SCADA & Information System Analyst (Water)

Job Number: 2678
Job Type: Full-Time
Location: 2069 Ottawa St S - Mannheim Water Treatment Plant
Job Category: Other
Number of Positions: 1
Department: Supervisory Control and Data Acquisition and Systems
Division: Engineering and Environmental Services
Hours of Work: 35. 8:00 AM - 4:00 PM
Union: CUPE 1883
Grade: CUPE 1883 Grade 014
Salary Range: $43.61 - $49.41 per hour
Posting Date: April 8, 2025

About Us!

The Region of Waterloo is a thriving, diverse community committed to fostering opportunities for current and future generations. Waterloo Region is part of the Dish with One Spoon wampum, a treaty guiding our commitment to:

- Taking only what we need

- Leaving some for others

- Keeping the dish clean

This agreement underpins our vision, mission, and core value, and reinforces our dedication to meaningful reconciliation and equity.

Waterloo Region is home to over 674,000 residents and expected to grow to nearly one million by 2051.

Guided by our 2023-2027 Strategic Plan, "Growing with Care," we prioritize homes for all, climate aligned growth, equitable services and opportunities and a resilient and future ready organization. Our mission is to provide essential services that enhance the quality of life for all residents, while our core value emphasizes caring for people and the land we share. Join us and be part of a team dedicated to making a meaningful difference in our community.

The Role

Assists to maintain and provides technical support for the Division's Supervisory Control and Data Acquisition (SCADA) system, related technical information, databases, and networking hardware. Provides reports and adapts applications to meet divisional staff's requirements (e.g., monitoring, reporting, water billing).

Duties/Responsibilities

- Assists to maintain the Division's SCADA system, technical information/data, and related systems/databases, and networking hardware. Ensures SCADA data transfers are complete and accurate, including after loss of communications. Collaborates with supervisor to resolve data transfer issues (hardware and software) and makes adjustments/fixes to SCADA programming.

- Participates in commissioning projects for new/upgraded facilities. Works with project managers to review control narratives, I/O lists, technical specifications, shop drawings, and other project documentation during the design stage. Facilitates and attends design meetings and workshops with consultants and contractors; and coordinates with same at sites.

- Provides SCADA technical support at water treatment sites. Performs SCADA interface programming and testing with operations and maintenance staff, consultants, and contractors in the field, including systems edits and configurations. Performs site and factory acceptance tests, as required.

- Works with operators and maintenance staff to develop control narratives, I/O lists, and test, write, and commission PLC and HMI programming and configuration, including graphics, alarms, trending and reporting systems for changes to the existing SCADA systems. Troubleshoots, diagnoses, and makes corrections to PLC software, SCADA servers, and historical information system.

- Designs and develops databases and reports for divisional programs that use water supply and distribution data (e.g., flow rates, outages, pumped/production database for water billing). Consults with end-users to ensure requirements are met, including screen layouts, report formats, graphical displays, and continued system maintenance. Performs system stress testing and optimization.

- Maintains documents and programs, including schematics and charts of control systems at water treatment sites. Prepares and updates Process & Instrument Drawings (P&ID), single line and control drawings. Perform minor AutoCAD services as required.

- Installs, configures, and troubleshoots operational software programs and SCADA equipment, including Operator Interface Terminals (OIT) at all sites. Provides/coordinates networking support; maintains servers and ensures network validity, in collaboration with ITS, vendor, and management.

- Assists to ensure software licenses are current.

- Maintains software resources for the creation of systems reports. Ensures data integrity, backup and recovery, and calculation accuracy; investigates and resolves functionality issues.

- Assists with backup, back-filling missing data, and disaster recovery of SCADA system to ensure compliance.

- Recommends program purchases (e.g., computers and peripherals); and performs maintenance and replacement activities, as needed. Researches and evaluates products.

- Performs some backup to SCADA Specialist in that incumbent's absence.

- Performs related duties, as assigned.

Knowledge, Skills, and Abilities

- Knowledge of computer networking; operating systems and devices; and programming languages (e.g., Oracle, SQL, Visual Basic) acquired through a 3-year community college diploma/university degree in a related field (e.g., computer science, automation engineering) plus 4 years of related experience.

- Knowledge of SCADA systems and related databases, reporting functions, and equipment (e.g., iFIX, programmable logic controllers). Ability to keep knowledge current.

- Must have and maintain a Class I Water Treatment and Water Distribution and Supply Certificate, or attain within 3 years of hire, including an Operator-in-Training (OIT) certificate within probationary period.

- Knowledge of and ability to comply with policies, procedures, and related legislation (e.g., health and safety).

- Analytical, organizational, and problem solving skills to work independently; research technical information; solve issues and apply principles related to system design, development, and documentation; and design and develop new systems and software configurations.

- Communication skills to advise, instruct, and train staff on computer software; communicate technical information to non technical and technical users and support staff; present to management, staff, and consultants; and participate as an effective team member.

- Ability to read and interpret publications, trade journals, software documentation and manuals, and systems design and development language documentation. Ability to write and prepare reports, documentation, and user manuals/instructions for software applications.

- Computer skills with ability to use software such as Microsoft Office (including Excel to develop formulas for data analysis). Knowledge and skill using drawing software (e.g., Visio 2000, AutoCAD) to create site maps.

- Ability to alter working hours for systems testing. May be requested to work weekend hours to support systems.

- Ability to be on-call as scheduled, including for weekends and after-hours.

- Ability to travel within Waterloo Region.

- Ability to support and demonstrate the Region's values.

The Region of Waterloo is an equal opportunity employer dedicated to an inclusive and accessible recruitment process. We actively encourage applications from diverse groups, including Black, racialized, First Nations, Métis, Inuit individuals, women, people with disabilities, and 2SLGBTQIA+ persons, and are committed to equity, diversity, accessibility, and inclusion in the workplace.

For an accommodation request, please contact us and we will work with you to meet your accessibility needs. Alternate formats of this document are available upon request. Please contact the Service First Contact Centre at phone number (519) 575-4400 to request an alternate format, or email talentmanagement@regionofwaterloo.ca.

Please note: candidates will be provided an update on their application. Please check your spam or junk folder occasionally as some candidates have noticed our emails in those folders (Gmail and Hotmail in particular).

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