

CITY OF HAMILTON

PUBLIC WORKS DEPARTMENT

(HAMILTON WATER DIVISION–WATER AND WASTEWATER PLANNING – LOCATION – 100 KING ST. W

SENIOR PROJECT MANAGER, MODELLING – WATER AND WASTEWATER SYSTEM PLANNING

SUMMARY OF DUTIES

Reporting to the Manager, Water and Wastewater Systems Planning, the Senior Project Manager, Modelling will be responsible for building, maintaining, and analyzing Hamilton Water's hydrologic and hydraulic models. This includes the City's wastewater, combined sewer, stormwater, and water distribution models. In addition to modelling, this position will be responsible for the hydrometric and water distribution system data collection programs to support model validation and calibration efforts.

The Senior Project Manager, Modelling will provide technical support and guidance for decision making in infrastructure planning, operations and maintenance, risk assessment, and development approval tasks. This position will ensure that modelling activities are delivered in accordance with City, Provincial, and Federal guidelines in a cost effective, efficient, and timely manner. This is an impactful role in which the successful applicant will be expected to show leadership in developing real-time modelling capabilities and establishing a modelling team within the Water and Wastewater Systems Planning Section of Hamilton Water.

GENERAL DUTIES

The Modelling Unit within Water and Wastewater Systems Planning is a new initiative to develop and maintain real-time hydraulic models for water, wastewater, and stormwater. This Unit will be an integral part of the Systems Planning Team to inform servicing studies, assist in the prioritization of sewer separation strategies, and . This Unit is expected to result in significant cost savings in Consulting fees over the long term.

The Model Lead will be key to developing an increased in-house capacity for various hydrologic/hydraulic model analyses. As required, the Model Lead will also interact with or manage consultants on water, wastewater and stormwater modelling projects including the preparation of terms of reference, engineering analysis, overseeing the collection of data, securing permits and approvals, and review/comment on consultants' reports and recommendations related to the following areas:

- Infrastructure Planning/Service Studies
- Wastewater, Combined Sewer, Stormwater, and Water Distribution Modelling
- Capacity analysis and/or allocation
- Operating Scenario Modelling
- Model Calibration and Validation.

Major responsibilities include:

Lead the strategic planning of model development and maintenance, including evaluation of software and/or staffing needs on a long-term basis.

Participate as a Subject Matter Expert on modelling related project tasks.

Liaise with external agencies such as Ministry of Natural Resources and Forestry, Ministry of Environment, Conservation and Parks, local Municipalities, Conservation Authorities, and interested community partners.

Play an enhanced leadership role, innovate and create policy/procedure/solutions through research to understand and promote Best Practices and improving the Section's technical performance and quality management systems.

Provide technical support for preparation of Terms of Reference for modelling related projects, in accordance with the City and Provincial guidelines.

Receive and answer inquiries of a technical nature from City staff and government agencies.

Written communications including Council Reports, Technical Guidelines, and Modelling Newsletter.

Develop and run complex modelling scenarios for planned and unplanned infrastructure analysis required for capital construction projects, planning application review, functional servicing analysis, and interim operating conditions.

Participate in capital budget, operating budget, and program development.

Lead by example by demonstrating an appetite for continual learning and improvement.

Represent the City on various agencies/committees.

Work in accordance with the provisions of applicable Health and Safety legislation and all City of Hamilton corporate and departmental policies and procedures related to Occupational Health and Safety.

Performs other duties as assigned.

QUALIFICATIONS

1. Proven demonstrated knowledge of the theories and practices of hydrologic and hydraulic modelling, usually acquired by obtaining a degree or diploma in Civil or Environmental Engineering.
2. Member of, or eligible for certification with, respective professional associations, i.e., Ontario Association of Certified Engineering Technicians and Technologists or registered as a Professional Engineer in the Province of Ontario preferred.
3. Minimum 5 years of experience in municipal engineering with extensive experience in hydrologic and hydraulic modelling.
4. Demonstrated technical leadership experience, attention to detail, and quality control.
5. Knowledge of relevant guidelines, procedures, regulations, and legislation related to water distribution and wastewater collection systems.
6. Strong knowledge of water and wastewater hydraulic modelling.
7. Strong working knowledge of GIS application systems.
8. Previous experience in the analysis of hydrologic/hydraulic models, including running various scenarios to determine current capacity, or for various growth or operational scenarios for both pressure and gravity pipe systems. Demonstrated experience in general sewer hydraulics, including interpreting sewer design sheets, design standards, etc.

9. The Model Lead shall demonstrate a customer focused approach to the role and will have a responsibility for investigating and recommending new procedures for improving the section's technical performance.
10. Possesses a high level of personal integrity and is an excellent communicator.
11. Demonstrated ability to articulate a vision to lead, innovate, and inspire others.
12. Highly effective leadership, communication, and organizational skills.
13. Experience in designing and delivering customer focused programs and services.
14. Ability to deal effectively with elected officials, representatives of other levels of government, management, peers, staff, and the public.