

MECHANICAL TECHNICIAN I/II

DEFINITION

Under immediate (Mechanical Technician I) to general (Mechanical Technician II) supervision, performs a variety of skilled duties in the preventive and corrective maintenance, inspection, and servicing of mechanical equipment, components, machinery, and facilities associated with the production, pumping, storage, delivery and treatment of potable, agricultural, reclaimed water and wastewater; ensures compliance with general water discharge orders; operates a variety of light and heavy equipment and hand and power tools; and performs related duties as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives immediate (Mechanical Technician I) to general (Mechanical Technician II) supervision from assigned supervisory or management personnel. Exercises no direct supervision over staff.

CLASS CHARACTERISTICS

Mechanical Technician I: This is the entry-level classification in the Mechanical Technician class series. Initially under close supervision, incumbents learn and perform routine preventive and corrective mechanical maintenance 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. Positions at this level usually perform most of the duties required of the positions at the II-level but are not expected to function at the same skill level and typically 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.

Mechanical Technician II: This is the fully qualified journey-level classification in the Mechanical Technician class series. Positions at this level are distinguished from the I-level by the performance of the full range of duties as assigned, working independently, and exercising judgment and initiative. 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. This class is distinguished from the Mechanical Technician III in that the latter provides technical and functional direction to lower-level staff and is responsible for the more complex work.

Positions in the Mechanical Technician I/II class series are flexibly staffed; positions at the II-level are normally filled by advancement from the I-level. Progression to the II-level is dependent on satisfactory work performance (an overall performance rating of “exceeds standards” or higher on most recent annual performance evaluation is required), the incumbent meeting the minimum qualifications for the classification including any licenses and certifications, and management approval for progression to the 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 that qualified employees can perform the typical functions of the job.

Positions at the Mechanical Technician I level may perform some of these duties and responsibilities in a learning capacity.

- Performs skilled mechanical maintenance duties in support of preventive/predictive maintenance programs including the maintenance, repair, servicing, and overhaul activities on wells, pumping stations, water/wastewater treatment plants, and other equipment related to the production, pumping, storage, and delivery of potable, agricultural, and reclaimed water and collection and treatment of wastewater; ensures maximum performance and efficiency of equipment.
- Maintains a range of mechanical equipment in well and booster pumping station operation using specialized tools and testing/diagnostic instrumentation; troubleshoots pumps and motors and makes appropriate adjustments and repairs; inspects, maintains and repairs hydraulic and pneumatic systems; installs, modifies, inspects, and maintains piping.
- Maintains, repairs, overhauls, and/or rebuilds equipment, components, pumps, valves, electrical motors, and engines associated with and used within water, wastewater, and agricultural systems.
- Responds to emergency alarms, determines cause, and provides corrective action; makes emergency field repairs; supplies emergency generators for power outages.
- Performs corrective maintenance by troubleshooting cause of malfunction using visual inspection and precision measuring and testing instruments and replacing or repairing broken parts, such as gauges, gaskets, sensors, switches, bearings, valves, pistons, rings, crankshafts, and pumps.
- Schedules and coordinates activities with other sections and divisions; ensures the timely and accurate completion of preventive maintenance activities; maintains detailed record keeping in the computerized maintenance management system (CMMS) on all maintenance repair and service activity.
- Performs confined space and permit required confined space entry; completes pre-entry checklists, performs atmospheric testing and evaluation of various entry conditions; assists in the calibration and maintenance of confined space atmospheric testing instrumentation and self-contained breathing apparatus units.
- Operates and maintains a variety of hand tools, power tools, pneumatic tools, and other equipment in the performance of assigned mechanical duties.
- Reads, understands, interprets, and works from blueprints, plans, schematics, diagrams, and maps.
- Responds to public inquiries in a courteous manner; provides information in accordance with District policies.
- Reads, understands, and ensures personal and staff compliance with the District Safety Manual; attends safety meetings, as required; reports all accidents, violations, or infractions to supervisor.
- Performs related duties as assigned.

QUALIFICATIONS

Positions at the Mechanical Technician I level may exercise some of these knowledge and abilities statements in a learning capacity.

Knowledge of:

- Principles, methods, materials, tools, and equipment required for installation, maintenance, diagnoses and repair of domestic, reclaimed, and agricultural water pumps, and operation and maintenance of booster pumping stations and domestic, reclaimed, and agricultural water wells.

