



Tuolumne Utilities District  
Job Description

**WATER TREATMENT PLANT OPERATOR OIT/1/2/3**

POSITION:	Water Treatment Plant Operator – OIT/1/2/3	DEPARTMENT:	Water
REPORTS TO:	Water Superintendent	FLSA Status:	Non-Exempt
PAY RANGE:	29/30/34/38	DATE PREPARED:	October 2018
INCUMBENT:			

**Summary:**

These positions are in the Water Treatment Operator classification (class) series. Under direct or general supervision of the Water Operations Superintendent or Water Foreman, operates, repairs and maintains the District’s water treatment facilities, including water treatment and distribution systems; reads and interprets charts and meter readings for analyzing the efficiency of plant operations; maintain chemical inventory; and performs other related work as required.

**Class Characteristics:**

Operator-in-Training (OIT), is the trainee-level class in the plant operations series. Initially under close supervision, incumbents learn District and operational procedures for water treatment and distribution system equipment and facilities. As experience is gained, assignments become more varied and the work is performed more independently. This class is alternately staffed with Plant Operator I and incumbents may advance after gaining experience, obtaining the required level of certification, meeting the qualifications of and consistently performing the work of the higher-level class.

Plant Operator 1, is the entry level class in this plant operations series. Under direct supervision, incumbents perform all tasks related to the operation of water treatment plants, including the water distribution systems, and associated equipment and facilities. As experience and certification is gained, operators may independently operate plants and appurtenances under the certification of a senior Treatment Plant Operator. This class is alternately staffed with Plant Operator 2 and incumbents may advance after gaining experience, obtaining the required level of certification, meeting the qualifications of and consistently performing the work of the higher-level class.

Plant Operator 2, is the journey level class in this plant operations series. Under minimal supervision, incumbents perform all tasks related to the operation of water treatment plants, including the water distribution systems, and associated equipment and facilities. This class may be alternately staffed with Plant Operator 3, and incumbents may advance after gaining experience, obtaining the required level of certification, meeting the qualifications of and consistently performing work of the higher-level class.

Plant Operator 3, is the advanced journey level in this class series. Incumbents are fully competent to independently perform all tasks related to the operation of water treatment plants, including the water distribution systems, and associated equipment and facilities. Incumbents in this classification may assist with the training and oversight of less experienced staff assigned to a treatment plant.

**Essential Functions (Illustrative Only):**

*The duties shown are done to differing levels of complexity and under differing levels of supervision depending upon the experience, certification level and training of the incumbent. Higher levels of the operator class are expected to completely and independently undertake the duties listed, while lower levels may be assigned less complex tasks such as vegetation management, maintenance and chemical delivery, and require instruction and assistance, or may singly accomplish only a portion of a listed activity. Essential responsibilities and duties may include, but are not limited to, the following:*

- Performs a variety of maintenance and repair on water treatment and distribution facilities including landscape maintenance such as weed and vegetation control, tree-trimming and brushing, plumbing at water treatment and distribution facilities, assisting the repair of pipe leaks, shutting down and installation of water lines, chemical feed lines and fittings.
- Inspect distribution tanks, booster stations, and system wells on a specified routine basis for proper levels or operation, ensure all alarms are working, monitor and record the current free chlorine residual and pH. Check overall condition including safety, leaks, vandalism, screens and vents ensuring sanitary conditions exist.
- Performs water treatment plant routines daily according to the plant's operations manual.
- Operates and maintains a variety of automatic and manually controlled equipment, motors, and pumps used in the treatment, purification, and disinfection of water.
- Regulates and controls the amount of chemicals used to maintain specified water treatment requirements.
- Takes samples, performs standardized quality control tests, and adjusts chemical feeders and other plant equipment according to results.
- Reads, interprets, and records data, such as residual content of chemicals, water turbidity, pH, temperature, alkalinity, filter differential pressure, etc.
- Makes regular calculations of plant flow rates and demands to ensure efficient plant operations.
- Perform routine Jar Tests to ensure optimum chemical dosages.
- Make regular assessments of raw and treated water quality for turbidity, pH, temperature, alkalinity, and other pertinent data to maintain proper plant operating conditions.
- Assists in controlling traffic to facilitate the repair, replacement, operating and maintenance of District facilities.
- Operates and maintains various hand and power tools and equipment.
- Assists contractors and representatives of other agencies with work or services to be performed at District facilities.

