

Public (when completed)

Common Government

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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 Manager of Dam Safety, this position is responsible for providing a wide range of technical support to dam safety team members in carrying out assigned dam safety regulatory duties as a result of implementation of OAG dam safety audit recommendations for improving "Systems to Regulate Dam Safety, March 2015" including:

- i. Enhancement, population and continuous improvement of the dam safety regulatory database and inventory system, “Environment Infrastructure Management System (EIMS)” as well as any other database used by dam safety;
- ii. Continuous updating and maintenance of dam safety regulatory database including: inventory of dams, inspection reports and deficiencies, annual performance reports/reviews, and dam safety assessment and evaluation reports;
- iii. Tracking dam safety regulatory activities and performance measures;
- iv. Documenting dam safety deficiencies for compliance with provincial safety standards set out in dam safety Regulation and Directive;
- v. Tracking dam safety deficiencies, and tracking correspondence with dam owners and follow-ups to ensure compliance;
- vi. Preparation of annual Dam Safety Executive report;
- vii. Preparation of education material for dam safety workshops, seminars and Dam Safety website;
- viii. Continuous update and maintenance of dam safety regulatory website including maps, guidelines, reports, inundation maps etc.;
- ix. Enhancement of dam safety regulatory emergency preparedness and response tools;
- x. Continuous update and maintenance of dam safety emergency preparedness and response tools including producing maps that can be overlaid with extreme events including precipitation, earthquakes etc. to identify areas where possible dam safety incidents may exist in order to assist with field audit inspections after extreme weather events;
- xi. Dam safety audit inspections and follow-ups;
- xii. Preparation and tracking of dam safety training program;
- xiii. Computer assisted drafting/mapping and working knowledge of other computer programs/ applications is required for performing the assigned duties.

Responsibilities

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

1. Providing a wide range of technical support to dam safety team in administration of Water Act, Water (Ministerial) Regulation Part-6, Alberta Dam and Canal Safety Directive including:
 - i. Technical support in preparation of plans to regulate dams and report on the results of the regulatory activities including:
 - Establish targets of dam safety regulatory activities;
 - Prepare dam safety operational plans and track dam safety regulatory activities;
 - Prepare periodic formal dam safety executive report on dam safety regulatory activities.
 - ii. Technical support in improving dam safety regulatory activities including:
 - Document and update work-flows, processes, and procedures;
 - Implement improved Dam Safety Regulatory processes relevant to inventory of dams, tracking dam safety deficiencies/ performance and follow-ups;
 - Track dam and canal safety related information, technical reviews/ comments, and technical recommendations;
 - Track dam safety regulatory requirements and conditions for interim or final licences/ approvals.
 - iii. Technical support in monitoring compliance of the owners and operators with the Act and the Regulation including:
 - Track dams and canals safety performance assessment and evaluation reports and risk assessments;
 - Conducts site/ audit inspections, as required by the Dam Safety team, to identify or confirm deficiencies in dams in Alberta;
 - Monitor/ track performance of the dams, dam safety regulatory requirements and follow-ups in dam safety database and inventory system (EIMS);
 - Track dam safety technical support to the department approvals and compliance to bring the dam owners/ operators in compliance;
 - Track information related to dam safety regulatory processes along with their status, and follow-ups using Environment Infrastructure Management System (EIMS);
 - Maintain an up-to-date inventory of the dams and canals in the province;
2. Improving dam safety regulatory activities by providing technical support to dam safety team members in Emergency Preparedness and Response situations including:
 - Track dam safety emergency preparedness and response requirements/ information;
 - Maintain dam safety emergency preparedness and response information, as required, including updated copies

of emergency preparedness plans and inundation studies/ maps;

- Maintain dam safety emergency response room in state of readiness as required;
- Participate in emergency preparedness and response exercises/ testing arranged by key stakeholders.
- Assist in events related to a dam or a canal emergency by providing available technical information as required;
- Assist in post-event inspections and dam safety audits to assess any damage to structures as required;
- Assist in tracking post-event inspections and performance reports.

