff, contractors and consultants are aware of OH&S responsibilities at work sites.
- Participates in updating and maintaining the on-site Annual Safety Plan and ensures that assigned goals/ measures outlined in the plan are met.
- Competent in working at heights, ladder climbing, working in confined spaces, working in/around/over water, working around mobile and heavy equipment, and boat use.
- Represents Northern Operations on safety committees as required.

Emergency Management

- Participates in the review, update, and exercise of Emergency Preparedness Plans and Emergency Response Plans for various dam sites as required.
- Participates in ongoing stakeholder (municipalities, RCMP, other ministries, etc.) engagement activities as it relates to flood emergency preparedness.
- Works closely with the team lead and participates in annual stakeholder meetings that includes municipal officials.
- Participates in emergency drill exercises.
- Participates in the 24/7/365 after-hours Operator on-call rotation of critical provincially-owned infrastructure, such as dams and reservoirs, by carrying a cell phone to respond to key operational alarms and by monitoring Supervisory Control and Data Acquisition (SCADA) systems remotely.

Technical Support

- Assists in updating the operating and maintenance manuals and guidelines for all projects.
- Provides operational technical support input into capital rehabilitation projects, engineering investigations, and dam safety assessments.
- Performs trouble shooting activities and/or liaise with control system specialists to ensure the site control, SCADA monitoring and dial out systems are always fully operational.
- Participates in the operational technical review of engineering investigations and dam safety activities such as dam safety reviews, dam breach inundation studies, potential failure mode and effects analysis, and annual performance reviews as required.
- Represents Northern Operations on technical committees as required.
- Maintains historical records, drawings and reports as required, to provide input for responses to action requests as required and interact with the general public related to inquiries about historical infrastructure operations.

Problem Solving

Typical problems solved:

The incumbent of this position assists in all operation and maintenance activities for water management infrastructure within Northern Operations of Water Infrastructure and Operations Branch (WIOB). The O&M team plays a significant role in maintaining water supply for Alberta citizens and industries. This water infrastructure includes various projects, such as dams, reservoirs, canals, diking systems, lake stabilization structures, etc. , and spans a wide geographical area. The O&M Supervisor's training and knowledge of water infrastructure management is critical in assuring that the department fulfills its water management mandates and business plans. Failure,

negligence and/or mismanagement of any one of these water management infrastructures could result in severe negative economic impacts and possible loss of life.

The incumbent coordinates and executes day-to-day O&M tasks of various complex water management systems, ensuring the province meets its water supply, flood protection, and agricultural support mandates. These responsibilities require sound judgment, technical expertise, and the ability to make independent decisions that can significantly affect public safety, infrastructure, and private assets valued in the millions of dollars.

The role demands strong communication and interpersonal skills for effectively engaging with stakeholders, including the general public, industry, landowners, contractors, local authorities, and government departments, especially during agreement negotiations and conflict resolution. Frequent collaboration is required with technical experts, professional staff, and departmental leadership to ensure compliance with provincial and federal regulations as needed and water management objectives during both high inflow and drought conditions.

The O&M Supervisor participates in emergency preparedness and response planning. Tasks include updating documentation, engaging stakeholders, and issuing notifications during high-flow or dam emergency events. The incumbent is also responsible for interpreting real-time data to adjust operations in ways that minimize downstream impacts.

Additional duties include supervising and coordinating contractors and trades for maintenance and repair work, overseeing health and safety programs, and reporting progress on contracted and internal maintenance activities. The role also involves 24/7/365 on-call duties to address emergencies at critical pieces of provincially-owned infrastructure, such as the South Heart River Dams and Paddle River Dam.

Due to the remoteness, complexity, and hazard potential of the infrastructure, creativity and problem-solving expertise is vital. Tasks often require working under challenging conditions including confined spaces, heights over five meters, and inclement weather. As a result, proficiency and adherence to site-specific safety procedures, such as confined space entry, fall protection, etc., is essential. Success in this role requires adaptability, strong organizational skills, a team-oriented attitude, and a commitment to the safety and reliability of Alberta's water infrastructure.

Types of guidance available for problem solving:

The incumbent will have independence to manage all day-to-day aspects of the project operations and maintenance and stakeholder relations. For operations and potential dam emergencies, the incumbent will reference Operation, Maintenance and Surveillance manuals, Emergency Management Plan documents and land management guidance. Also, guidance will be sought for problem solving and rational decision by fellow colleagues, O&M Team Lead, and Operations Infrastructure Manager.

Direct or indirect impacts of decisions:

This position is essential in implementing the safe operation and maintenance of the water management infrastructure, with a primary focus on a variety of unique and complex water infrastructure projects. Stakeholders such as towns and local authorities, recreational users, industries and the environmental community rely on a sustainable and reliable water supply. The impacts of decisions related to water management infrastructure are considerable, ranging from providing assured water supply for all levels of domestic, commercial and industrial use throughout various river basins. Impacts of decisions, both day-to-day and flood emergency have a significant impact throughout the basin related to water supply, agricultural production, and flood impacts. On-going decisions related to the maintenance of critical water management infrastructure, such as major dams, also have a significant public safety component.

Key Relationships

Major stakeholders and purpose of interactions:

Daily interactions can be internal, either directly within the team or interdepartmental, and/or external as detailed below.

