

Advisor Source Water Protection

Job ID: 54118

Job Category: Operations & Maintenance

Division & Section: Toronto Water, Environment Energy & Emergency Planning

Work Location: Metro Hall, 55 John Street, Toronto

Job Type & Duration: Full-time, Permanent Vacancy

Salary: \$93,734.00 - \$123,449.00, TM5389 and Wage grade 6.5

Shift Information: Mon-Fri 35 hours per week

Affiliation: Non-Union

Number of Positions Open: 1

Posting Period: 14-Apr-2025 to 02-May-2025

The Process, Innovation & Energy unit (PIE)

The Process, Innovation & Energy unit (PIE) is Toronto Water's central process engineering group for water & energy. The team strives to advance water and energy management in Toronto Water by delivering exceptional research, process engineering, and innovation-driven solutions. PIE supports Toronto Water in the areas of process & optimization, research & innovation support, data management, regulatory reporting, source water protection, energy management, GHG emissions mitigation and more, solving complex and sometimes ambiguous problems in an ever-changing environment to help Toronto Water prepare for the future. The team's work is critical in enabling innovation in Toronto Water and supporting the environmental goals and initiatives for Toronto Water and the City.

Source Water Protection Advisor Responsibilities

In the years since the Walkerton Inquiry first introduced source water protection requirements to Ontario, Toronto Water's source water protection responsibilities have steadily increased to a point that a dedicated position for Source Water Protection Advisor has been created. The Source Water Protection Advisor will be responsible for fulfilling Toronto Water's source protection commitments. Responsibilities may include:

Collaboration & Outreach

- Collaborate with Peel, Durham and Halton Regions, and liaise with multiple levels of government, conservation authorities and source protection authorities.
 - Represent the City on multiple source protection committees and working groups including the Credit Valley – Toronto and Region – Central Lake Ontario (CTC) Source Protection Committee and associated working groups, the Lake Ontario Collaborative Group (LOCG) and its associated projects, committees and working groups, and more as applicable. The LOCG is a multi-agency collaborative approach tasked with the implementation of the Lake Ontario-based policies in the CTC source protection plan including the collection, analysis and sharing of water quality data and modelling lake circulation and water quality impacts.
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- As a key technical resource on Lake Ontario water quality, respond to internal and external water quality and source protection inquiries.
- Act as the primary City of Toronto liaison on Source Water Protection issues to conservation authorities, the MECP, ECCC and other City Divisions including City Planning.
- Develop communication materials and education programs for Source Water Protection programs, including public outreach and notifications.
- Speak publicly at Council and senior management meetings on matters relating to the Source Water Protection program.
- Work with other Toronto Water sections on developing, improving and implementing spill response plans (and other emergency response plans as applicable) related to source protection.

Technical & Risk Management

- Review, develop and implement policies and plans related to the MECP mandated source water protection requirements, including identification and assessment of threats and risks to municipal drinking water sources and mitigation measures.
 - Ensure compliance with legislative requirements under the Clean Water Act and Source Protection Policies on reporting, documenting, and updating agencies and authorities such as Conservation Authorities, CTC Source Protection Committee, City Council, Provincial Authorities and neighbouring municipalities.
 - Develop initiatives, policies or procedures related to source water protection.
 - Review new and proposed legislation, summarize impacts on the City of Toronto and recommend and implement actions to ensure compliance.
 - Represent the City at Environmental Review Tribunals when required as part of the Clean Water Act responsibilities.
 - Assist with the review of Permits to Take Water.
 - If/when needed, review and approve Risk Management Plans and property use changes for property owners designated as risk or threats to drinking water sources and negotiate with property owners for the development and implementation of Risk Management Plans.
 - If/when needed, review and issue Notices under the Clean Water Act for new development and re-development proposals and work with other Government agencies on the management of risks to Toronto's municipal water source.
 - If/when needed, develop, implement and maintain Risk Management Inspector (RMI) activities and an effective inspection program related to the Source Water Protection.
 - Anticipate and plan for future source water issues in Toronto and actively pursue the engagement of senior City staff, counterparts in neighbouring municipalities, and City Council to update, advise, and recommend changes as needed.
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- Participate in projects such as Environmental Assessments and Engineering Design of new water and wastewater infrastructure to provide expert advice on water quality impacts, including siting intakes and outfalls.
- Monitor and report on long-term Lake Ontario water quality trends.
- Lead and develop research projects with academic, conservation authority partners and industry consultants that further our understanding of Lake Ontario water quality. Research includes water quality monitoring and changes, climate change impacts, algae prevalence, algae surrogate measures, taste and odour, as well as mussel veliger occurrence and prevention.

