

# CITY OF SAN JUAN CAPISTRANO

## UTILITIES OPERATOR II – GROUNDWATER TREATMENT PLANT

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are not intended to reflect all duties performed within the job.*

### **DEFINITION**

To perform a full range of duties associated with the operation, maintenance and repair of the City's GWRP and City Utilities' facilities and infrastructure, including monitoring, servicing and adjusting chemical injection systems, automated valves and level indicators, optimizing filter and treatment procedures and verifying compliance with regulatory agencies; to provide service and maintenance for the Chemical Feed Systems; to provide consistently safe drinking water; to perform required chemical tests and adjust chemical treatment of plant processes as required; to maintain records and prepare reports, and to perform assigned work as required.

### **DISTINGUISHING CHARACTERISTICS**

This is the full journey level class within the Utilities Operator series. Employees within this class are distinguished from the Utilities Operator I by the performance of the full range of duties as assigned including performing skilled and semi-skilled maintenance activities. Employees at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit. Positions in this class are flexibly staffed and are normally filled by advancement from the Utilities Operator I level, or when filled from the outside require prior experience. This class is distinguished from the Utilities Operator III in that the latter assumes lead responsibilities.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives general supervision from higher level supervisory or management staff.

**ESSENTIAL FUNCTION STATEMENTS**. *Essential responsibilities and duties may include, but are not limited to, the following:*

#### **Essential Functions:**

1. Operates the City's Groundwater Recovery Plant (GWRP), 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.
2. Performs daily plant process tests and system inspections at specified intervals per California Department of Public Health's Division of Drinking Water and Environmental Management (DDWEM) permit requirements; prepares timely regulatory reports for submittal by required due dates to respective agencies.
3. Performs plant process chemical checks to determine chemical levels for plant processes; calculates usage; determines reserve amounts, and reorders and ensures the safe transfer and delivery of bulk chemicals.
4. 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.
5. Performs chemical cleanings of the reverse osmosis treatment system; calculates amounts of chemicals used; determines calibration of required instrumentation, and readjusts process flows to

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compensate for down units.

6. Monitors plant equipment and processes and research experiments; may make adjustments to controls operating plant equipment.
7. Inspects the operation of pumps, motors, structures, tanks and equipment, and coordinates repair or replacement.
8. Maintains records relating to equipment, treatment processes, and daily log of plant operating procedures; maintains records, including gauge and meter readings, calculating the daily use of energy and chemicals and chemical test results, and completing required monthly reports.
9. Participates in plant facilities housekeeping activities and may perform plant maintenance work.
10. Creates graphical screens for the plant SCADA system.
11. Utilizes Computer Maintenance Management Systems (CMMS).
12. Conducts or assists with the preparation of GWRP tours.
13. Operates a variety of hand, power tools, and equipment related to work assignment; uses and performs maintenance on tools and test equipment, and reads and calibrates gauges and meters used for process control.
14. Keeps current with National Pollution Discharge Emissions (NPDES) Standards orders and Title 22 Regulations.
15. Participates in safety training and exercises.
16. Responds to after-hours emergencies.
17. Performs related duties and responsibilities as required.

### **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 City staff, in person and over the telephone.

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**Skill in:**

- Operating, maintaining, and repairing a variety of water treatment facilities and equipment
- Understanding of a water distribution system.
- Interpreting and reading flow diagrams, supervisory control and data acquisition systems, telemetry equipment, flow charts, and indicating meters.
- Reading a variety of gauges, charts, and meters, recording data and making appropriate process adjustments.
- Conducting standard chemical and physical tests of water, wastewater, sludge, and related materials.
- Safely handling hazardous chemicals.
- Recognizing and correcting or reporting unusual, inefficient, or dangerous operating conditions.
- Making accurate arithmetic calculations.
- Safely and effectively operating and maintaining hand tools, mechanical equipment, power tools, and related equipment as required.
- Maintaining manual and automated logs, records, reports, and charts.
- Following department policies and procedures related to assigned duties.
- Understanding and following oral and written instructions.
- Organizing work, setting priorities, and meeting critical time deadlines.
- Using tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Communicating clearly and concisely, both orally and in writing.
- Establishing and maintaining effective working relationships with those contacted in the course of 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 years of experience in the operation, maintenance, and repair of water treatment plants and utilities distribution and collection systems. 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 completion of the twelfth grade supplemented by college-level coursework in water and/or wastewater treatment, environmental studies, or a related field.

**Licenses or Certifications:**

- Possession of a T2 Water Treatment Operator Certificate issued by the California Department of Public Health.
- Possession of a D2 Water Distribution Operator Certificate issued by the California Department of Public Health.
- Possession of a Collection System Maintenance Grade II certification issued by the California Water Environment Association (CWEA).
- Possession of, or ability to obtain, an appropriate, valid driver license.
- Possession of, or ability to obtain, First Aid/CPR certification.

**WORKING CONDITIONS**

**Environmental Conditions:**

Work is performed inside a water treatment plant and in the field; exposure 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; exposure to,

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working at heights, noise, dust, dirt, water, sewage, grease, fumes, gases, high voltage electrical currents, high pressure water lines, and vehicle traffic.

**Physical Conditions:**

Essential functions may require maintaining physical condition necessary for operating motorized equipment and vehicles, performing manual labor, lifting moderate to heavy objects, and standing and walking for prolonged periods of time in operational areas; 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; Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment; ability to 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.