



Water Treatment Plant Operator & Trainee

Class Code:
713,714

ALAMEDA COUNTY WATER DISTRICT
Revision Date: May 2013

DEFINITION

Under supervision of the Treatment and Distribution Supervisor, operates, inspects and maintains District water treatment plants and related facilities to supply, treat, store and distribute water for a large urban potable water distribution system; operates all equipment needed to regulate water flow through the hydro-electric power and water treatment plant processes; and performs other related work as required.

Water Treatment Plant Operator Trainees function as Shift Operators as defined by the State; and accept the responsibilities inherent in a treatment plant operator who also operates a distribution system as stipulated in the California Code of Regulations.

DISTINGUISHING CHARACTERISTICS

Water Treatment Plant Operator Trainee is the entry level classification in the Water Treatment Plant Operator series. Under close to general supervision within a framework of established policies and procedures, incumbents receive on-the-job training and experience in the operation of a water treatment and distribution system. Assignments are given in specific terms and are subject to frequent review while in progress and upon completion, except where tasks are well defined by established standards, policies and procedures. As experience and proficiency are gained, assignments become more varied and difficult with less direct supervision.

This class is distinguished from the Water Treatment Plant Operator classification which has responsibility for the efficient operation and general maintenance of a water treatment plant and distribution system on an assigned shift. These classifications are flexibly staffed. Incumbents in this classification normally advance to a Water Treatment Plant Operator after two years at entry level, successful completion of a formal training program that meets the requirements of the journey-level classification, obtaining a Grade T3 Water Treatment Plant Operator Certificate, receiving a performance rating of "meets requirements" overall on the most recent evaluation and supervisory confirmation of proficiency in the job requirements of the journey level classification.

Water Treatment Plant Operator is the journey level classification in the Water Treatment Plant Operator series. Under general supervision within a framework of established policies and procedures, incumbents are fully qualified Water Treatment Plant Operators responsible for the efficient operation and general maintenance of a water treatment plant and distribution system on an assigned shift. Assignments are given in general terms and are subject to periodic review while in progress and upon completion. There is significant latitude for independent judgment and action in well-defined areas of work.

This class is distinguished from the Advanced Water Treatment Plant Operator classification which serves as shift leader for Water Treatment Plant Operators and Water Treatment Plant Operator Trainees and regularly performs higher skilled duties related to the efficient operation and general maintenance of a water treatment plant and distribution system on an assigned

shift. The Water Treatment Plant Operator and the Advanced Water Treatment Plant Operator classes are flexibly staffed. Incumbents in this classification normally advance to the Advanced Water Treatment Plant Operator after three (3) years experience at the journey-level, obtaining a Grade T4 Water Treatment Plant Operator Certificate, receiving a performance rating of "meets requirements" overall on the most recent evaluation and supervisory confirmation of proficiency in the job requirements of the advanced-journey level classification.

TYPICAL DUTIES

TYPICAL EXAMPLES OF DUTIES MAY INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

- Operates all equipment needed to regulate water flow through the hydropower and water treatment plant processes, including equipment related to conventional treatment (with ozone disinfection) and management of residuals generated from such processes in order to meet production requirements and drinking water quality standards.
- Monitors and controls the water supply, transmission and storage systems through a plant supervisory control and data acquisition (SCADA) system, and analyzes and acts accordingly to control flow through various transmission and distribution facilities or to take other actions as required.
- Computes chemical dosages and adjusts chemical feeders.
- Monitors operation of membrane treatment facilities, shuts down such facilities as necessary, and notifies Treatment Facilities Operators of membrane facility alarms and actions taken.
- Prepares and maintains detailed logs, records and reports on a variety of functions including; plant operations, test results, maintenance work performed, unusual operating conditions and the results of periodic inspections conducted; uses a computer to maintain data base files and generate reports.
- Performs a variety of laboratory tests to determine plant process performance and compliance with water quality regulations; maintains laboratory equipment in clean condition.
- Takes regular inventories of chemicals and other supplies used during the operation of water facilities; orders operating supplies and chemicals as needed; and assists with the safe unloading and storage of chemicals.
- Works with hazardous chemicals related to water treatment; receives training and responds to hazardous chemical spill events at District facilities.
- Makes equipment adjustments, lubrications and minor repairs and participates in major plant repairs.

