



## Job Description

*Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties or responsibilities that are required of the employee for this job.*

<b>Job title</b>	SCADA Supervisor
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### **GENERAL PURPOSE**

Under general direction, engineers, plans, assigns, inspects, supervises and participates in highly-skilled work in the areas of process automation control systems and process information networks, District technology programs, Supervisory Control and Data Acquisition Control System (SCADA) and process control applications, controls and machinery used in the production, treatment, storage and transmission of reclaimed water, ensuring the reliability and availability of the 12kV control systems and process control applications, common to large state-of-the-art water/wastewater facilities including field telemetry communications systems; and performs related duties as assigned.

### **DISTINGUISHING CHARACTERISTICS**

This is the full supervisory-level class that exercises independent judgment on diverse and specialized duties involving the design, program, installation and maintenance of Programmable Logic Controllers (PLC), Supervisory Control and Data Acquisition Systems (SCADA), Human Machine Interfaces (HMI) and related process automation and control systems; ensures the support of network communications and associated hardware including process input/output (I/O) networks and LAN/WAN used in plant information networks. Incumbents are responsible for planning, organizing, supervising, reviewing, providing technical support, evaluating, and participating in the work of assigned staff in the design, construction, installation, modification, maintenance and repair of electrical, operational technology, and critical power systems, machinery, and devices at a state-of-the-art wastewater facility and is responsible for providing technical level support to an Electrical Services Manager in a variety of areas. Performance of the work requires the use of independence, initiative, and discretion within established guidelines.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives general direction from department Manager. Exercises direct supervision over professional and technical staff.

## **TYPICAL DUTIES AND RESPONSIBILITIES**

*The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to this position.*

- Participates in the selection, training, supervision and evaluation of assigned staff; participates in the establishment of performance requirements and personal development targets and provides technical assistance and advice to assigned staff.
- Provides day-to-day leadership and works with staff to ensure a high performance, customer service-oriented work environment which supports achieving the department's and the District's mission, strategic plan, objectives, and values.
- Assists with the development and administration of the department's annual budget; directs the forecast of additional funds needed for staffing, consultants, contractors, equipment, materials, and supplies; directs the monitoring of and approves expenditures; directs and implements adjustments as necessary to meet changing conditions.
- Coordinates, evaluates, and participates in the maintenance and enhancement of process automation and network functionality; engineers, installs, upgrades, configures, integrates, and maintains process automation and information networks across multiple platforms, including PLCs, SCADA, I/O networks, HMIs, servers, virtual machines, web servers, workstations, printers, and routers.
- Ensures proper maintenance, configuration, update, and design of process controls for water and wastewater treatment systems and 12kV power distribution systems.
- Plans, coordinates, and participates in the upgrade, maintenance, and optimization of critical 12kV power distribution and generation control systems, including PLC, Power Quality Monitor (PQM), Protective Relays, HMIs, and RTUs to ensure consistent reliable operation.
- Ensures supervisory control and data acquisition system and automatic process control systems are available, secure and functioning at optimal levels; reviews and responds to hardware, communication, and application failures; manages data recovery activities.
- Plans, provides technical guidance and participates in the development of the District's cybersecurity program, radio communications, industrial networks, process control, supervisory control and telemetry systems, loader logic, process databases, application programs, and system support scripts.
- Coordinates team activities with other information technology teams and with managers and staff in other business units; interfaces with business units to ensure supervisory control and data acquisition standards are followed in the selection of new control system instrumentation and hardware.

- Participates in the planning and implementation of complex projects and Control System strategic planning; maintains ladder logic, databases and graphics master files; researches new process control, supervisory control and telecommunication methods, techniques and equipment, and recommends their application.
- Provides technical assistance and advice to staff and other District sections and departments; provides for the training of staff in work methods, use of tools and equipment, and relevant safety precautions; provides specialized, electrical training for staff in other sections and departments; inspects and evaluates work being performed by District staff and contractors.
- Identifies problem areas and directs remedial action; interprets and modifies work orders for proper completion of tasks, verifying validity and necessity of requests; recommends special work or necessary equipment maintenance; researches new operational methods, techniques and equipment and recommends their application; submits requisitions for necessary tools, equipment, and supplies.
- Responds to inquiries and complaints from user departments; responds to emergency situations as necessary.
- Responsible for carrying out the District's safety program; ensures subordinates follow safety practices in work methods and procedures; enforces proper safety procedures while working in dangerous situations; educates employees on rules, regulations, codes, safe work habits, and potential hazards presented by their work environment.
- Maintains records in the form of blueprints, drawings and specifications for electrical and electronic system circuitry; reviews or prepares drawings and specifications for contract work and inspects work performed to determine compliance to standards and equipment; plans and lays out jobs from blueprints, drawings, sketches or verbal instructions.
- Ensures the timely completion of preventive and predictive maintenance programs; plans and oversees the testing of electrical and electronic SCADA equipment and devices on a scheduled basis; develops, reviews and updates written maintenance instructions and schedules.
- Prepares and maintains a variety of records and reports, including time cards, worksheets, accident reports, and maintenance requests.
- Ensures staff observe and comply with all District and mandated safety rules, regulations, and protocols.
- Performs related duties as assigned.

Continuous Improvement Related Duties:

- Supports and promotes the application of Continuous Improvement principles in the oversight of operations within the business unit.
- Assists in the development and maintenance of best practice in unit work processes and supports the philosophy of continuous improvement.
- Develops and monitors team and individual performance measures, ensuring that they align with District's strategic and operational plans.
- Ensures a thorough understanding of the Strategic Planning Cycle and participates in its development and deployment.

