SOUTH COAST WATER DISTRICT

SENIOR PLANT OPERATOR

DEFINITION

Under general supervision, performs a full range of duties associated with the operation, maintenance and repair of the District’s groundwater recovery facility (GRF), ozone plant, and ultra-violet facility, including monitoring, servicing and adjusting chemical injection systems, automated valves and level indicators, optimizing filter and treatment procedures and verifying compliance with regulatory agencies; provides operation, service and maintenance for the Reservoir Management Systems (RMS) and Chemical Feed Systems to provide consistently safe drinking water; performs required chemical tests and adjusts chemical treatment of plant processes as required; maintains records and prepares reports; and performs related work as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Director of Operations and/or the Water Production Supervisor. No direct supervision of staff is exercised.

CLASS CHARACTERISTICS

This is the journey-level class in the plant operations and maintenance series that performs the full range of duties required to ensure that the District’s Groundwater Recovery Facility (GRF), Ozone Plant, and Ultra-violet (UV) facility; systems, and facilities are maintained in a safe and effective working condition and provide the highest level of safety for public use. Responsibilities include inspecting and attending to assigned areas in a timely manner, and performing a wide variety of tasks in the operation, maintenance, and repair of assigned facilities and systems. This class is distinguished from the System Operator class in that this class is specifically responsible for the operation of the GRF, RMS, UV, and Ozone Treatment Plant, while the latter is responsible for the installation, repair, operation, and maintenance of the District’s water distribution and wastewater collection systems.

EXAMPLES OF ESSENTIAL JOB FUNCTIONS

Duties may include, but are not limited to, the following:

- Operates the District’s Groundwater Recovery Facility (GRF), RMS, chemical feed system, and Ozone Water Treatment Plant using electronic and computer control systems (SCADA) and revises equipment settings as appropriate; interprets gauges, meters, charts, and graphs; operates pumps, valves, motors, and related equipment; inspects plant equipment; notifies supervisor of unusual situations and makes inspections or corrects system problems as necessary.
- Performs daily plant process tests at specified intervals per California Department of Public Health, Department of Drinking Water permit requirements and equipment inspections; prepares timely (daily, weekly, monthly and annually) regulatory reports for submittal by required due dates to respective agencies.
- Performs plant process chemical checks which include determining chemical levels for various plant processes; calculating usage; determines reserve amounts; reorders and ensures the safe transfer and delivery of bulk chemicals.
- Performs membrane maintenance for the Reverse Osmosis treatment system which includes diagnosing causes of failure through interpretation of raw data; diagnoses system problems using instrumentation and SCADA systems.
- Performs chemical cleanings of the reverse osmosis treatment system, which includes calculating amounts of chemicals used, determining calibration of required instrumentation, and readjusting process flows to compensate for down units.
Monitors plant equipment and processes; may make adjustments to various controls operating plant equipment.

Collects state and county mandated water quality samples; determines proper labeling, bottle preparation, and method of collection.

Collects water data and performs water quality tests; updates related logs and enters data into a computer; maintains records and other required documents.

Inspects the operation of pumps, motors, structures, tanks and equipment, and performs or coordinates the appropriate repair or replacement.

Maintains records relating to equipment and treatment processes, and maintains a daily log of plant operating procedures.

Maintenance, repair and verify accurate operation and analytical equipment.

Participates in plant facilities housekeeping activities; may perform plant maintenance work and other tasks as assigned.


Conducts or assists with the preparation of GRF tours.

Operates a variety of hand and power tools and equipment related to work assignment as instructed.

Uses and performs maintenance on a variety of tools and electrical and electronic test equipment; reads and calibrates gauges and meters used for process control.

Keeps current with National Pollution Discharge Emissions Standards orders and Title 22 Regulations.

Communicates all facts essential to the efficient operation of the plants and reports all operating problems or emergencies immediately to the Water Production Supervisor.

Maintains accurate records, including gauge and meter readings, calculating the daily use of energy and chemicals and chemical test results, and completing required monthly reports.

Cleans and acid washes Sodium Hypochlorite Generation System Electrolytic Cells.