- Observes pumping equipment and troubleshoots and identifies possible problems and operating difficulties.
- Maintains logs, records, and data systems for required plant reports.
- Inputs data into computer to develop database for generating plant operations reports.
- Operates a District vehicle, driving to pumping stations and other facilities for inspection and maintenance work.
- Practices and ensures adherence to District and OSHA safety procedures and requirements.
- Always be on the lookout for unsafe conditions, correct immediately or report.
- Posts District correspondence signs as required.
- Participate in training programs.
- Deliver chemicals, materials and supplies to work sites and treatment plants.
- Performs other related duties as assigned.

**Qualification Requirements:**

*To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

**Knowledge, Skills, and Abilities:**

**Knowledge of:**

- Regulatory requirements, procedures, equipment and techniques used in the collection, storage, transportation, and preparation of water samples for field or laboratory testing for both ground water and surface water.
- Physical characteristics of water, safe handling of laboratory chemicals and reagents.
- General laboratory and field analytical procedures and laboratory equipment.
- Basic arithmetic including calculating proportions and percentages and measuring concentrations.
- Safe work methods and safety precautions as related to the job.
- Methods, materials, procedures, and equipment used in the adjustment, repair, operation and maintenance of water treatment plants and water distribution facilities.
- Water treatment methods, principles and Best Management Practices.
- Standard water quality tests
- Federal, state, and county regulations pertaining to water treatment and water distribution operations.
- Methods and precautions for handling and storing potentially hazardous chemicals.
- Operation and maintenance of hand and power tools and light to moderately heavy power-driven equipment
- Operation and application of Microsoft word processing and spreadsheet software applications.
- Plant measurement and recording equipment.
- Correct application and usage of the English language, including spelling, grammar and punctuation.

### Skill in:

- Operating, maintaining and repairing a variety of water treatment and distribution facilities and equipment.
- Recognizing and correcting or reporting unusual, inefficient or unsafe operating conditions.
- Reading a variety of gauges, charts and meters; recording data accurately and making appropriate process adjustments.
- Making calculations as necessary to summarize data results, ascertain data trends, and aggregate information over time.
- Conducting basic chemical and physical tests of potable water, influent, effluent, sludge and related materials.
- Using and maintaining the tools and equipment of the work skillfully and safely.
- Handling hazardous chemicals in a safe manner.
- Basic computer skills including word processing, basic spreadsheets, maintaining and sharing computer files.
- Collecting and accurately entering data and creating spreadsheets as assigned.
- Maintaining accurate records of work performed.
- Using, properly maintaining, and ensuring the security of District-owned equipment that may be provided to assist in the performance of assigned duties.
- Understanding and following oral and written directions.
- Establishing and maintaining professional and effective working relationships with those contacted in the course of the work and providing excellent customer service.

### Ability to:

- Work independently with minimal supervision.
- Read and write at the level required for successful job performance.
- Perform algebraic and geometrical calculations and metric conversions.
- Organize and maintain records and files, assemble data and prepare reports.
- Perform a variety of operations and maintenance assignments.
- Perform strenuous, manual labor often exposed to inclement weather conditions.
- Operate small, heavy equipment such as a small backhoe, mini-excavator, forklift, two axle trucks, pallet jacks, barrel lifts and hand trucks.
- Use a variety of tools with skill and safety.
- Read district map books.
- Provide excellent customer service and relations.
- Operate automatic plant control systems.
- Read plant measurements and recording equipment, interpreting results to adjust plant operations.
- Troubleshoot, diagnose, and correct a variety of operating problems.
- Use proper safety precautions in working with water plant chemicals.
- Perform standard water quality tests.
- Maintain and update thorough plant records and logs.
- Read and interpret plant piping and distribution diagrams.
- Understand and carry out oral and written directions.
- Establish and maintain cooperative and effective working relationships with those contacted during the work.

