



## LEAD WASTEWATER TREATMENT PLANT OPERATOR

### **DEFINITION**

Under direction, operates and maintains the District's wastewater treatment plants; regulates flows within the system; performs sample collection and laboratory testing; checks operations and monitors equipment for proper functioning of facilities; and performs related work as required.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives direction from assigned supervisory or management personnel. Exercises technical and functional direction over and provides training to less experienced staff.

### **CLASS CHARACTERISTICS**

This is the advanced journey level classification in the Wastewater Treatment Plant Operator series responsible for performing the most complex work assigned to the series. Incumbents regularly work on tasks which are varied and complex, requiring considerable discretion and independent judgment. Positions in the classification rely on experience and judgment to perform assigned duties. Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines, and methods to complete assignments. Work is typically reviewed upon completion for soundness, appropriateness, and conformity to policy and requirements.

### **EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)**

*Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations where appropriate so qualified employees can perform the essential functions of the job.*

- Provides technical and functional supervision to assigned wastewater treatment plant operators; reviews and controls quality of work; participates in performing routine to complex and specialized wastewater treatment duties.
- Plans, schedules, prioritizes, and assigns plant maintenance and repair work in consultation with supervisor or manager; communicates status of repairs to appropriate personnel, working cooperatively to schedule repairs in accordance with established and special operational priorities.
- Trains and instructs employees in work procedures, work methods, use of tools and equipment, and relevant safety precautions.
- Performs the most complex maintenance duties including wasting sludge loads, adjusting valves, and collecting information from dials, meters, and gauges; inspects and checks for worn or broken v-belts, motors, automatic controls, skimmers, and rotors; lubes equipment and changes pump seals.
- Operates a variety of construction equipment, such as front-end loaders, air compressors, jackhammers, and a variety of hand tools and small equipment.
- Serves as the Plant's designated Laboratory Technical Manager and oversees all sample collections and laboratory tests; analyzes test results for regulatory compliance reports and adjusts the operations accordingly.
- Assists the Chief Plant Operator with sample collections and laboratory tests; participates in analyzing test results for regulatory compliance reports and adjusts operations accordingly.

- Maintains a variety of records and logs; collects data and assists in preparing a variety of reports for regulatory agencies.
- Assists the Chief Plant Operator with preparing, maintaining, and updating a variety of plans, reports, and permits including but not limited to: Sewer Systems Management Plan, Permits, and Reports; Sanitary Sewer Overflow Response Plan; State Certified Laboratory Quality Assurance Manual and Permit; Storm Water Pollution Prevention Plan, Permit, and Reports; Hazardous Materials Permit, Business Plan, and Reports; South Coast Air Quality Management District Permits; State and Regional Water Quality/Resources Control Board Reports and Permits; Environmental Protection Agency and ADEQ Annual Sludge Disposal reports.
- Prepares a variety of reports for operations related to plant operation and collection maintenance activities; maintains and updates records of Plant operations work performed by Operators.
- Leads crews performing emergency repair work; coordinates work with outside repair services as required.
- Ensures adequate inventory of parts and supplies.
- Assists in developing short-term and long-range district planning for maintenance, construction, and repairs to the plant and collection systems.
- Coordinates work with outside agencies, including other municipalities.
- Ensures staff observe and comply with all District and mandated safety rules, regulations, and protocols.
- Performs other duties as assigned.