Cleans and acid washes the rapid sand and anthracite filter media beds at the Ozone and UV treatment facilities.

Performs maintenance and rebuilds pumps and pumping equipment.

Services and maintains the Ultra-violet disinfection system.

Samples and records data for the Special Wastewater Discharge Permits at the GRF, Ozone and UV facilities

Participates in safety training and exercises.

Provides needed information and demonstrations concerning how to perform certain work tasks to new employees in the same or similar class of positions.

Responds to after-hours emergencies.

Performs related duties as assigned.

QUALIFICATIONS:

Knowledge of:

- Principles, practices, equipment, material, and tools used in the operation, cleaning, and preventive maintenance of water treatment facilities and equipment.
- Standard chemical and physical tests of water and related materials.
- The operation and preventive maintenance of piping systems, including pipes, valves, and related appurtenances.
- Basic principles of biology, chemistry, bacteriology, and mathematics.
- Basic mechanical, electrical, hydraulic, and plumbing principles.
- Applicable Federal, State, and local laws, ordinances, regulations, and guidelines relevant to assigned duties.
- Basic equipment troubleshooting principles and practices.
- Basic record keeping practices.
- Safe work methods and safety practices pertaining to the work, including the handling and storage of hazardous chemicals.
Basic computer software related to work.
- English usage, spelling, vocabulary, grammar, and punctuation.
- Techniques for providing a high level of customer service to public and District staff, in person and over the telephone.

### Ability to:
- Operate, maintain, and repair a variety of water treatment facilities and equipment.
- Accurately interpret and read flow diagrams, supervisory control and data acquisition systems, telemetry equipment, flow charts, and indicating meters.
- Read a variety of gauges, charts, and meters, record data accurately and make appropriate process adjustments.
- Conduct standard chemical and physical tests of water, wastewater, sludge, and related materials.
- Handle hazardous chemicals in a safe manner.
- Recognize and correct or report unusual, inefficient, or dangerous operating conditions.
- Make accurate arithmetic calculations.
- Safely and effectively operate and maintain hand tools, mechanical equipment, power tools, and related equipment required for the work.
- Maintain manual and automated logs, records, reports, and charts.
- Follow department policies and procedures related to assigned duties.
- Create and maintain computer generated spreadsheets and documents.
- Understand and follow oral and written instructions.
- Organize own work, set priorities, and meet critical time deadlines.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Establish and maintain effective working relationships with those contacted in the course of the work.

### EXPERIENCE AND TRAINING GUIDELINES

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

#### Experience:

Two (2) years of experience in the operation, maintenance, and repair of water treatment plants. Laboratory experience and hazardous materials response experience is desirable. Experience in the use of personal computers and the use of spreadsheet software is desirable.

#### Training:

Equivalent to the completion of the twelfth (12th) grade supplemented by thirty (30) units of college-level coursework in water and/or wastewater treatment, environmental studies, or related field.

#### License or Certificate:

- Valid California class C driver’s license with satisfactory driving record.
- Valid Grade II Water Treatment Operator Certificate (T2) issued by the State Water Resources Control Board (SWRCB).

### PHYSICAL DEMANDS

Must possess mobility to work in a standard water treatment plant and related facilities; strength, stamina, and mobility to perform light to medium physical work, to work in confined spaces, around machines and to climb...
and descend ladders, and operate varied hand and power tools and equipment; vision to read printed materials and a computer screen; color vision to read gauges and identify appurtenances; and hearing and speech to communicate in person and over the telephone or radio. The job involves frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment. Positions in this classification bend, stoop, kneel, reach, and climb to perform work and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects up to 100 pounds and heavier weights with the use of proper equipment.

**ENVIRONMENTAL ELEMENTS**

Employees work inside a water treatment plant and in the field and are exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, confining workspace, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives and contractors in interpreting and enforcing departmental policies and procedures.

**WORKING CONDITIONS**

Must be willing to work weekends, holidays, and off-hour shifts for emergency callback response.

*The specific statements shown in each section of this classification description are not intended to be all-inclusive. They represent the essential functions and minimum qualifications necessary to successfully perform the assigned functions. Management reserves the right to add, modify, change or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.*