Lake Ontario Water Quality Forecasting System – LOWQFS

- Lead for all aspects related to the Lake Ontario Water Quality Forecasting System (LOWQFS) including working with partners to refine the tool and business systems supporting it. The LOWQFS is a decision support system that is jointly developed by the LOCG partners to model hydrodynamic conditions in Lake Ontario and to predict water quality at drinking water treatment plant intakes during emergency spill conditions.
- In the event of a spill during business hours, run the model and interpret results to determine impacts to the City’s drinking water plants, liaise with drinking water process engineers to implement monitoring and response plans for plant operation, and communicate with neighbouring municipalities per agreed upon communication protocols.
- Develop training material and oversee training for staff using LOWQFS.
- Lead the implementation, maintenance and replacement of lake current and water quality instrumentation at the City’s drinking water intakes which feed the LOWQFS model.
- Explore relationships between lake instrumentation readings and lab water quality measurements to establish operational triggers for changes in water quality and strategies to deal with these changes before they impact the treatment plants.

Contract Management & Project Management

- Develop and manage source protection program budget including expenditures that are cost-shared with other neighbouring municipalities.
- Plan for and manage resources such as consultants, contract and/or temporary or student resources.
- Oversee technical studies related to the Source Water protection Program

Key Qualifications

The candidate must possess the following skills and qualifications:

1. Must have a university degree in Environmental Sciences, Geo-Sciences, Environmental Planning, Environmental Engineering, Water Resources or an equivalent combination of education and experience required to fulfill the job qualifications.
2. Must have Risk Management Official (RMO) designation from the MECP, including authority to preside as RMO and Risk Management Inspector (RMI), or must obtain this designation within three months of beginning employment with the City in this role.
3. Experience with project management and contract management.
4. Experience with negotiations and collaborative skills to work with multi-stakeholders at varying levels to achieve the goals and objectives of the program.
5. Knowledge of the following regulations is also required: Safe Drinking Water Act, Planning Act, Ontario Building Codes as applied to the City of Toronto, and Intra-basin Transfer regulations.
6. Knowledge of the Clean Water Act and the related Source Water Protection policies and regulations.
7. Knowledge of best management practices for industrial handling and storage of fuel and chemicals and pollution control/prevention programs.
8. Leadership, planning ability, and diplomacy to make judgements and collaborative decisions with other agencies and authorities on behalf of the City, and to make formal presentations to Council, senior staff and regulatory agencies.
9. Proficient in Microsoft Excel & experience in data analysis.
10. Must possess a valid Province of Ontario Class "G" Driver's License.

The following skills and experience would be an asset:

- A valid Professional Engineering license or Certified Engineering Technologist license.
 - Expertise in freshwater biology or limnology.
 - Drinking water treatment and/or wastewater treatment process knowledge.
 - Education and/or experience in data analysis or data science.
 - Experience with risk assessment.
 - Excellent communication skills, including writing and presentation abilities, ability to persuade others.
 - Ability to build and foster effective working relationships with peers, internal clients, external agencies, other utilities, and other levels of government.
 - Ability to understand legal language, interpret regulations, and express complex ideas in simple language.
 - Ability to manage multiple competing priorities and deadlines.
 - Must also have investigative, analytical, conceptualization and problem-solving skills with the ability to work independently and within a team to achieve desired outcomes when faced with ambiguity.
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Note To Current City of Toronto Employees

City of Toronto employees are eligible to apply for the posted job opportunity, but cannot hold two different jobs. To be considered for this job posting, you must indicate that you are a "Current City of Toronto employee" on the online application form, and provide your "Employee Number".

How to Apply:

For more information on this and other opportunities with the City of Toronto, visit us online at <https://jobs.toronto.ca/jobsatcity/>. To apply online, submit your resume through the job portal, quoting **Job ID 54118**, by **Friday, May 2, 2025**.

Toronto is home to more than 2.9 million people whose diversity and experiences make this great city Canada's leading economic engine and one of the world's most diverse and livable cities. As the fourth largest city in North America, Toronto is a global leader in technology, finance, film, music, culture, and innovation, and consistently places at the top of international rankings due to investments championed by its government, residents and businesses. For more information, visit jobs.toronto.ca or follow us on Twitter at [Twitter.com/CityTOjobs](https://twitter.com/CityTOjobs), on LinkedIn at [Linkedin.com/company/city-of-toronto](https://linkedin.com/company/city-of-toronto) or on Facebook at [Facebook.com/CityTOjobs](https://facebook.com/CityTOjobs).

Equity, Diversity and Inclusion

The City is an equal opportunity employer, dedicated to creating a workplace culture of inclusiveness that reflects the diverse residents that we serve. Learn more about the City's commitment to [employment equity](#).

Accommodation

The City of Toronto is committed to creating an accessible and inclusive organization. We are committed to providing barrier-free and accessible employment practices in compliance with the Accessibility for Ontarians with Disabilities Act (AODA). Should you require Code-protected accommodation through any stage of the recruitment process, please make them known when contacted and we will work with you to meet your needs. [Disability-related accommodation during the application process is available upon request](#). Learn more about the City's [Hiring Policies and Accommodation Process](#).