- As assigned, operates the plant communications during off hours, on weekends and holidays; receives calls from customers, dispatches personnel if needed; maintains telephone and radio communications with field employees, security forces and others, including lock out/tag out programs, confined space program and emergency operations plan.
- Learns and receives training on a variety of issues including: advanced operational and technological developments in the water industry and safety and environmental compliance requirements.
- Maintains plant, operating equipment and facilities in a clean and orderly condition; performs routine housekeeping chores inside and outside the plant and conducts regular site safety inspections.
- With proper training, may perform the assigned responsibilities of a Solids Handling Operator on an as-needed basis.
- Operators may instruct Trainees and new journey-level operators
- May conduct tours for individuals or groups, as requested.
- May operate a motor vehicle or fork lift incidentally in the performance of work.
- Performs other related work as required.

REQUIREMENTS

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

Education and Experience:

High school diploma or its equivalent plus specialized training (recent acceptable formal courses of instruction) in water treatment and plant operations; and

Water Treatment Plant Operator Trainee: No work experience required.

Water Treatment Plant Operator: At least three (3) years experience operating a water treatment plant as an operator in charge of a shift, or two years of experience as a Water Treatment Plant Operator Trainee with the District (only one year of experience may be required if the individual has a California Department of Public Health Water Treatment Plant Operator Certificate T2 Operator's Certificate or higher at time of appointment).

Knowledge, Skills and Abilities:

Water Treatment Plant Operator Trainee:

Knowledge of: basic mechanical, electrical, and hydraulic principles; arithmetic; identification, use and safe operations of standard hand and power tools and equipment; safe work practices and pertinent safety regulations.

Skill and Ability to: perform routine maintenance and cleaning on machinery, structures, equipment and piping; learn the practices, procedures, techniques, regulations, and laws pertaining to a water treatment plant and distribution system; understand and follow written and verbal instructions; learn to operate, clean, and perform minor maintenance on water treatment plant equipment and facilities; read and interpret a variety of meters, gauges, and recording equipment; learn to read and interpret mechanical system and piping diagrams; learn to observe and accurately record operating conditions and make verbal or written reports; learn to recognize unusual, inefficient, or dangerous operating conditions and exercise independent judgment within established guidelines; perform assigned activities with decreasing supervision while accepting increasing responsibility; learn the operation and routine servicing of computerized instrumentation and plant operational equipment; establish and maintain effective working relationships; and perform essential duties of the job without causing harm to self or others.

Water Treatment Plant Operator: (in addition to the above)

Working Knowledge of: the operation, maintenance, and cleaning of water treatment plant, blending facilities, and distribution system equipment and facilities; water treatment principles, methods, and practices; safety rules, codes, and regulations pertaining to the work; the methods and precautions related to storing and handling chlorine and other hazardous chemicals; mechanical, electrical, and hydraulic principles; standardized water quality tests; routine facility and equipment maintenance and cleaning methods.

Skill and Ability to: operate water treatment plant and distribution system equipment, including automatic control devices without immediate or detailed supervision; effectively use computers for data base management; perform minor maintenance and make operating adjustments to water treatment and distribution equipment; recognize unusual, inefficient or dangerous operating conditions and take appropriate action; accurately read and record data from gauges and meters; read and interpret plant piping and distribution diagrams; perform standardized water quality tests and adjust plant equipment accordingly; compile, evaluate and analyze operational data and information and take, or recommend appropriate action; learn advanced processes and control techniques and complex analyses of water quality.

Additional Requirements:

- Must possess a valid California driver's license and have a satisfactory driving record

Water Treatment Plant Operator Trainee:

- Must possess or obtain a California Department of Public Health Water Treatment Plant Operator Certificate Grade T2 within 18 months of employment.
- Must successfully complete a formal Operator training program and obtain a California Department of Public Health Water Treatment Plant Operator Certificate Grade T3 within four (4) years of appointment to the Water Treatment Plant Operator Trainee class (or within 2 years if in possession of a Grade T2 Certificate at the time of appointment).

Water Treatment Plant Operator:

- Must possess a California Department of Public Health Water Treatment Plant Operator Certificate Grade T3.

Working Conditions/Physical Requirements:

The essential duties of this classification require the ability to work outdoors under various climatic and geographic conditions; to work rotating assignments; to work weekends, holidays, and overtime as needed; to work with and around hazardous chemicals; to be clean shaven and

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able to wear respiratory protection equipment as required; to complete necessary Continuing Education (CEU) as required to obtain, maintain and renew requisite California Department of Public Health certification.

The essential duties of this classification require repetitive use of feet and hands to operate vehicles, equipment and tools; the ability to lift sacks of chemicals weighing up to 55 pounds; to speak to verbally exchange ideas and information; to hear to receive verbal detailed information and instruction; to see at arms length to twenty feet with a good field of vision and the ability to distinguish basic colors; to walk, stand and climb for sustained periods of time; and finger dexterity and hand strength to operate and grasp tools and equipment on a daily basis.

Revised: 05/13

Approved: 
Human Resources/Risk Manager