## **QUALIFICATIONS**

### **Knowledge of:**

- Principles of providing functional direction and training.
- Principles, practices, techniques, equipment, and materials used in maintaining and repairing comprehensive wastewater plant systems.
- Principles and practices of preventive maintenance.
- Operational principles, practices, methods, functions, and servicing requirements of the equipment of a wastewater facility.
- Operational principles of pumps, valves, electric motors, diesel engines, and electronic, computerized, and manual control systems.
- Principles of wastewater treatment and water reclamation processes including conventional activated sludge, enhanced primary treatment, dewatering, biosolids drying, and ditch processes.
- Relevant chemicals used in water reclamation.
- Supervisory control and data acquisition systems (SCADA).
- Current practices and procedures in chemical, bacteriological, and biological analysis, and water chemistry analysis.
- Fundamental scientific principles governing wastewater treatment including breakpoint chlorination, nitrification, and denitrification, mean cell residence time, sludge retention time, and detention time.
- Common laboratory techniques used in wastewater treatment, water reclamation, biosolids handling including settleability, ammonia/nitrate concentration, microscopy analysis, and solids concentration.
- Discharge requirements pertaining to respective wastewater facilities and discharge permits.
- Applicable federal, state, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- District and mandated safety rules, regulations, and protocols.

- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination, including computers and software programs relevant to work performed.

**Ability to:**

- Plan, organize, and coordinate the work of assigned staff.
- Effectively provide staff leadership and work direction.
- Inspect the work of others and maintain established quality control standards.
- Train others in proper and safe work procedures.
- Oversee and participate in maintenance and related projects in the assigned functional area(s).
- Operate and maintain all aspects of the District's wastewater treatment system and related facilities and equipment.
- Operate treatment facilities, monitor trends, and pull water samples.
- Operate a wide variety of pumping, treatment, control, and transmission equipment, including remote operation via SCADA equipment.
- Calculate chemical dosages, pumping rates, and other wastewater treatment related metrics.
- Analyze facility processes and equipment and lift station performance data to identify inefficient or malfunctioning operations and discern possible causes.
- Independently assess treatment facility and lift station process conditions, make responsible judgements, and take corresponding actions to increase process efficiencies, correct performance issues, and ensure permit compliance.
- Diagnose inefficient or faulty operation of facility equipment through physical examination in field based upon operative clues such as vibration, noise, heat, or smell.
- Detect and resolve unsafe working conditions independently or by notifying supervisors and stopping unsafe work when detected.
- Accurately read meters, gauges, valve books, blueprints, and schematic drawings.
- Prepare and follow Standard Operating Procedures governing various facility equipment and associated treatment processes.
- Operate and maintain a variety of equipment including front loader and forklift, and power and hand tools.
- Maintain accurate logs, records, and basic written records of work performed.
- Make accurate arithmetic calculations.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Effectively use computer systems, software applications relevant to work performed, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

**Education and Experience:**

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

Education:

- Possession of a high school diploma or G.E.D. required, supplemented by college level coursework in wastewater treatment technology or a related field.

Experience:

- Three (3) years of increasingly responsible experience in wastewater plant operations including maintenance, repair, treatment, collections, and laboratory and regulatory reporting responsibilities.

**Licenses and Certifications:**

- Possession of a valid California Driver's License, to be maintained throughout employment.
- Possession of a valid Grade III Wastewater Treatment Plant Operator certificate, to be maintained throughout employment.
- Possession of a valid Grade II Collection System Maintenance certificate from the California Water Environment Association, to be maintained throughout employment.
- Possession of, or successful acquisition within 18 months of employment, a valid Grade I Laboratory Analyst certificate, to be maintained throughout employment.

**PHYSICAL DEMANDS**

Must possess mobility to work in the field; strength, stamina, and mobility to perform medium to heavy physical work; to sit, stand, and walk on level, uneven, or slippery surfaces; frequently reach, twist, turn, kneel, bend, stoop, squat, crouch, grasp, and make repetitive hand movement in the performance of daily duties; possible entry into confined spaces and the use of confined entry equipment, to climb and descend ladders, to operate varied hand and power tools and construction equipment, and to operate a motor vehicle and visit various District sites; and vision to inspect and operate equipment. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to operate and repair tools and equipment. Employees must possess the ability to lift, carry, push, and pull materials and objects averaging a weight of 50 pounds or heavier weights, in all cases with the use of proper equipment and/or assistance from other staff.

**ENVIRONMENTAL CONDITIONS**

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, hazardous physical substances and fumes, dust and air contaminants. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.