



## POSITION DESCRIPTION

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**TITLE: INSTRUMENT CONTROL TECHNICIAN I AND II**

**REPORTS TO:** Information Technology Supervisor

**GRADE:** 4, 6

**FLSA:** Non-exempt

**CONFIDENTIAL:** No

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### **SUPERVISORY RESPONSIBILITIES**

**DIRECT:** None\*

**INDIRECT:** None

*\*Instrument Control Technician II provides technical guidance to the Instrument Control Technician I*

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### **MINIMUM QUALIFICATION REQUIREMENTS**

Unless required by law, experience and education may be substituted for each other upon approval by the General Manager or their designee. Certifications required by law for the position must be obtained within first year in the position. A State of California Water Distribution Operator D1 certification is required by law for this position.

#### **EDUCATION:**

**Level I:** High School diploma, or equivalent and water and /or wastewater coursework; valid California driver's license and proof of insurability; and Standard First Aid and CPR certifications are required. A (CWEA) California Water Environment Association Electrical/Instrumentation Grade II Certification or Electrical Apprenticeship Certificate preferred.

**Level II:** Associate's degree or equivalent in electronics or electrical theory with five years progressive experience, or high school diploma or equivalent along with six years progressive experience in telemetry; valid California driver's license and proof of insurability; and Standard First Aid and CPR certifications are required. A CWEA Electrical/Instrumentation Grade II Certification or Electrical Apprenticeship Certificate preferred.

#### **EXPERIENCE:**

**Level I:** One year of direct experience in electronics and electrical experience in the maintenance and repair of telemetry equipment, preferably in utility operations; experience with SCADA (Supervisory Control And Data Acquisition) systems, remote telemetry units, telemetry and telecommunications equipment; comprehensive ability to effectively utilize a personal computer and peripherals along with related word processing and spreadsheet programs.

**Level II:** Five years of direct experience in electronics and electrical experience in the maintenance and repair of telemetry equipment, preferably in utility operations; experience with SCADA systems, remote telemetry units, telemetry and telecommunications equipment; comprehensive ability to effectively utilize a personal computer and peripherals along with related word processing and spreadsheet programs.

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### **CONTACT RESPONSIBILITY**

**INTERNAL:** Interaction with Supervisor to receive specific work direction and review results; district employees to resolve purchasing, inventory and vendor-related issues; Operations Supervisors; train and guide Systems Operators to assist in installation and front line support of telemetry equipment; all other

District personnel as required.

**EXTERNAL:** Interaction with outside consultants and vendors to purchase materials and to coordinate external repair of equipment.

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### PHYSICAL REQUIREMENTS

Ability to walk extended distances; climb steep hills and ladders; may on an infrequent basis assist with lifting up to 100 pounds. Ability to tolerate repeated bending and stooping. Good hearing, eyesight and speech are necessary. Ability to effectively utilize a personal computer, keyboard and peripherals. Ability to tolerate prolonged exposure to a computer screen. Ability to utilize various laboratory equipment. Excellent verbal and written communication skills are required.

***These positions require the ability to be "on-call", work evenings, weekends, and Holidays.***

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### ENVIRONMENTAL CONDITIONS

Work is often performed outdoors in all kinds of weather. Subject to: hazardous materials (e.g. chlorine, bacteria, etc.), confined spaces, foul odors, hazardous traffic conditions, noisy conditions, contact with animals and insects, variable weather conditions, possible exposure to heavy equipment, dust, and fumes. When working indoors, work is performed in an office environment with lighting and ventilation. Subject to conversational noise from other personnel within the facility; standard background noise found in an office environment; long periods of sitting; exposure to a computer screen. Appropriate personal safety equipment is provided.

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### DETAILED DUTIES AND RESPONSIBILITIES - ESSENTIAL FUNCTIONS

This at will position responsibilities include performing a variety of electrical and electronic maintenance and repair duties related to telemetry control equipment as well as general electrical and electronic systems. Installs, diagnoses and repairs instrument and control telemetry systems used in the storage, treatment, and distribution of potable water, wastewater and reclaimed wastewater. Constructs circuit-testing devices, calculates motor feeder conductors, conduit sizes, main disconnects and over-current devices; reads, comprehends and interprets complex electronic and electrical system schematics; performs programmable logic controller maintenance. Support of the District Strategic Plan and Mission Statement; and the ability to work effectively in a team environment are essential. A working knowledge and understanding of District safety rules and regulations and active participation in the District's safety program is necessary. Stable, reliable attendance is required. Level I Instrument Control Technicians work under general supervision. Level II Instrument Control Technicians work independently with minimal level of supervision.

The following tasks are typical for this classification. Incumbents may not regularly perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business or staffing needs and changing business practices as defined by the General Manager.

<b>% TIME</b>	<b>TASKS</b>
<b>LEVEL</b>	
<b>I</b>	<b>II</b>
<b>15%</b>	<b>25%</b>
	Performs electrical troubleshooting, maintenance and repair: <ul style="list-style-type: none"><li>• Tests, troubleshoots, and performs preventative maintenance on a variety of low and medium voltage industrial electrical systems, components, motors and machinery.</li><li>• Repairs and replaces defective electrical parts in motors, hydroelectric generators,</li></ul>

storage batteries, controllers, conductors, switches, and other industrial electrical fixtures.

- Performs preventative maintenance and repair of plant, field, office and shop electrical and electronic systems, components, devices and equipment.
- Modifies, alters and installs motor control equipment circuits, mapping and wiring the work; reads and interprets blueprints, schematics and wiring diagrams; upon completion, documents modifications made to the system.

- 40%**    **30%**    Performs instrumentation system installation, maintenance and repair:
- Tests, troubleshoots and calibrates, repairs and performs preventative maintenance on a variety of electronic, telecommunication and instrumentation systems and components, programmable logic controllers, pneumatic and electric pressure recording and indicating instruments such as flow meters and level sensing devices associated with the operation of the District's pipeline system.
  - Performs a variety of skilled, technical duties in the development, installation, modification, and maintenance of telecommunications, process control, SCADA, and telemetry systems.
  - Modifies, installs, and supports software based control and instrumentation logic and systems used for the transportation of electronic signals across a wide geographic area.
  - Tests circuitry to locate defective parts in analog and digital equipment; replaces defective parts.
- 35%**    **10%**    Administers electronics maintenance program:
- Ensures the timely and accurate completion of preventative maintenance activities.
  - Requisitions necessary material, equipment, and supplies.
  - Researches new operational methods, techniques, and equipment and makes recommendations.
  - Schedules and coordinates activities with other staff, departments, and agencies.
  - Provides training and direction to Systems Operators in routine maintenance and repair of electrical and electronic systems.
  - Provides detailed reports on activities as directed.
- 0%**    **15%**    Supports new construction:
- Reviews plans and provides design input to electrical and SCADA design engineers.
  - Inspects new installations for conformity to District standards and adherence to electrical code.
- 0%**    **10%**    Trains Level I Instrument Control Technician:
- Acts as technical guide and lead for Level I Instrument Control Technician.
  - Trains Level I Technician on SCADA and PLC (programmable logic controller) systems hardware and software configuration.
  - Familiarize Level I Technician on WAN (wide area network) and SCADA communications network components.
  - Guide Level I Technician and other team members on District electrical safety policy and procedures.

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## **DETAILED DUTIES AND RESPONSIBILITIES - NON-ESSENTIAL FUNCTIONS**

- 10%**            Performs all related duties as assigned.