3. Improving dam safety management and regulatory activities by providing technical support to dam safety team and WIOB operations staff for the department owned and operated dams and canals including:

- Preparation and updating of the dam safety regulatory documentation including operations, maintenance and surveillance (OM&S) manuals and emergency preparedness/ response plans;
- Update dam safety database and inventory system (EIMS) to include conclusions and recommendations of the dam safety assessments and evaluations;
- Manage dam safety records and track dam safety deficiencies on the infrastructure including design documentation, dam safety assessment and evaluation reports, instrumentation data, and construction data;
- Participate in dam safety inspections and instrumentation data collection with the operations staff to help identify and assess dam safety deficiencies;
- Check compliance of the structure with the Act and the Regulation as well as the best practices.

4. Improving dam safety regulatory activities by assisting in educating public and dam owners/ operators including:

- Assist in updating dam safety directives/ guidelines such as the inspection of small dams booklet used to assist small dam owners with proper operations and maintenance of their structures as well as notification of any training workshops that may be hosted by the Dam Safety Team;
- Assist in development and distribution of dam safety education material and brochures;
- Assist in planning and delivering dam safety educational events such as webinars, seminars and workshops;
- Maintain digital information including dam safety web pages, and the dam safety portal.

5. Supporting the small dam inspection program.

- Conduct/Participate in the small dam inspection program including preparation of the notification letter, confirm stakeholder information and review of past inspection results;
- Compile, scan, and prepare drawings, photographs, mapping and other related documents for use in the field;
- Populating inspection information into EIMS.

6. Checking the OH & S competencies and ensuring that all OH&S competencies are up to date, as well as the Safety Plans of contractors engaged by the Dam Safety team.

- Assist in coordinating the dam safety activities of the team;
- Ensure OH&S Competencies of the team member are up to date;
- Checking the OH&S Competencies and Safety Plans of contractors engaged by the Dam Safety team.

Problem Solving

Typical problems solved:

- The Dam Safety team is responsible for the development of dam safety regulatory policy and administration of the Water Act, Water (Ministerial) Regulation Part-6, and Alberta Dam and Canal Safety Directive, for approximately 1300 regulated dams in Alberta. In addition, it is also responsible for the development and implementation of the dam safety management program for the department owned and operated dams as well as assisting WIOB operations staff in dealing with the dam safety issues and to ensure that the regulatory requirements are met under the Act, the Regulation and the Directive. The Dam Safety Technologist requires knowledge of dam safety regulation, processes/ activities, geotechnical investigations/ safety assessments/ evaluations along with some knowledge of hydrology, hydrotechnical, and structural aspects of dams and its appurtenant structures to properly perform its tasks.
- This position requires good communication and interpersonal skills to perform his/ her duties as dam safety team routinely interacts with many clients/ stakeholders including public, often simultaneously. Clients/ stakeholders include the dam owners, EP Approvals and Compliance teams, Alberta Energy Regulator (AER), Department of Fisheries and Oceans (DFO), Educational Institutes and Research Centres, Municipal Districts, industrial clients such as TransAlta, EPCOR, Grande Cache Coal, Oil Sands Operators, Irrigation Districts (EID, SMRID, UID, WID), engineering consultants, associations (e.g. CDA, APEGA, ASET).
- This position provides a wide range of specialized technical support e.g. conduct inspections of dams and associated structural components, identify deficiencies, tracking and monitoring deficiency resolutions to protect public against potential dam failures. This position is responsible for maintaining, updating and assembling all technical

information used by the Dam Safety team as well as private dam owners and public that will be posted on the Dam Safety website.

- This position requires many other skills beyond technical abilities including: innovative thinking for solving dam safety related issues, critical thinking, leadership, facilitation of meetings, teamwork, extensive computer skills, flexibility and adaptability, time management, and curiosity and desire for self-improvement.

This position also requires specialized technical knowledge for maintaining all dam safety databases, GIS, mapping, and various computer applications under the direction of the Dam Safety Manager. This position is a resource for the dam safety regulatory role of the Dam Safety team. This position will also ensure the team's OH&S competencies are up to date.