- Principles of electronic and industrial electricity as it relates to assigned areas of responsibilities.
- Principles, methods, and techniques of mechanical maintenance, crane operation, rigging, metals identification, and welding.
- Operational characteristics and activities of diverse water, wastewater, and treatment plant systems, maintenance, and repair programs.
- Methods and techniques of performing diagnostic troubleshooting services.
- Principles and practices of record keeping.
- 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 to effectively perform the work.
- 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:

- Perform a variety of tasks involving the installation, construction, maintenance, and repair of mechanical equipment associated with water, wastewater, and agricultural water systems.
- Inspect, troubleshoot, diagnose, perform predictive, preventative, and/or corrective maintenance, and repair mechanical equipment within District water, wastewater, and agricultural systems such as motors, pumps, valves, actuators, and other equipment.
- Operate a variety of maintenance, repair, installation, and electrical testing equipment in a safe and effective manner.
- Read and understand technical manuals, blueprints, electrical diagrams and schematics, shop drawings, and sketches.
- Use various types of welding equipment to effectively repair equipment in the various District water and wastewater systems.
- Use a computerized maintenance management system for scheduling, tracking, and analyzing all work performed on equipment.
- Use SCADA to troubleshoot and identify potential problems within district systems.
- Comply with Cal-OSHA respirator facemask fit test requirements including use Self Contained Breathing Apparatus (SCBA).
- Maintain a variety of accurate records.
- Perform accurate mathematical calculations.
- Learn, interpret, and apply applicable federal, state, and local policies, laws, and regulations.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Use tact, initiative, prudence, and independent judgment within general policy and procedural guidelines.
- 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:

Equivalent to the completion of the twelfth (12th) grade supplemented by college level coursework or trade school training in electrical technology and/or mechanical maintenance, or a related field.

Experience:

Mechanical Technician I:

- One (1) year of experience in the maintenance and repair of mechanical equipment used in the distribution, collection, and treatment of water or wastewater systems or other similar industrial setting.

Mechanical Technician II:

- Three (3) years of progressively responsible experience in the maintenance and repair of mechanical equipment used in the distribution, collection, and treatment of water or wastewater systems.

Licenses and Certifications:

Mechanical Technician I:

- Possession of a valid California Class B Driver's License with air brakes and tank endorsements, within twelve (12) months of employment, to be maintained throughout employment.
- Possession of a crane operator certifications issued by the National Commission for the Certification of Crane Operators within twelve (12) months of employment.
- Possession of a valid Grade I Mechanical Technologist Certificate issued by the California Water Environment Association within twelve (12) months of employment.
- Possession of a valid Water Distribution Operator Grade 1 (D1) certification issued by the California State Water Resources Control Board within twelve (12) months of employment.

Mechanical Technician II:

- Possession of, and ability to maintain, a valid California Class B Driver's License with air brake and tank endorsements, to be maintained throughout employment.
- Possession of a crane operator certifications issued by the National Commission for the Certification of Crane Operators.
- Possession of a valid Grade II Mechanical Technologist Certificate issued by the California Water Environment Association.
- Possession of a valid Water Distribution Operator Grade 2 (D2) certificate issued by the California State Water Resources Control Board.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

ENVIRONMENT

Indoor/outdoor, and wastewater treatment plant environment; travel from site to site; exposure to noise, dust, grease, smoke, fumes, noxious odors, gases, vibrations, electrical energy, radiant energy and all types of weather and temperature conditions; exposure to

hazardous traffic conditions; work in or around water and wastewater; work and/or walk on various types of surfaces including slippery or uneven surfaces and rough terrain; work in confined spaces; incumbents may be required to work extended hours including evenings and weekends.

PHYSICAL

- Level Three
- NIDA
- Pulmonary

Incumbents require sufficient mobility to walk, stand, and sit for prolonged periods of time; frequently stoop, bend, kneel, crouch, crawl, climb, reach and twist; push, pull, lift, and/or carry 100lbs, exposure to harsh weather, hazardous chemicals, confined spaces, respirator. Use of large mechanical tools, electrical parts, and frequent exposure to extended periods of noise; operate assigned equipment and vehicles; ability to verbally communicate to exchange information.

VISION

See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; and to operate assigned equipment.

HEARING

Hear in the normal audio range with or without correction.

ADDITIONAL REQUIREMENTS

Must be able to respond within a forty-five (45) minute time period to the District's Corporate Yard while on standby duty; must be able to communicate by telephone for the duration of the on-call shift.