SOUTH COAST WATER DISTRICT

SYSTEM OPERATOR I/II/III

DEFINITION

This position is located in the Distribution or Collection System Sections of the Operations Department and performs a variety of routine to skilled work in the installation, repair, operation, and maintenance of the District’s water distribution and wastewater collection systems; assists in project inspections during maintenance and construction of District water distribution and wastewater collection systems; may obtain water and other meter readings; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

This position reports to the Collection System Supervisor or the Water Distribution Supervisor. No direct supervision of staff is exercised. May provide technical and functional direction to lower-level staff.

CLASS CHARACTERISTICS

System Operator I: This is the entry-level class in the systems operations and maintenance series. Initially under close supervision, incumbents with basic maintenance experience learn District infrastructure, systems, and facilities, use of tools and equipment, and a wide variety of practices and procedures. As experience is gained, assignments become more varied and are performed with greater independence. This class is alternately-staffed with System Operator II and incumbents may advance to the higher level after gaining the knowledge, skill, experience, licenses and certifications which meet the qualifications for and demonstrating the ability to perform the work of the higher-level class.

System Operator II: This is the journey-level class in the systems operations and maintenance series that performs the full range of duties required to ensure that District infrastructure, systems, and facilities to which assigned 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 flexibly staffed with Systems Operator III, and incumbents may advance to the higher level class after gaining experience, demonstrating proficiency in the skill sets established by the District which meets the qualifications for that classification and obtaining the required certification.

System Operator III: This is the advanced journey-level class in the systems operations and maintenance series that performs the full range of duties required to ensure that District infrastructure, systems, and facilities to which assigned 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. Incumbents perform the more complex duties assigned and are required to use sound and independent judgment and are qualified, by State certification, to independently operate the District’s systems. This class is distinguished from the Senior System Operator in that the latter is responsible for technical and functional direction over lower-level operations and maintenance staff and is capable of performing the most complex duties assigned to the division.

The incumbent ensures that her/his activities are aligned with and support the South Coast Water District’s policies, mission, vision, core values, core strategies, and annual action items as well as performance measures.
EXAMPLES OF ESSENTIAL JOB FUNCTIONS

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

When performing Wastewater Collections Systems assignments:

- Maintains and repairs, in a safe and sanitary manner, sewer lines, manholes, pressure hoses, mains, parts, and other related facilities and equipment to ensure compliance with established codes; methods include smoke testing, TV work, packing, and sealing.

- Inspects and tests underground wastewater collection pipes, lateral connections, storm drain interceptors, and associated appurtenances using closed-circuit television devices and other specialized testing equipment to locate leaks, breaks, infiltration and the buildup of dirt, debris, roots, and other materials on a scheduled preventative maintenance basis.

- Operates and maintains the District’s close circuit television system and equipment used to monitor and prevent problems in the wastewater system.

- Examines, maintains, cleans and unplugs collection lines with a variety of specialized equipment including hydro-cleaning, video vehicles.

- Tests and monitors manholes for dangerous gases and uses proper safety precautions when entering underground areas; builds and cleans out manholes and other collection facilities.

- Provides installation, maintenance, and repair of wastewater mains and laterals; digs up and repairs damaged sections of pipe; cuts, installs, threads, and assembles new pipe.

- Performs a variety of semi-skilled work to repair, maintain, install, inspect, troubleshoot, and adjust a variety of mechanical equipment relating to the District’s lift stations, including compressors, hydraulic controls, generation and bypass pumps, mechanical, structural, and plumbing apparatus, belts, chains, conveyors, and diesel and gas engines.

- Responds to customer complaints and emergency calls for service; uses inspection equipment to identify causes; and assists in mitigating overflow spills and damage as required.

- Operates a combination hydro-cleaning/vacuuming truck to clean and flush sewer lines on a scheduled or emergency basis.

- Performs asphalt and concrete repair and patchwork; removes trees, brush, and debris from right-of-ways to access sewer main lines and laterals.

- Installs and maintains different metering devices throughout the District’s infrastructure to monitor wastewater flows.

When performing Water Distribution Systems assignments:

- Performs a variety of semi-skilled work to inspect, maintain and repair water distribution pipelines, pumps, valves, meters, tanks, reservoirs, and related appurtenances; inspects and tests lines in the distribution system visually or using smoke or dye testing and/or television devices.

- Monitors and controls the operation of water distribution systems incorporating chemical feeding equipment, utilizing the SCADA system, filtration equipment, reservoirs, and/or storage tanks; inspects for compliance with established codes and/or damaged or worn parts and makes repairs as necessary.

- Checks the operation of automatic pump and valve regulating equipment and adjusts or repairs as needed.

- Performs valve maintenance and leak detection with the use of electronic devices.

- Performs preventive maintenance on pumps, motors, and other equipment.

- Takes samples and performs chemical tests of chlorine residuals; takes samples of water and may perform a variety of other chemical tests.

- Adjusts and repairs pressure regulating equipment and removes and replaces chlorine cylinders.

- Operates, adjusts, maintains, and repairs chemical feeders.

- Oversees, coordinates, and inspects contract repair work associated with repairs of pipelines, pumps, tanks, reservoirs, and related equipment.

- Performs general maintenance duties such as flushing of main lines and dead ends.