Types of guidance available for problem solving:

- Support from dam safety team, management, Sr. Management and Executive Leadership
- Technical and management training/ development opportunities

Direct or indirect impacts of decisions:

The Agriculture and Irrigation Dam Safety team is responsible for developing policy regarding safety of Dams and Canals in Alberta. The team is also responsible for administration of Water (Ministerial) Regulation Part-6 and Alberta Dam and Canal Safety Directive, for all dams and canals in Alberta except energy related projects under the Water Act. The responsibility for implementation of the regulation for energy related projects has been transferred to Alberta Energy Regulator (AER) since April 2014. The Part-6 of the Regulation and the Directive establishes the requirements for safety of dams and canals as well as emergency management in order to prevent/ minimize loss of life, environmental impacts and property damage that may result with a potential failure of these structures. The responsibilities of the owners/ operators for dam safety management, safe operation, maintenance and surveillance of their infrastructure are also part of the Part-6 of the Regulation and the Directive.

The Dam Safety team is also responsible for supporting delivery of the Dam Safety Management Program for the Department owned and operated dams and canals. The team provides technical support to operations staff of Water Infrastructure and Operations Branch (WIOB) for implementation of the management program.

The activities and decisions made by the dam safety technologist relate to public safety, emergency management, dam safety management etc.

Key Relationships

Major stakeholders and purpose of interactions:

Dam Safety staff: working unit

Operations, Regional Approvals and Compliance staff: Water Act Regulator

Operations Infrastructure, Infrastructure Support staff: Infrastructure Support unit

Operations Infrastructure, Regional Operations staff: Owner and operator of water infrastructure.

Public: Licensee of water infrastructure

Required Education, Experience and Technical Competencies

Education Level

Diploma (2 year)

Focus/Major

Engineering

2nd Major/Minor if applicable

Other

Designation

Other

If other, specify:

Civil Engineering Technology or equivalent and ASET membership

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

- Diploma in Civil Engineering Technology, or equivalent with a minimum of 5 years relevant experience.
- Must be eligible for membership with the Association of Science and Engineering Technology Professionals of Alberta. (ASET)
- Ability to work independently, and demonstrate leadership in specialty areas
- Requires in-depth knowledge of geotechnical instrumentation as well as a working knowledge of hydrology.
- Requires knowledge and experience in hydrotechnical/ hydraulic and geotechnical assessments related to dams and canals.
- Requires knowledge of Emergency Preparedness Planning.
- Requires knowledge and experience in computer assisted drafting and mapping, database management, user interface development, surveying and mapping

- Requires knowledge of Dam Safety Regulation and Management in general.
- Requires good communication skills to interact with engineers, managers, regional staff, consultants, co-workers and clients
- Requires computer skills including Microsoft Excel, Microsoft Word, Outlook, Adobe Acrobat, etc.
- Requires a good understanding of Alberta OH&S Act, CoR requirements and Hazard Assessments
- Knowledge of the policy cycle
- Knowledge of the Water Act, Water (Ministerial) Regulation, Alberta dam safety guidelines, and procedures for dam safety regulation will be an asset.

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 checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Focuses on continuous improvement and increasing breadth of insight: <ul style="list-style-type: none"> • Asks questions to understand a problem • Looks for new ways to improve results and activities • Explores different work methods and what made projects successful; shares learning • Collects breadth of data and perspectives to make choices 	
Systems Thinking	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Considers inter-relationships and emerging trends to attain goals: <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 	
Drive for Results	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Works to exceed goals and partner with others to achieve objectives: <ul style="list-style-type: none"> • Plans based on past experience • Holds self and others responsible for results • Partners with groups to achieve outcomes • Aims to exceed expectations 	
Develop Networks	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Works on maintaining close relations with all	

		stakeholders: <ul style="list-style-type: none"> • Identifies key stakeholder relationships • Has contact with range of interested parties • Actively incorporates needs of a broader group • Influences others through communication techniques 	
Build Collaborative Environments	<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Facilitates open communication and leverages team skill: <ul style="list-style-type: none"> • Leverages skills and knowledge of others • Genuinely values and learns from others • Facilitates open and respectful conflict resolution • Recognizes and appreciates others 	

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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
ADM Name	Date yyyy-mm-dd	ADM Signature
DM Name	Date yyyy-mm-dd	DM Signature

