

AUTOMATION & CONTROLS SUPERVISOR

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

Under general direction, supervises, assigns, reviews, and participates in the work of staff responsible for the areas of process automation control systems and process information networks. Plans, designs, programs, installs and maintains Programmable Logic Controllers (PLC), Distributive Systems (DCS); Supervisory Control and Data Acquisition systems (SCADA), human machine interfaces (HMI) and related automation and control systems. Implements and modifies central control systems, water treatment plant process control systems, RF and fiber optic based communication systems, and field telemetry communications systems. Acts as a project leader, coordinating, overseeing and inspecting the work of professional and technical staff; performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

This is the first-line supervisor level classification in the Water Production Department. The incumbent is responsible for developing, governing, and overseeing process automation and control standards and policies, and for designing and implementing related computer, network, telecommunications, and applications technologies that provide cost effective solutions and support achievement of current and long-term goals and objectives within general policy guidelines. Supervises support staff, and is responsible for directing day-to-day assignments of specific duties, ensuring completion and compliance with applicable standards, policies and procedures, as well as providing technical assistance, training, writing and conducting performance appraisals.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from the Water Production Manager.

Direct supervision provided to Instrumentation/Electrical Technicians and Controls Analyst.

ESSENTIAL AND MARGINAL FUNCTION STATEMENTS

Essential and other important responsibilities and duties may include, but are not limited to, the following:

Essential Functions:

1. Assigns, evaluates and supervise the work of the Controls Team who are responsible for installation, repairs and maintenance of network infrastructure and operating systems on multiple platforms for the District's PLC, SCADA, DCS, and Plant Information local area and wide area networks (LAN/WAN).
2. Coordinates and participates in maintaining and enhancing process automation and network functionality.

Automation & Controls Supervisor

Essential Functions (continued)

3. Engineers, plans, coordinates, develops implements and maintains aspects of the District's SCADA systems and sub-systems and related functions.
4. Provides leadership and works with staff to ensure a high performance, customer service-oriented work environment that supports achieving the division's, department's and District's mission, plans, objectives and values.
5. Monitors and provides system administration for the District's process auto-mation and control systems including the Distributive Control Systems (DCS), the Supervisory Control and Data Acquisition systems (SCADA), micro-wave wireless communications systems, radio and telecommunication systems; establishes and maintains configuration of hardware, cabling and communications software and protocols and coordinates the integration of multiple networks, platforms, applications and users.
6. Designs, develops and writes programs for new automation and enhancements to existing PLC's, computers, configurations and applications to facilitate operational requirements of the District's water treatment, production and distribution systems.
7. Ensures the timely and accurate completion of preventive maintenance activities.
8. Develops, evaluates, tests, installs, troubleshoots and modifies central control operator interface graphics, ladder logic, control and communication databases, application programs and system support scripts.
9. Provides daily work instructions, guidance and performance feedback to staff and other project team members as assigned.
10. Provides training of staff in work methods, use of tools and equipment, and relevant safety precautions.
11. Reviews, modifies, and reports on District specifications and design documents for new and existing District facilities as related to process control schemes, instrumentation, communication and SCADA, checking for compliance with District and industry standards.
12. Direct the design, installation, and administration of automation and control systems network hardware, cabling, and software infrastructure; develops, recommends, and installs network architectures and proto-cols for fast, efficient sharing of data and applications among users and platforms.

Automation & Controls Supervisor

Essential Functions (continued)

13. Prepares a variety of special studies and reports; develops recommendations to improve departmental operations and efficiency.
14. Performs and instructs others in the support, preventive maintenance, and repair of control systems, electronic and computer systems, components, devices, and equipment.
15. Requisitions and orders necessary tools, equipment, and supplies.
16. Utilizes software applications for troubleshooting, diagnostics and record keeping.
17. Plans and lays out jobs from blueprints, drawings, sketches or verbal instructions; maintains records in the form of blueprints, plans and specifications for computers and electronic communications and instrumentation equipment and devices.
18. Regular attendance at the work site.

