



CLASSIFICATION NO. 808
Established: 10/03
FLSA: Non-Exempt
EEO: 7

INSTRUMENTATION TECHNICIAN

CLASS CHARACTERISTICS

Under general supervision, to develop specifications and standards, to program, calibrate, maintain, tune, and install wastewater control and metering systems and supporting equipment and software; and to do other work as required.

DISTINGUISHING CHARACTERISTICS

The Department of Water Environment Services manages and operates the County's utility service districts, including sewerage facilities, collection systems, pumping stations, treatment plants and surface water management.

The Instrumentation Technician is responsible for the hardware and software systems that control and meter wastewater treatment plant operations. Incumbents serve on project development teams to specify equipment and software needs, enforce programming standards, perform hardware and software maintenance for control systems and processes, and design and program systems for efficient and safe wastewater operations.

The Instrumentation Technician differs from the Wastewater Mechanic series that performs maintenance and repair to wastewater equipment and instruments. It also differs from the Collection Systems Technician series which maintains and repairs sewer lines and related equipment.

TYPICAL TASKS

Duties may include but are not limited to the following:

1. Designs, upgrades, programs, installs, and tests new and repaired control and monitoring systems such as distributed control systems (DCS), human machine interface (HMI), programmable logic controllers (PLC), instrumentation – control – automation (IC&A); ensures that repairs and installations are safe and operate properly.
2. Performs computer hardware and software maintenance for wastewater systems: tunes PID loops, troubleshoots computer systems and networks; upgrades firmware and software, recovers historical data, organizes and backs up systems files, maintains and stores computer software.
3. Participates with project teams to review contract documents, specify networks, instructions, electrical components and associated peripheral equipment.
4. Confers with end users to analyze and assess needs of the wastewater system resources; plans new or modified applications; recommends cost-effective solutions to meet user

requirements; develops time and cost estimates to complete projects; generates reports regarding system optimization and usage.

5. Maintains records, supplies, and equipment for process and control systems and equipment.
6. As assigned and related to instrumentation projects, directs the work of others who are responsible for the efficient and safe operations of County wastewater treatment plants.

REQUIRED KNOWLEDGE AND SKILLS

Working knowledge of: Applicable laws, and regulations related to OSHA, DEQ, MSDS, and Oregon Electrical codes; process control techniques; software applications for interfacing with remote plant equipment and retrieving data; physics of flow and level applications using basic math and algebra; schematics interpretation; recordkeeping techniques; basic supervisory and project management techniques.

Skill to: Program PLC's using various software packages; program control systems; upgrade firmware updates; back up system applications; purchase, inventory and maintain records for systems, equipment and software; read and interpret P&ID loops, electrical schematics, technical manuals; plan testing procedures; communicate effectively, both orally and in writing; coordinate the work of others; establish and maintain effective working relationships with contractors, officials of government agencies, County employees and the public.

WORKING CONDITIONS

Duties require physical labor, including walking, reaching, squatting, kneeling, bending, balancing, climbing, shoveling, fine motor control, and ability to lift up to 50 pounds, carry, and push/pull up to 70 pounds. Duties also involve exposure to bacteria, viruses and toxins in wastewater, chemicals, exhaust fumes and dust, loud noises, and vibration. Some duties involve exposure to adverse weather conditions and hazardous locations, such as streets, live sewers, confined underground areas and on elevated platforms.

MINIMUM QUALIFICATIONS

Minimum qualifications are used as a guide for establishing the minimum experience, education, licensure, and/or certifications required for employment in the classification. The following minimum qualifications are established for this classification. Additional minimum qualifications and special conditions may apply to a specific position within this classification and will be stated on the job announcement.

Experience: A minimum of two (2) years of related experience that would provide the required knowledge and skills to perform the responsibilities of this position.

Licenses/Certifications: None Required.

PRE-EMPLOYMENT REQUIREMENTS

Driving is required for County business on a regular basis or to accomplish work. Incumbents must possess a valid driver's license, and possess and maintain an acceptable driving record throughout the course of employment.

Employment is contingent upon passing a post-offer physical assessment. Accommodation requests will be reviewed on an individual basis in compliance with State and Federal legislation.

Edited: 6/16