

SCADA TECHNICIAN**Approval Date:** February 2026 **Department:** Information Technology IAFF CUPE Management**Title of Management Supervisor:** IT and Information Security Manager**General Accountability:****Purpose and Scope**

Reporting to the IT and Information Security Manager and taking direction from the Utilities Operations Manager or Supervisor Utility Maintenance, the SCADA Technician is responsible for the installation, configuration, maintenance, programming, security, and ongoing operation of the City's Supervisory Control and Data Acquisition (SCADA) systems used in municipal operations including water, wastewater and other infrastructure services. This role provides technical and field-based support to Utility Operations and other departments troubleshooting and resolving issues related to SCADA systems, Programmable Logic Controllers (PLCs) and Remote Terminal Units (RTUs), and associated communications infrastructure.

Nature and Scope of Work

The SCADA Technician is responsible for and performs a wide variety of advanced technical tasks, and may assist with or lead the following activities, including but not limited to:

- The development, maintenance, security and optimization of the City's SCADA systems in accordance with industry best practices and applicable standards.
- Install, configure, operate, and maintain SCADA control systems related equipment, hardware and software, including PLCs, RTUs, and network components.
- Program, configure, modify and troubleshoot PLCs, SCADA applications, HMI display screens, alarms and control logic.
- Maintain and troubleshoot SCADA communication systems infrastructure, including network hardware, PLCs, RTUs and other field equipment; configure new sites and modify system parameters as required.
- Administer and maintain SCADA system databases, including operational data storage, memory management, and historical data collection, trending and reporting.
- Establish and perform preventative and corrective maintenance programs for SCADA and PLC related hardware, software and peripheral devices.
- Oversee and coordinate SCADA, PLC, and automated controls work performed by contractors at water and liquid waste services' facilities ensuring work is in compliance with City standards, specifications and programming guidelines.
- Assist in development and execution of "Requests for Proposals" for contracted services and preparation of other procurement documentation.
- Provide technical guidance and support to operations and maintenance staff, including responding to inquiries, troubleshooting issues, on-site field support, and performing repairs when required.
- Deliver training and provide technical guidance to SCADA system users on hardware, software, system functionality, and operational best practices.
- Maintain accurate and up-to-date system documentation, including configuration records, operational manuals, associated procedures, network diagrams, and change management records.
- Assist with the development, review, and updating of SCADA-related technical standards, specifications, procedures, and operational documentation.
- Ensure compliance with all City Policies, cybersecurity requirements, and WorkSafeBC regulations.

- Perform other related duties as required.

Necessary Qualifications

Knowledge:

- Thorough knowledge of the design of SCADA systems, process control systems, PLC controllers, and process control protocols, including system architecture, configuration, operation and maintenance.
- Considerable knowledge and experience with PLC platforms such as Allen Bradley ControlLogix and SLC500, and SCADA software including iFIX, RSLinx, and comparable industrial automation applications.
- In-depth understanding of instrumentation, electrical systems, hydraulics, and mechanical equipment as it relates to SCADA systems and PLCs.
- Considerable knowledge of PLC programming methodologies, including ladder logic, and their application within SCADA and process control environments.
- Considerable knowledge of relevant computer operating systems and industrial software applications used for remote monitoring, control, data acquisition, and communications.
- Considerable technical knowledge and hands-on experience with the methods, practices, tools and equipment used to install, upgrade, maintain and support SCADA systems.
- Working knowledge of municipal infrastructure including water distribution systems, wastewater treatment and collection, and drainage systems.
- Working knowledge of WSBC regulations, safe work practices, accident prevention, and emergency management principles.

Skills:

- Strong analytical, troubleshooting, and problem solving skills.
- Strong planning, organizational and time management skills.
- Strong project management skills.
- Strong verbal and technical writing communication skills
- Effective interpersonal communication and conflict resolution skills.
- Proficiency with Microsoft Office Suite including Word, Outlook and Excel.
- Proficiency in departmental software programs, computer databases, data processing concepts, and computer technology.

Abilities:

- Demonstrated ability to develop, install, maintain, and test controls, electronic communication systems and components, SCADA, PLC, and historical database systems.
- Ability to work independently with minimal supervision in a team environment.
- Ability to use considerable independence of judgment and action in applying technical knowledge.
- Ability to learn and adapt to new and changing technology to meet the goals and objectives of clients and the organization.
- Ability to plan and prioritize operational and project tasks, perform under pressure and meet deadlines.
- Ability to effectively document systems, and write clear and concise technical documentation, procedures and guidelines.
- Ability to establish and maintain effective working relationships with a variety of internal and external contacts, including the ability to communicate with tact and discretion when responding to complaints, or clarifying information.
- Ability and willingness to contribute to maintaining a respectful, safe and supportive work environment that embraces diversity, along with treating everyone with courtesy, dignity and fairness.
- Must have sufficient physical strength, stamina and ability to perform the work.

Education:

- Two (2) year technical diploma in Electrical Engineering Technology, Instrumentation and Electrical Automation, Controls Systems and/or Automation Technology or a related field from a recognized post-secondary technical institution **OR** a Trades Qualification as an Instrumentation and Control Technician plus an assessable equivalent combination of relevant training and SCADA systems experience.

Experience:

- Minimum of five (5) years of recent experience working with SCADA systems, PLCs, HMIs, and industrial control systems in municipal water and wastewater operations or a comparable industrial automation environment, including the planning, design, installation, programming, upgrading, troubleshooting, diagnostics, and ongoing management of SCADA and field control systems, as well as associated electrical and mechanical interfaces and equipment, within the last ten (10) years.
- Recent experience working with PLC platforms such as Allen-Bradley ControlLogix and SLC 500, and with programming and integrating systems using iFIX, RSLinx, or comparable industrial automation and SCADA software.

Training/Certification:

- Must possess and maintain a valid Class 5 Driver's License, and produce and maintain a clear driver's abstract, as per City policy.
- Occupational First Aid Level 1.

Preferred Criteria (For External Candidates Only)

- Experience with and knowledge of operations and maintenance of water and wastewater treatment plants and distribution and collection systems.

Unusual Working Conditions

- This position involves office and fieldwork in operational areas.
- May be required to work in adverse weather conditions.
- May come into contact with live sewage.