Marginal Functions:

1. System operation including: standby emergency response duties for after hours distribution system operational emergencies, operates pumps and related flow and pressure control and storage facilities manually or by using system control and data acquisition (SCADA) system, maintain and/or adjust system flow and pressure requirements, control flows to meet consumer demands including fire flow demands and minimum pressure requirements, determine and control proper chemical dosage rates for wellhead disinfection and distribution residual maintenance.
2. Calculates and adjusts chemical solution concentration and dosages. Design, implementation, and validation of chemical mixing, batching, and feed systems. Operation, installation, and calibration of online analyzers and instrumentation.
3. Perform related duties and responsibilities as required.

KNOWLEDGE, SKILLS AND ABILITIES

Knowledge of:

Programmable Logic Controller (PLC) programming.
Human Machine Interface (HMI) software configuration.
Software, mechanical and electrical maintenance principles and practices.
Principles and procedures of record keeping.
Advanced mathematical principles.
District control system equipment.

Automation & Controls Supervisor

Ability to:

Analyze complex maintenance problems and recommend solutions.

Exercise independent judgment and initiative within established guidelines.

Orient and train employees.

Direct and guide the work of others.

Understand and carry out oral and written instructions.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain cooperative working relationships with those contacted in the course of work.

Maintain physical condition appropriate to the performance of assigned duties and responsibilities.

Maintain mental capacity which allows the capability of making sound decisions and demonstrating intellectual capabilities.

Maintain effective audio-visual discrimination and perception needed for making observations, communicating with others, reading, writing and operating assigned equipment.

Work with other District department/divisions to reach a common goal.

REQUIRED QUALIFICATIONS

Experience and Training Guidelines

Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Five (5) years of progressively responsible, experience in the design, developing process control, implementation of process automation, control and telemetry systems, including a minimum of two (2) years experience in a lead or supervisor capacity; or an equivalent combination of training and experience.

Education/Training:

Graduation from an accredited program or college with a major in electronics, electrical engineering, computer science or a closely related field.

Certificate:

Possession of a valid T2 Water Treatment Operator Certificate and a valid D2 Distribution Operator Certificate issued by the State Water Resources Control Board (SWRCB), or the ability to obtain certifications within 1 year of appointment.

Possession of, or ability to obtain within one (1) year of appointment, a valid California Water Environmental (CWEA) Electrical & Instrumentation Technologist Certification – Grade III, or an approved alternative.

License:

Possession of a valid Class C California driver's license and a satisfactory driving record.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The physical and mental 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 job functions.

Automation & Controls Supervisor

Environmental Conditions

Standard office setting and outdoor field environment; travel from site to site; exposure to noise, dust, grease, smoke, fumes, noxious odors, gases, vibrations, and all types of weather and temperature conditions; exposure to hazardous traffic conditions; work in or around water; work and/or walk on various types of surfaces including slippery or uneven surfaces and rough terrain; incumbents may be required to work extended hours including evenings and weekends.

Physical Demands

Incumbent requires sufficient mobility to work in an office setting and field environment; walk, stand, and sit for prolonged periods of time; frequently stoop, bend, kneel, crouch, crawl, climb, reach, and twist; push, pull, lift, and/or carry light to moderate amounts of weights; operate office equipment including use of a computer keyboard; operate assigned equipment and vehicles; ability to verbally communicate to exchange information.

Mental

While performing the duties of this class, the employee is regularly required to use written and oral communication skills; read and interpret complex data, information and documents; analyze and solve problems; observe and interpret people and situations; use math and mathematical reasoning; learn and apply new information or skills; perform highly detailed work on multiple, concurrent tasks with constant interruptions; work under intensive and constantly changing deadlines and interact with those encountered in the course of work, some of whom may be demanding, dissatisfied, and or upset.

Vision

See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; and to operate assigned equipment.

Hearing

Hear in normal audio range with or without correction.

STATUS: Exempt
DATE ADOPTED: July 2021

Safety Sensitive Position