**Physical Demands:**

*The physical demands described herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

While performing the duties of this job, the employee is regularly required to speak and hear to effectively interface with other staff members and the public; walk, stand, kneel, crawl, climb, lift and move up to 50 pounds, pull, stoop, bend, squat, twist, turn and work in tight, confined space; use hands and fingers to write and to handle, gripe, feel and operate tools, pumps, and equipment.

Specific vision abilities required by this job include close vision, distance vision, peripheral vision, and the ability to adjust focus.

**Work Environment:**

*The work environment characteristics described below are representative of those an employee encounters while performing the essential functions of this position. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

- Outside: Drive a vehicle and perform tasks in a variety of weather conditions ranging from snow, and below freezing to 100°F; confined work space; and at heights, such as ladders or on a tank.
- Inside: Work performed in a temperature-controlled environment.
- Fumes/Gasses: Exposure to various vapors and/or airborne particles from powder and liquid chemicals; strong fumes; and unpleasant odors.
- Noise/Vibration: Exposure to generators.

**Education and Experience Requirements:**

*Any combination of experience and education that would likely provide the required knowledge, skills and abilities may be qualifying as determined solely by the District. A typical way to obtain the knowledge, skills and abilities would be:*

**Education/Certification/License/Experience:**

- High school diploma or general education degree (GED).
- Must possess a valid California driver’s license, have a satisfactory driving record, and be insurable by the District to operate District vehicles.
- If hired into classification following the date this job description was prepared, must possess a Hazardous Materials Endorsement or obtain within six months from hire date.

**Water Treatment Operator-In-Training (OIT)**

In addition to the qualifications above, the Water Treatment Operator OIT has:

- Current California Water Treatment Operator Grade T1 certification issued by the State Water Resources Control Board (SWRCB) or obtain within 12 months, or by the second attempt at taking the State exam if taken within the first two possible exam periods, whichever is later, of hire date.

For Water Treatment Operator, Grade 1

In addition to the qualifications above, the Water Treatment Operator 1 has:

- Current California Water Treatment Operator Grade T1 certification issued by SWRCB.
- One-year experience operating and maintaining water treatment and related facilities. Two years' experience operating and maintaining the water distribution system at Tuolumne Utilities District can be substituted for one year of water treatment experience.
- Current California Water Distribution Operator Grade D1 certification issued by SWRCB.

For Water Treatment Operator, Grade2

In addition to the qualifications above, the Water Treatment Operator, Grade 2 has:

- Current California Water Treatment Operator, GradeT2 certification issued by SWRCB.
- Two years' experience operating and maintaining water treatment and related facilities, including one full year equivalent to that of a Water Operator, Grade 1. Two years' experience operating and maintaining the water distribution system at Tuolumne Utilities District can be substituted for one year of water treatment experience.
- Current California Water Distribution Operator Grade D2 certification issued by SWRCB.

For Water Treatment Operator, Grade3

In addition to the qualifications above, the Water Treatment Operator, Grade 3 has:

- Current California Water Treatment Operator, Grade T3 certification issued by SWRCB.
- Two years' experience operating and maintaining water treatment and related facilities, equivalent to that of a Water Operator, Grade 2.

Operators must complete the designated number of contact hours (i.e., continuing education/training requirements) as determined by the California State Water Resources Control Board (SWRCB) to maintain the required certifications. Certifications are required as a condition of continued employment; failure to comply with SWRCB regulations pertaining to required certifications for the position will result in termination of employment.

Work Hours:

7:00 a.m. to 3:30 p.m., five consecutive workdays as assigned to include one weekend day. Subject to change, as required to meet the needs of the District. Must be willing to work overtime and/or alternate schedule when required.

Grade 2 and 3 operators must be willing to participate in the on-call standby rotation on a regular basis; therefore, must live within an 18-mile radius of the District's main facility.

I have reviewed this job description and agree to obtain or maintain any job specific requirements.

\_\_\_\_\_  
Supervisor's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Employee's signature

\_\_\_\_\_  
Date

Approved by General Manager:    Approval Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_