

**CITY OF SALEM
WATER QUALITY TECHNICIAN**

00123

NATURE OF WORK

This is technical work in the collection, analysis, and documentation of domestic drinking water samples as required by the Safe Drinking Water Act and related regulations.

Work involves responsibility for collecting samples, conducting field water quality analyses, and maintaining records of analytical results. Samples will be collected throughout the distribution system, at Aquifer Storage and Recovery facilities, at treatment plant facilities, and in the watershed. Work includes responsibility for operating headgates, filters, and other treatment plant facilities to provide appropriate water flow into distribution system. Work includes operating and maintaining chlorination, fluoridation and other chemical feed systems as needed for normal and emergency operations. The work does not normally include lead responsibilities nor full supervisory responsibilities, however, the incumbents of this classification may direct others in sampling methods, or train others in work responsibilities.

The work of this classification is distinguished from the Water Quality Specialist by the absence of overall monitoring drinking water quality for trends, interpreting regulations for sampling, testing and reporting requirements, and providing assistance in the design and implementation of many special sampling, monitoring and testing programs.

ILLUSTRATIVE EXAMPLES OF WORK

(Any single position of a class will not usually involve all essential duties listed and many positions will involve essential duties which are not listed.)

Collects samples in the watershed, at the water treatment plant, at the Aquifer Storage and Recovery, and throughout distribution system as directed by supervisor.

Investigates customer complaints regarding water quality, obtaining specific information concerning color, odor, clarity and location. Conducts sampling in compliance with the requirements of U.S. Environmental Protection Agency and the Oregon Health Division mandated sampling programs. Coordinates sample collection and analysis efforts with the Willow Lake Laboratory or outside laboratories. Collects and transports water samples to laboratories. Reports laboratory results to customers with recommendations for corrective measures. Discusses sampling results with supervisor and proceeds as directed by supervisory staff.

Conducts water quality sampling of aquifer and distribution system related to Aquifer Storage and Recovery program. Measures aquifer levels and stream flows to meet requirements of Oregon Department of Water Resources.

Operates and maintains equipment of a water treatment system as back-up or for staffing relief, operates pumps, motors, valves, filters, canals, fluoride feed injectors and other chemical feed systems, generators, turbidimeter, pH meters, and chlorinators. Diagnoses equipment malfunctions, takes remedial action, and reports problems to the supervisor. Adjusts treatment plant operations based on analysis and operating parameters set by supervisor.

Work may involve responsibility for making decisions concerning opening or closing valves, diverting water through appropriate filtering basins, and making adjustments based upon a reading of instruments, sample evaluation, and gauges.

Performs routine laboratory analysis of raw and finished water quality. Cleans, maintains and stores lab glassware, instruments and supplies. Conducts field analyses using equipment which may include pH meters, colorimeters, conductivity meters, and dissolved oxygen meters. Addresses distribution system concerns based on analyses and parameters set by supervisor.

Observes variations in physical condition of reservoirs, pumps, canals, operating conditions and interprets test results, meter readings, gauges, and makes necessary recommendations and/or adjustments to ensure the proper quality and quantity of water is delivered to consumers. Communicates with supervisor on a daily basis.

Maintains records on treatment plant and distribution system operations, water quality testing results and other data related to the water treatment and distribution system. Enters data onto spreadsheets.

May participate in the installation, cleaning, maintenance, and repair of various structures, filter basins, and other equipment or components at the treatment plant. May occasionally transport hazardous materials (chlorine) to treatment facilities.

May perform routine maintenance functions as required at the treatment plant and within the distribution system.

Performs other related work as required.

WORK QUALIFICATIONS

Experience in collecting water samples, analyzing data, and interpreting results and in the operation of a drinking water treatment plant (preference for slow sand filtration); completion of two years of college or university with major course work in chemistry, bacteriology or related subjects; or any equivalent combination of experience and training which provides the following knowledges, abilities and skills:

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Knowledge of State of Oregon Drinking Water Regulations (Oregon Administrative Rules Chapter 333), watershed management and protection practices and the Safe Drinking Water Act regulations applicable to water quality sampling.

Considerable knowledge of the materials methods, equipment, and practices used in the treatment and distribution of water and of chemistry and bacteriology.

Considerable knowledge of the safety precautions necessary in water treatment and distribution, and in taking samples and performing laboratory analysis.

Considerable skill in the use of modern office equipment such as copiers and facsimile machines and personal computers and keyboarding skills to access information in computer systems and entering technical information.

Skill in the use and care of laboratory equipment and ability to follow complex sampling procedures and interpret technical laboratory results.

Ability to read maps, locate features, and interpret plans and diagrams.

Ability to independently schedule and organize work assignments to ensure timely and effective completion.

Ability to read and interpret maps, plans and diagrams. Ability to make mathematic computations using a calculator.

Ability to establish and maintain effective working relationships with other employees and with the public. Ability to understand and follow oral and written instructions. Ability to work independently and with a minimum of supervision.

Possession of a valid Oregon Water Treatment Plant Operator I or Oregon Water Distribution System Operator I certification is required within six months. Higher certifications are desirable.

Possession of a valid Oregon Class C driver's license, and the ability to meet City driving standards. Preference given for Commercial Driver's Licence Class A or B, with hazardous materials endorsement.

Work is performed both in the outdoors and around industrial settings. Work hours may require weekend and evening duties with some call back. Industrial settings require sufficient mobility and dexterity for working around chemicals, noise, in underground vaults, close quarters, and heights with safety precautions in order to inspect equipment operation and check monitoring gauges. Sensory perceptions are necessary to identify

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unsafe conditions such as mechanical noises, chlorine smells, etc. Outdoor work includes moving efficiently over uneven terrain in a variety of weather conditions. Work can involve long hours in the open, frequently under adverse climatic conditions. Work routinely requires operation of motor vehicle equipment to check conditions and take samples at treatment and distribution facilities.

Personnel Director

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