Internal:

- O&M Team Lead: day-to-day interaction and direction, performance-related conversations.
- Other Operations and Maintenance staff on Peace-Athabasca Team: daily interaction and cooperation related

to Operations, Maintenance, and Surveillance.

- Operations Infrastructure Manager: frequent interaction related to larger operation related issues that require input. Understanding and assurance that conditions of satisfaction are met. Furtherance of reports as required and managing various issues as they arise.
- Operations Support (Lands, SCADA) - Lethbridge: interaction related to land issues, land management, leases, SCADA control issues, alarms, or upgrades.
- Infrastructure Technical Support (Water Project Management, Dam Safety, EIMS) - Edmonton: frequent interaction, depending on involvement, with engineering projects, dam safety activities and contracts, EIMS troubleshooting.

Other Departments:

- Alberta Transportation & Economic Corridors: frequent interaction related to capital projects and non-operational maintenance implementation.
- Alberta Forestry, Parks & Tourism (Parks, Public Lands): infrequent contact depending on coordinating land issues on Public Land or Parks land, or emergency situations/preparedness.
- Alberta Environment and Protected Areas (River Forecast, Data Monitoring, ASERT) - Edmonton: infrequent contact, typically during flood, drought, emergency, water gauge issues, or abnormal operating conditions
- Alberta Emergency Management Agency: infrequent interaction with district field officer for emergency preparedness and response.

External:

- Local Authorities: communicating operations and emergency preparedness requirements and educational opportunities to local authority stakeholders (includes councillors, administrators, and emergency management directors).
- Local Landowners: land management issues. Resolving area-based issues with stakeholders.
- Engineering Consultants: provide detailed operational and maintenance information to ensure ongoing engineering/capital work meets project needs.
- Contractors: directing work being performed by external contractors for Operational and Non-Operational Maintenance and capital rehabilitation projects.

Required Education, Experience and Technical Competencies

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

If other, specify:

Equivalent technical or science diploma related to water, or related experience in lieu of education.

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

Diploma in Civil Engineering with 5 years experience and preference given to candidates holding a **Certified Engineering Technologist (C.E.T.)** designation; equivalent combinations of education and experience may also be considered.

- Proven experience in the **operation, inspection, and maintenance of civil infrastructure**, including:
 - Dams, canals, spillways, gates, and hydraulic regulating structures
 - Dykes, erosion control works, and river training systems
- Practical knowledge of **instrumentation, electrical, and mechanical systems** associated with water infrastructure, including motorized gate operators and hoisting mechanisms.
- Strong understanding of **dam safety regulations, regional water security, and public safety principles** associated with the ownership and operation of water control structures.

- Familiarity with **seasonal operational variances** in canal and reservoir systems, including snowmelt, flood response, and irrigation demand cycles.
- Working knowledge of **SCADA (Supervisory Control and Data Acquisition)** systems for remote monitoring and alarm response in water infrastructure.
- All activities are carried out in compliance with the Federal and Provincial Fisheries Acts, the Federal Navigable Waters Protection Act, the Environmental Protection and Enhancement Act, the Water Act, the Public Lands Act, OH&S regulations, and Alberta Agriculture’s business plan for sustainable water management.
- Ability to interpret and apply **flow charts, hydrological data**, and system operations to regulate gates and control water flow accurately.
 - Proficient in identifying, planning, and executing **preventive and corrective maintenance** programs.
 - Demonstrated ability to troubleshoot operational and equipment issues efficiently in field settings.

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		
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 	<p>Must be able to identify issue/ defficiency and recommend or troubleshoot to implement corrective action and solution by considering alternatives. Creating problem skills must leverage personal experience as well as input of team members and other support groups.</p>
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 situations and creates a 	<p>Anticipate and adjust to adopt anticipated or constant varying situations or condition in operations and surveillance while working in operations or maintenance</p>

		backup plan	
Systems Thinking	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<p>Considers inter-relationships and emerging trends to attain goals:</p> <ul style="list-style-type: none"> • Seeks insight on implications of different options • Analyzes long-term outcomes, focus on goals and values • Identifies unintended consequences 	<p>Understanding the importance and impact of activities such as inspections, operations, maintenance, and rehabilitation of water management infrastructure is essential for enhancing public safety, supporting municipal services, meeting regulatory and licensing requirements, and protecting the environment.</p>
Develop Networks	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	<p>Leverages relationships to build input and perspective:</p> <ul style="list-style-type: none"> • Looks broadly to engage stakeholders • Open to perspectives towards long-term goals • Actively seeks input into change initiatives • Maintains stakeholder relationships 	<p>This position works with minimal daily direct supervision which requires self initiative, organization, and performance tracking. This position supervises a staff member, so ongoing mentoring and individual development is essential to success.</p>
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"> • Uses variety of resources to monitor own performance standards • Acknowledges even indirect responsibility • Commits to what is good for Albertans even if not immediately accepted • Reaches goals consistent with APS direction 	<p>This position requires initiative related to working independently and with a subordinate staff member to plan and schedule operational and maintenance work, and identify areas for improvement as a result of inspections.</p>

Benchmarks

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

Assign

The signatures below indicate that all parties have read and agree that the job description accurately reflects the work assigned and required in the organization.

Employee Name

Date yyyy-mm-dd

Employee Signature

Supervisor / Manager Name

Date yyyy-mm-dd

Supervisor / Manager Signature

Director / Executive Director Name

Date yyyy-mm-dd

Director / Executive Director Signature