- Installs, replaces, maintains, and repairs water and fire services and hydrants, including installing parts and fittings and performing scheduled maintenance.

- Performs various water meter maintenance duties, including removing and installing meters and making minor meter repairs.
Reports water service defects and public safety hazards, including providing exception list information and reporting hazards to supervisors.
Reads and services customer water service meters; turns water service on or off.

When performing all assignments:
- Reports water service defects and public safety hazards, including providing exception list information and reporting hazards to supervisors.
- Reads and services customer water service meters; turns water service on or off.
- When performing all assignments:
  - Reads and interprets maps and diagrams in the performance of the work.
  - Observes safe work methods and makes appropriate use of related safety equipment as required.
  - Operates and maintains a variety of light, medium, and heavy-duty equipment and trucks, as well as hand and power tools appropriate to the functional area of assignment.
  - Operates a variety of hand and power tools and equipment related to work assignment as instructed.
  - Maintains work areas in a clean and orderly condition, including securing equipment at the close of the workday.
  - Installs street barricades and cones, and controls traffic around work sites to ensure safe conditions for the general public and District workers.
  - Provides needed information and demonstrations concerning how to perform certain work tasks to new employees in the same or similar class of positions.
  - Answers inquiries from citizens regarding work performed; maintains accurate records of work performed.
  - Responds to after-hours emergencies and assists other maintenance crews as needed and in emergency or relief situations.
  - Performs confined space entry and rescue operations.
  - Performs related duties as assigned.

QUALIFICATIONS:

Knowledge of:
- Maintenance principles, practices, tools and materials for maintaining and repairing water distribution systems, including water hydraulics, valves, pipe materials and water service components; wastewater collection systems, including gravity and pressurized wastewater lines, manholes, wastewater cleanouts and other related facilities and equipment.
- The operation and minor maintenance of a variety of hand and power tools, vehicles and power equipment.
- Basic traffic control procedures and traffic sign regulations.
- Shop arithmetic.
- Safety equipment and practices related to the work, including the handling of hazardous chemicals.
- Safe driving rules and practices.
- Basic computer software related to work such as SCADA and other telemetry systems.
- 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:
- Perform construction, modification, maintenance and repair work on water distribution and wastewater collection systems, facilities and equipment such as found in the District.
- Operate specialized maintenance and repair equipment related to water and wastewater main cleaning.
- Set up and operate traffic area construction zones, including cones, barricades and flagging.
- Locate underground utilities by use of blue prints and electronic locating equipment in accordance with Underground Service Alert (USA) regulations.
- Troubleshoot maintenance problems and determine materials and supplies required for repair.
- Make accurate arithmetic calculations.
- Read and interpret construction drawings and specifications.
- Safely and effectively use and operate hand tools, mechanical equipment, power tools, and equipment required for the work.
- Perform routine equipment maintenance.
- Maintain accurate logs, records and basic written records of work performed.
- Follow department policies and procedures related to assigned duties.
- 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:**

**System Operator I:** No experience required.

**System Operator II:** Two (2) years of experience in the operation, maintenance, and repair of underground utilities.

**System Operator III:** Three (3) years of experience in the operation, maintenance, and repair of underground utilities equivalent to that of the System Operator II at SCWD.

**TRAINING:**

**System Operator I, II, and III:** Equivalent to the completion of the twelfth (12th) grade. College-level coursework in biology, chemistry, engineering, construction methods, or a related field is desirable.

**LICENSE AND CERTIFICATE REQUIREMENTS:**

License and certificates are required at the time of appointment and must be maintained during District employment.

**System Operator I:**

- Valid California Class B driver license with the appropriate endorsements and satisfactory driving record.
- When assigned to the Wastewater Collection System: Grade I Wastewater Collection System Maintenance Certificate issued by the California Water Environment Association (CWEA).
- When assigned to the Water Distribution System: Grade I Water Distribution Operator Certificate issued by the State Water Resources Control Board (SWRCB).

**System Operator II:**

- Valid California Class B driver license with the appropriate endorsements and satisfactory driving record.
- When assigned to the Wastewater Collection System: Grade II Wastewater Collection System Maintenance Certificate issued by the CWEA.
- When assigned to the Water Distribution System: Grade II Water Distribution Operator Certificate issued by the SWRCB.
- When assigned to Wastewater Collection Section performing Lift Station Mechanic duties: Grade II Mechanical Technologist Certificate issued by the CWEA.
System Operator III:

- Valid California Class B driver license with the appropriate endorsements and satisfactory driving record.
- When assigned to the Wastewater Collection System: Grade III Wastewater Collection System Maintenance Certificate issued by the CWEA.
- When assigned to the Water Distribution System: Grade III Water Distribution Operator Certificate issued by the SWRCB.
- When assigned to Wastewater Collection Section performing Lift Station Mechanic duties: Grade III Mechanical Technologist Certificate issued by the CWEA.

**PHYSICAL DEMANDS**

Must possess mobility to work in the field; strength, stamina and mobility to perform medium to heavy physical work, to work in confined spaces, around machines and to climb and descend ladders, and operate varied hand and power tools and construction equipment; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. The job involves fieldwork requiring 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 weighing up to 75 pounds and heavier weights with the use of proper equipment.

**ENVIRONMENTAL ELEMENTS**

Employees work 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.*