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**JOB TITLE:** Controls and Instrumentation Specialist  
**DEPARTMENT:** Treatment Operations  
**REPORTS TO:** Treatment Operations Manager  
**FLSA STATUS:** Exempt

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## SUMMARY OF POSITION

This position is responsible for highly technical skilled work related to Supervisory Control and Data Acquisition (SCADA) computer hardware, instrumentation and metering devices, software, network and communication systems and Programmable Logic Controllers (PLCs). The incumbent works collaboratively with Treatment, Collections, and Maintenance departments to implement, troubleshoot, diagnose and maintain the control and communication systems for the District's collection and treatment facilities. The incumbent is guided by District policies, receives assignments from the District Manager and/or Department Managers, and uses good judgement in the application of technical knowledge. This is a District safety-sensitive position in accordance with Arizona law.

## ESSENTIAL FUNCTIONS

*Performs duties and responsibilities commensurate with assigned department which may include, but are not limited to, any combination of the following:*

- May serve as a lead to staff to include assigning and monitoring work and providing direction.
- Provides technical support in the design, installation, construction, and modification of Supervisory Control and Data Acquisition (SCADA) hardware, software, network, and communication systems.
- Installs, maintains, and services the Remote Telemetry Units (RTUs) and Programmable Logic Controllers (PLCs) that monitor and control the wastewater collection and treatment functions and reclaimed water storage and distribution functions.
- Performs corrective and preventive maintenance to ensure the proper operation and calibration of wastewater and reclaimed water system instrumentation, control loops, and monitoring circuits.
- Monitors and verifies accuracy of instrumentation and metering equipment.
- Monitors SCADA data and responds to SCADA system user problems; troubleshoots SCADA system and PLC malfunctions and implements or recommends effective repairs and adjustments.
- May provide technical training; participates in training and startup of new equipment, systems, and processes.
- Monitors and maintains materials, inventory, and supplies necessary for communication systems; and requests the purchase of materials and supplies within established budgets.
- Prepares, plans, schedules, processes, and completes work orders in the area of responsibility.
- Prioritizes work orders and work tasks to ensure the continuous and safe operation of wastewater treatment and collection facilities.
- Provides input relative to the fiscal needs for the operation and maintenance of District SCADA and/or instrumentation systems.
- Provides on-call support during non-business hours including evenings, weekends, and holidays to troubleshoot and resolve automated control and data communication systems.
- Complies with and implements District's safety programs as applicable to area of responsibility.
- May assist in operational needs of Treatment department as needed.
- Drives District vehicles in accordance with District policy as needed.
- Performs other duties of a similar nature or level.

**REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES**

- Knowledge of District policies and procedures.
- Knowledge of the methods, materials, tools, and equipment used in the operation, maintenance, and installation of wastewater collection and treatment systems.
- Knowledge of SCADA and PLC software and hardware.
- Knowledge of radios, fiber optic, ethernet, routers, switches, TCP/IP, communications, and network systems.
- Knowledge of local, state, and federal codes and regulations related to responsibilities.
- Knowledge of safety procedures and safe work practices.
- Knowledge of inventory principles and proper record keeping.
- Skilled in using applicable tools and equipment related to area of assignment.
- Skilled in using computers and related software applications.
- Ability to modify SCADA software.
- Ability to develop and modify SCADA graphics.
- Ability to install, inspect and test RTU's or PLCs in field locations and terminate control and instrument wiring.
- Ability to test, analyze instrument, metering, and control systems, detect errors or malfunctions, and take corrective action, both in the office and the field.
- Ability to generate reports, sort and categorize data.
- Ability to prioritize and assign work in keeping with the priorities of Department Managers and the District Manager.
- Ability to read technical manuals and work instructions and apply them to the maintenance and operation activities.
- Ability to read engineering plans, schematics, construction drawings and technical specifications.
- Ability to work cooperatively and professionally with all other District employees, vendors, and the public.
- Ability to understand and follow oral and written instructions in the English language.
- Ability to complete required OSHA and other safety training classes.

**WORK ENVIRONMENT AND PHYSICAL DEMANDS**

- Most work is performed in a plant/field setting, frequently outdoors, with occasional work done in an office environment.
- Ability to work in a wide variety of weather conditions and exposure to the elements.
- Sufficient strength to lift and move objects up to 30 pounds on occasion.
- Ability to work in small, cramped spaces and comply with confined space entry procedures.
- Ability to safely drive District vehicles and operate equipment such as fork trucks, front end loaders/backhoes and aerial lift equipment.
- Ability to wear protective equipment as required, such as a respirator, hard hats, safety-rated steel-toed boots, and retrieval harness.
- Sufficient body flexibility, mobility, stamina, and balance to perform operation and maintenance tasks which require moderate, though not constant physical effort, typically involving some combination of climbing, balancing, stooping, kneeling, crouching, crawling, climbing stairs and ladders, lifting, carrying, pushing and/or pulling of objects and materials of moderate weights, walking over uneven terrain.
- Visual and muscular dexterity to operate a motor vehicle, equipment, hand tools and computer.

- Sufficient clarity of hearing, with or without reasonable accommodation, which permits the employee to discern verbal instructions, communicate with other employees and the public, and discern warning or emergency alarms, including vehicle back-up warnings.
- Sufficient visual acuity, with or without reasonable accommodation, which permits the employee to comprehend written work instructions and work orders, technical and operational documents, discern color-coded equipment indicators, and move over rough or unfamiliar terrain.
- Sufficient manual dexterity, with or without reasonable accommodation, which permits the employee to operate a variety of power and hand tools to adjust or maintain equipment.

#### **REQUIRED CREDENTIALS, EDUCATION AND WORK EXPERIENCE**

- High school diploma or GED equivalency.
- A vocational degree in related field and a minimum of two years in the operation, implementation and troubleshooting of SCADA, instrumentation, communications, and control systems in wastewater collection and/or treatment.
- An equivalent combination of experience and training which provides the knowledge and abilities necessary to perform the work may be considered.
- Must possess a Grade 3 or 4 Wastewater Treatment Operator Certification from the Arizona Department of Environmental Quality.

#### **ADDITIONAL REQUIREMENTS**

- This is a safety sensitive position that must pass a post offer/pre-employment drug screening, background check and physical.
- This position is subject to random drug and alcohol testing throughout the period of employment in accordance with the District's Drug-Free Workplace Policy.
- This position requires the use of District vehicles for business. A valid, unrestricted driver's license with no major citations within the past 39 months prior to the start date is required.

#### **EQUAL OPPORTUNITY EMPLOYER**

FHSD is an equal opportunity employer. FHSD shall employ, without discrimination as to race, color, religion, age, sex, national origin, disability status, genetics, protected veteran status, sexual orientation, gender identity or expression, or any other characteristic protected by federal, state, or local laws. Reasonable accommodations may be made to enable qualified individuals with disabilities to perform essential job functions.

#### **DISCLAIMER**

Some incumbents may not perform all the duties listed or may perform related duties as assigned. This job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the position change.