



WASTEWATER TREATMENT PLANT OPERATOR I/II

DEFINITION

Under immediate (Wastewater Treatment Plant Operator I) or general (Wastewater Treatment Plant Operator II) supervision, performs a wide variety of skilled tasks involved in the monitoring, regulation, maintenance, and operation of wastewater facilities and equipment; performs laboratory tests on various water processes; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives immediate (Wastewater Treatment Plant Operator I) to general (Wastewater Treatment Plant Operator II) supervision from assigned supervisory or management personnel. Exercises no direct supervision over staff.

CLASS CHARACTERISTICS

Wastewater Treatment Plant Operator I: This is the entry level classification in the Wastewater Treatment Plant Operator series. Initially under close supervision, incumbents learn and perform more routine wastewater treatment duties. As experience is gained, assignments become more varied, complex, and difficult; close supervision and frequent review of work lessen as an incumbent demonstrates skill to perform the work independently. Within the scope and authority of their mandated certification, positions at this level perform some of the duties required of the positions at the Wastewater Treatment Plant Operator II level but are not expected to function at the same skill level and exercise less independent discretion and judgment in matters related to work procedures and methods. Work is usually supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise.

Wastewater Treatment Plant Operator II: This is the journey-level classification in the Wastewater Treatment Plant Operator series. Positions at this level are distinguished from the Wastewater Treatment Plant Operator I level by the performance of higher-level operating duties as assigned, performing standby duties, working independently, and exercising judgment and initiative within the scope and authority of mandated certification. Positions 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 the Wastewater Treatment Plant Operator class series are flexibly staffed; positions at the Wastewater Treatment Plant Operator II level are normally filled by advancement from the Wastewater Treatment Plant Operator I level; progression to the Wastewater Treatment Plant Operator II level is dependent on (i) management affirmation that the position is performing the full range of duties assigned to the classification; (ii) satisfactory work performance; (iii) the incumbent meeting the minimum qualifications for the classification including any licenses and certifications; and (iv) management approval for progression to the Wastewater Treatment Plant Operator II level.

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 so qualified employees can perform the essential functions of the job.

Positions at the Wastewater Treatment Plant Operator I level may perform some of these duties and responsibilities in a learning capacity.

- Inspects treatment plant and equipment to ensure its proper functioning to minimize interruptions in the treatment process; makes adjustments to operating equipment as instructed; reports the need for major or specialized repairs to equipment, machinery, and electrical and electronic systems.
- Monitors and controls system wastewater treatment operations; participates in the periodic maintenance of a variety of process equipment such as valves, sluice gates, pumps, blowers, samplers, dissolved oxygen sensors, chlorine, and other wastewater analyzers and related equipment.
- Checks effluent discharge outfall site.
- Monitors biosolids dewatering facility; monitors treatment process parameters including levels, chemical and oxygen concentrations, and equipment status; monitors and controls pump flows and chemical dosages; ensures a range of specified compliance parameters are satisfied.
- Operates wastewater treatment equipment, machinery, and facilities by using manual, electronic, and computer control systems to regulate and control processes; collects toxicity and other samples and inspects and tests overall quality of reclaimed water by using various types of laboratory test equipment, as needed.
- Analyzes historical trend data to ensure proper operation and regulatory compliance; reads gauges, meters, charts, and graphs, and operates pumps, valves, electric motors, and related equipment.
- Cleans facilities, including tanks, process areas, filters, and control rooms; ensures buildings and grounds are clean and orderly.
- Assists maintenance personnel and contractors in the servicing, maintenance, repair, and upgrades of equipment, electrical and electronic devices, machinery, and related appurtenances; writes work orders for malfunctioning or failing equipment or for desired plant improvements.
- Calculates or determines chemical feed and dosages; makes adjustments to chemical dosages or pump rates as necessary; monitors chemical inventories and usage; orders chemicals as needed to maintain inventory.
- Maintains a variety of records, logbook entries, and reports; enters daily and weekly plant process data into automated systems.
- Performs a variety of custodial and groundskeeping duties to ensure facilities are maintained in clean, orderly, and safe condition; performs duties in confined spaces, utilizing departmental safety equipment and following District policies and procedures; reads gauges, meters, charts, and graphs.
- Observes and complies with District and mandated safety rules, regulations, and protocols.
- Performs other duties as assigned.

QUALIFICATIONS

Positions at the Wastewater Treatment Plant Operator I level may exercise some of these knowledge and abilities statements in a learning capacity.

Knowledge of:

- 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, extended aeration, dewatering, biosolids dewatering, 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 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, rules, regulations, ordinances, and organizational policies and procedures regarding wastewater processes and treatment.
- Recordkeeping principles and procedures.
- District and mandated safety rules, regulations, and protocols, including confined space entry, bloodborne pathogens, and fall protection techniques.
- 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:

- Operate and maintain all aspects of the District's wastewater treatment system and related facilities and equipment.
- Operate treatment and blending 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.
- Troubleshoot issues with facility performance based on established wastewater treatment principles.
- 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.
- Follow Standard Operating Procedures governing various facility equipment and associated treatment processes.
- Operate and maintain a variety of equipment including front loader and forklift, as well as power and hand tools.
- Make accurate mathematic computations.
- Establish and maintain accurate logs, records, and basic written records of work performed.
- Prepare clear and concise records and reports.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal 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:

- Wastewater Treatment Plant Operator I/II: 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:

- Wastewater Treatment Plant Operator I: One (1) year of experience working in wastewater treatment facility operations involving primary, biological, secondary, and tertiary phases of treatment or a related field.
- Wastewater Treatment Plant Operator II: Two (2) years of increasingly responsible experience working in wastewater treatment facility operations involving primary, biological, secondary, and tertiary phases of treatment.

Licenses and Certifications:

- Wastewater Treatment Plant Operator I/II: Possession of a valid California Driver's License, to be maintained throughout employment.
- Wastewater Treatment Plant Operator I:
 - Possession of, or successful acquisition within two (2) testing periods from employment, a valid Grade I Wastewater Treatment Operator's Certificate, to be maintained throughout employment.
 - Possession of, or successful acquisition within 18 months of employment, a valid Grade I Collections System Maintenance certificate from the California Water Environment Association, to be maintained throughout employment.
- Wastewater Treatment Plant Operator II:
 - Possession of a valid Grade II Wastewater Treatment Operator's Certificate upon appointment, to be maintained throughout employment.
 - Possession of a valid Grade II Collection System Maintenance 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.