

Region of Waterloo Job Description

Title: Project Hydrogeologist

Job Code: R01388

Department/Division: Transportation & Environmental Services/Water Services

Union: Management/Management Support

Reports to: Senior Hydrogeologist

Revised: November 6, 2018

General Purpose:

Assists in the planning, design, management of the provision of hydrogeologic services for municipal groundwater supplies; provides technical expertise and advice on the quantity, quality and protection of the Region's municipal groundwater supply sources; and assists in the design and implementation of source water protection programs.

Duties/Responsibilities:

Works individually or as part of project teams regarding conceptual program and design studies, and development of risk management programs to meet regulations. Occasionally monitors the work of other Regional staff assigned to projects, including: Design & Construction project managers, inspectors, and surveyors; Water Services project managers and coordinators; and students. Administers contracts with consultants and contractors.

Assists in the planning, design, and management of hydrogeologic investigations to define the quantity and quality of groundwater resources, sources of surface and groundwater contamination, and supply well rehabilitation/maintenance programs. Assists in the public consultation process.

Reviews and assesses developer/consultant/external agency hydrogeologic submissions (e.g., development applications, risk assessments, watershed studies, environmental assessments) to determine gaps, defensibility, and long- and short-term impacts on the Region's municipal groundwater supply sources. Communicates adequacies and inadequacies with same to define and negotiate issues, terms of reference, technical requirements, studies, and resolutions. Defends professional scientific/technical opinion and position regarding same.

Assists with vulnerability and activity risk assessments to meet legislative requirements, including delineation and scoring of protection areas, and assessing presence of activities creating water quality and quantity risks.

Provides technical support in the development of policies and programs to reduce the risk that land use activities could impact municipal drinking water sources, including monitoring, incentive, inspection, and awareness programs.

Assists in the preparation of submissions to the Ministry and conditions on supply well water taking permits. Compiles and interprets hydrogeologic data, and prepares documentation for submission, tracks progress and compliance requirements.

Implements hydrogeologic water quantity and quality monitoring programs. Reviews supply well performance, determines monitoring locations, parameters and monitoring frequency, analyses and tracks results, and recommends construction of new monitoring infrastructure. Assists in negotiating land access agreements with land owners for related infrastructure and monitoring network.

Assists in the implementation and maintenance of a data management system. Coordinates transfer of data and information from the hydrogeologic data management system to consultants and incorporation of project outcomes and monitoring data into same. Ensures proper handling of confidential and sensitive data.

Assists in the implementation of a supply well maintenance program. Analyses and tracks well performance, and reviews tests and rehabilitation results.

Assists in the coordination of responses to and acts as a witness in judicial appeals of permit to take water, official plan policies, and development applications.

Researches, monitors, and evaluates hydrogeology and source water management and protection trends, legislation, practices, and technological developments.

Identifies and estimates capital project costs for assigned projects and provides same for Senior Hydrogeologist for inclusion into ten-year capital program and operating budget. Provides recommendations for monitoring equipment purchases.

Participates on project teams and working groups. Presents hydrogeologic information to divisions and departments. Occasionally makes presentations and provides advice to Planning and Works Committee and Council. Participates in the procurement process with Procurement.

Has regular contact with engineering and hydrogeological consultants, Ministry staff, area municipalities, conservation authority, public utility officials, contractors, residents, and the public to exchange information.

Performs related duties, as required.

Knowledge, Skills & Abilities:

Knowledge of hydrogeology, geology, groundwater assessment numerical modelling and groundwater protection concepts, normally acquired through a Bachelors degree in Hydrogeology, Hydrogeological Engineering, Environmental Engineering, or equivalent discipline, plus related experience.

Membership, or eligibility for membership in the Association of Professional Geoscientists, or Professional Engineers of Ontario with competence in professional geoscience.

Knowledge of and ability to comply with policies, procedures, and related legislation (e.g., Environmental Protection Act, Ontario Water Resources Act, Clean Water Act, Lake Erie Source Protection Plan, Drinking Water Guidelines, Planning Act, health and safety, freedom of information).

Analytical and problem solving skills to plan and develop projects and programs; research and prepare complex technical reports and project specifications.

Human relations and communication skills to present technical reports and recommendations; conduct public presentations; present and promote objectives related to groundwater resource management and protection; communicate complex technical information; and participate as an effective team member.

Ability to read and interpret technical hydrogeology reports, letters, memos, technical journals, and literature. Ability to write project specifications and scientific articles.

Computer skills with ability to use software such as Microsoft Office, ArcGIS, Access, relational hydrogeologic databases and numeric modelling/visualization software.

Ability to occasionally work evenings and weekends to attend public meetings.

Ability to travel within and outside Waterloo Region.

Ability to support and demonstrate the Region's values.

Working Conditions:

Works in a standard office environment. Travels to attend meetings and conduct site inspections. Exercises precautions to mitigate risks associated site inspections, including weather conditions, odours, noise, and moving equipment. Work is subject to interruptions and deadlines.

Sensory/Mental/Physical Effort:

Uses a computer approximately 60% of the time. Attends meetings and communicates with others approximately 25% of the time. Conducts site inspections approximately 15% of the time, requiring moving about.

[Click here to view corporate training requirements.](#)

Incumbent Name, Signature & Date: _____

Supervisor Name, Signature & Date: _____

Director Name, Signature & Date: _____

Commissioner Name, Signature & Date: _____

Human Resources & Citizen Service: _____