

**RANCHO CALIFORNIA WATER DISTRICT
POSITION DESCRIPTION**

DATE: July 1, 2022

POSITION TITLE: **SCADA ADMINISTRATOR**

GRADE LEVEL: E42

SUPERVISOR TITLE: Electrical Services Supervisor

FLSA Status: Exempt Non-Exempt At-Will

BARGAINING UNIT: RCWDEA RCWD MPCEA



DEFINITION

Under general supervision, this position provides support, implementation and maintenance of the District's Supervisory Control and Data Acquisition (SCADA), Distributed Control System (DCS), and other control systems.

CLASS CHARACTERISTICS

This is an advanced journey level position. This position meets with Operations staff to analyze and document SCADA and other control system needs; reviews new applications, programs, and their impact on operations; designs, develops, and modifies programs; implements new functionality of SCADA systems. Establishes long-term needs for SCADA systems, and plans strategy for developing systems. . Because employees in classifications at this level are expected to be fully trained and competent, such positions typically require significant previous work experience in the appropriate field. This job classification is represented by the Rancho California Water District Employees Association (RCWDEA) bargaining unit

EXAMPLE OF DUTIES (Duties may include, but are not limited to, the following):

-  Implements, maintains, and supports systems related to SCADA applications; researches problems and issues reported by users; determines best method for issue resolution. Also provides database administration and maintenance; maintains security of SCADA/DCS and other control systems, databases, and applications.
-  Troubleshoots, programs, and repairs/replaces programmable logic controllers (PLC's), logic modules, data modules, and PLC network communications

equipment. Evaluates SCADA system communications performance and monitors SCADA system data collection reports; acts as SCADA computerized control systems administrator.

- ✎ Liaisons between District staff and various consultants regarding components of the system; maintains contracts for continuing support/maintenance for hardware and software. Recommends, designs, and deploys best practices for existing and new technologies as well as knowledge transfer and mentoring to other staff.
- ✎ Participates in purchasing equipment and software and other contracts for support of control systems. Works with various system integrators on new and existing control systems design, programming, installation, upgrades, and maintenance. Ensures process and instrumentation diagram loops and documentation including schematics, drawings, and program annotation used for troubleshooting are kept updated.
- ✎ Provides network design, security, and troubleshooting of local SCADA area network related problems. Ensures available SCADA hardware meets requirements of software specifications; determines needs, researches hardware sources and purchases upgrades of equipment; troubleshoots and repairs/replaces malfunctioning hardware, software, and SCADA communications equipment; maintains various computer interface cables, firmware, software, programs, and data storage. Analyzes SCADA communication infrastructure and makes recommendations for improvements. Researches issues reported by users; determines best method for issue resolution.
- ✎ Trains and provides technical assistance to operations and maintenance staff in SCADA applications, computer control equipment; develops ad-hoc and complex reports from SCADA historian or other sources to make reports in Excel; develops queries and databases to support requested reports; provides technical assistance to users; advises in the troubleshooting of SCADA and various instrumentation/computer related problems.
- ✎ Provides formal and in-formal end-user training and support; designs, programs, installs and maintains application; designs networks to support SCADA applications.
- ✎ Perform related duties as assigned.

QUALIFICATIONS

Knowledge of:

- ✎ Windows Operating Systems
- ✎ TCP/IP, LAN, WAN, Wireless, Fiber Optic, and Remote Access communications
- ✎ Switches, Routers, Firewalls, Gateways and Bridges
- ✎ Spread Spectrum Radios
- ✎ Field instrumentation and signal processing
- ✎ Systems design theory and methods

- ✎ Mechanical, electrical control systems
- ✎ Various SCADA software, HMI interface
- ✎ Microsoft Word, Access, and Excel to generate ad-hoc and complex reports
- ✎ Personal computer office applications and programming applications
- ✎ Familiarity with water and wastewater systems
- ✎ Low voltage operational and safety considerations
- ✎ Radio equipment including hand held, mobile, spread spectrum
- ✎ Fiber optic communication systems
- ✎ Field instrumentation and signal processing and conditioning
- ✎ Computer/other control Systems design theory
- ✎ Applicable laws, codes and regulations

Ability to:

- ✎ Analyze and define complex problems, evaluate alternatives, and provide solutions
- ✎ Communicate both orally and in writing at the level appropriate for the audience
- ✎ Read, interpret and apply complex technical publications, manuals, electrical drawings, and other documents in performance of assigned tasks
- ✎ Adapt and apply new technologies
- ✎ Prepare clear and concise technical reports and correspondence
- ✎ Plan, organize, and schedules work to meet deadlines
- ✎ Review, check, and inspect the work of contractors and consultants
- ✎ Establish and maintain effective working relationships with employees, consultants, and vendors

SELECTION GUIDELINES

The appropriate knowledge, skills, and abilities can be achieved through a variety of combinations of experience and training. A typical example is:

Experience: Four (4) years of progressively responsible experience in instrumentation and controls, PLC programming, and maintaining SCADA, DCS or other high level control systems with a minimum of two (2) years experience as a Senior Electrical Controls/Instrumentation Technician or similar experience.

Training: Any combination of training and experience, which demonstrates attainment of the required knowledge and ability to perform the required work

Typically be achieved through the following: Previous SCADA Administrator or Operations Technology (OT) experience, Senior Electrical Controls/Instrumentation Technician with OT experience or

education. Bachelor's degree in Electronics, Electrical Engineering, or an Engineering degree with OT/SCADA Administrator experience.

Licenses and Certificates:

- ✎ Valid California driver's license, required
- ✎ Formal cyber security training and certification specific to SCADA systems, CSSA (Certified SCADA Security Architect), required or ability to obtain within one year from date of employment
- ✎ Certified SCADA Security Architect (CSSA), required or ability to obtain within one year from date of employment
- ✎ Grade D2 Water Distribution Operator Certificate, required
- ✎ Grade T1 Water Treatment Operator Certificate, required

PHYSICAL REQUIREMENTS/WORKING CONDITIONS

The essential functions of this position will require the employee to perform the following physical activities:

- ✎ Frequently use office equipment such as a computer, copier and FAX machine
- ✎ Must be able to carry, push, pull, reach and lift materials and objects up to 25 lbs.
- ✎ Extended standing, walking, sitting, reaching, stooping, and bending
- ✎ Communicates verbally with District management, co-workers, and the public in face-to-face, one-on-one, and group meetings
- ✎ Regularly uses a telephone or radio for communication
- ✎ Ability to speak and hear both in person, by telephone, and radio
- ✎ Vision within normal ranges including color vision with or without correction
- ✎ Regular attendance

The essential functions of this position will require the employee to be exposed to the following working conditions:

- ✎ Work in a temperature controlled office environment with moderate noise
- ✎ Occasional work in the field where noise is at times loud and employee may be exposed to hot and cold conditions; inclement weather, or traffic hazards

OTHER REQUIREMENTS

- ✎ Work nights, weekends, and overtime, as necessary.
- ✎ On-call on a rotational basis

_____ Employee Signature	_____ Date
_____ Supervisor/Manager Signature	_____ Date