**REQUIRED QUALIFICATIONS**

Knowledge of:

- Principles and practices of employee supervision, including work planning, assignment review and evaluation, discipline, and the training of staff in work procedures.
- Principles and practices of leadership.
- Principles and techniques for working with groups and fostering effective team interaction to ensure teamwork is conducted smoothly.
- Administrative principles and methods including goal setting, program development and implementation.
- Principles and practices of budget preparation and administration.
- Principles, methods and equipment used in installation, maintenance and repair of electrical and electronics equipment and devices common to a large water works system; theory of electrical/instrumentation, operation, calibration, various field devices and equipment, and installation.
- Process mapping and structured problem solving.
- Practices, methods, techniques, tools and equipment used in the design, development, installation, testing calibration, maintenance, and repair of electronic and computer-based process control, supervisory control and telecommunication systems and equipment common to a large public utility, including those used for automated process control.
- Methods and techniques of installing, configuring, administering, and monitoring a diverse range of physical and virtual systems, evaluating system effectiveness, security and monitoring devices, and procedures to maintain integrity and security of data in networked systems.
- Principles, methods, protocols, and techniques in the design, installation, and operation of data, voice, and video communications systems, networks, equipment, devices, cabling LC ladder logic programming, designing interfaces, industrial control systems, and SCADA system device configuration.

- Safety practices, safe work methods and safety regulations pertaining to the work.
- Codes, ordinances and regulations pertaining to the work.
- District personnel rules, policies and labor contract provisions.
- District and mandated safety rules, regulations, and protocols.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

Continuous Improvement Based Knowledge:

- The core values, concepts, and framework of continuous improvement criteria, including the principles of management by fact, and organizational and personal learning.
- Familiar with process mapping and structured problem solving.
- Theoretical and practical knowledge necessary to develop and monitor individual performance standards, and insure they align with key performance measures for the unit.

Ability to:

- Select and supervise staff, provide training and development opportunities, ensure work is performed effectively, and evaluate performance in an objective and positive manner.
- Assist in developing and implementing goals, objectives, practices, policies, procedures, and work standards.
- Assist with the preparation, administration and monitoring of a division/department budget.
- Analyze, diagnose and modify computer-based hardware and software programs; use spreadsheets and database management systems for Industrial Control Systems (ICS) configuration and report generation; read and interpret drawings, specifications, and manuals.
- Conduct training on best practices and the operation of process equipment, instrumentation, SCADA systems, and a variety of control devices.
- Install, configure, maintain, and administer networked systems hardware and software and servers.
- Identify nominal voltages and other electrical hazards and make risk assessments while working at water/wastewater facilities and remote industrial sites.
- Design, program, troubleshoot, plant process and critical 12kV power distribution controls.

- Monitor systems performance and recommend changes; perform database management and administration tasks.
- Develop and implement security measures; analyze and define user requirements; conduct comprehensive research, analysis, and feasibility studies.
- Use modern, state-of-the-art precision and diagnostic instruments, computers, and specialized software.
- Maintain and utilize process flow charts for key processes, with performance standards related to customer and stakeholder needs; validate customer requirements.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies, and procedures, and standards relevant to work performed.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Use tact, initiative, prudence and independent judgment within general policy, procedural, and legal guidelines.
- Effectively use computer systems, software applications relevant to work performed, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Continuous Improvement Based Abilities:

- Maintain and utilize process flow charts for key processes, with performance standards related to customer and stakeholder needs.
- Validate customer requirements.
- Create a workplace that values employees, encourages their development, values their participation, and encourages innovation.
- Create an environment of continuous improvement and to ensure business unit results consistent with expectations in key performance measures.

Experience:

*Any combination of experience and education that provides the required knowledge and abilities is qualifying, along with the specific licenses/certifications as outlined below:*

- Six (6) years of journey-level water works or similar industrial electrical and/or electronics maintenance and repair experience, including supervisory control and telemetry systems, of which two (2) years is in a lead or supervisory capacity. College-level or advanced technical training in the electrical or electronics field is desirable.

Education:

- Equivalent to completion of the twelfth (12<sup>th</sup>) grade.

Licenses/Certifications:

- A valid California driver's license and the ability to maintain insurability under the District's Vehicle Insurance Policy.

**PHYSICAL DEMANDS**

*The physical demands described here are representative of those that must be met by employees to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

Must possess mobility to work in standard wastewater treatment plant and related facilities; vision to read printed materials and a computer screen, and to operate a motor vehicle and visit various District sites; color vision to read gauges and identify appurtenances; a hearing and speech to communicate in person and over the telephone or radio. The job involves frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment. Positions in this classification bend, stoop kneel, reach, and climb to perform work and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects averaging a weight of 20 pounds or heavier weights, in all cases with the use of proper equipment and/or assistance from other staff.

**WORK ENVIRONMENT**

*The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

Employees work partially indoors and partially outdoors and are exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, vibrations, chemicals, mechanical and/or electrical hazards, and hazardous physical substances, odors, and fumes.

Employees are subject to weekend and/or rotating shifts and 24-hour call out.

Eastern Municipal Water District  
Job Title: SCADA Supervisor  
Last Update: October 2019

This job description has been reviewed and approved by all levels of management in cooperation with the union (if applicable):

<b>Approved by:</b>	<i>Board of Directors</i>
<b>Date adopted:</b>	<i>October 2, 2019</i>
<b>Date modified:</b>	
<b>FLSA determination:</b>	<i>Exempt</i>

**Job Description Acknowledgment**

*I have received, reviewed and fully understand the job description for SCADA Supervisor. I further understand that I am responsible for the satisfactory execution of the essential functions described therein, under any and all conditions as described.*

*Employee Name (print):* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Employee Number:* \_\_\_\_\_

*Employee Signature:* \_\_\_\_\_