



JULY 2012
FLSA: NON-EXEMPT

LEAD MECHANIC

This class specification indicates, in general terms, the type and level of work performed as well as the responsibilities of employees in this classification. The job functions described are not to be interpreted as being all-inclusive to any specific employee.

DEFINITION

Under direction, leads, oversees, and participates in the most complex and difficult work of staff responsible for the maintenance, repair, service, and troubleshooting of equipment, vehicles and machinery in wastewater treatment plants, pumping stations, and related facilities; oversees and participates in cleaning sewer lines, manholes and wet wells including removing all debris; and oversees and participates in performing preventive, predictive and corrective maintenance on assigned equipment, vehicles, and machinery.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from the Maintenance Supervisor. Exercises technical and functional direction and training over assigned staff.

CLASS CHARACTERISTICS

This is the lead-level class in the maintenance series. Incumbents organize and oversee the day-to-day work of staff in assigned areas of responsibility, and ensure that equipment and machinery in District wastewater treatment plants, pumping stations, and related facilities are maintained in a safe and efficient manner. 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 distinguished from the Maintenance Supervisor in that the latter has full supervisory authority for planning, organizing, and overseeing the full scope of assigned maintenance functions within the department.

EXAMPLES OF ESSENTIAL JOB FUNCTIONS

The following essential job functions are typical for this classification. Incumbents may not perform all of the listed job functions and/or may be required to perform additional or different job functions from those set forth below to address business needs and changing business practices.

When performing all assignments:

- Plan, assign, review, and participate in the work of staff responsible for the maintenance, repair, service, and troubleshooting of equipment, vehicles, and machinery in wastewater treatment plants, pumping stations, and related facilities.
- Assist in developing work plans, procedures, and schedules, and coordinates personnel, equipment and other resources needed to complete day-to-day work.
- Request supplies and equipment for work projects; maintain records of purchase orders; may assist in developing budget figures for division.
- Monitor work sites and ensure adherence to safe work practices and procedures; respond to and resolve complex work related or equipment operating problems.

- Supervise the use, care, and operation of a variety of mechanical repair equipment including hand tools, power tools, and pneumatic tools.
- Inspect work in progress and upon completion to assure that repairs, maintenance, and project activities are in accordance with District regulations, policies, and operating procedures and practices.
- Provide technical and safety training to workers on safety hazards, work procedures, and care and use of equipment and tools; perform inspections of equipment and tools; complete documentation outlining confined space entry and lock- and tag-out procedures.
- Coordinate projects with members of other divisions, departments, and outside agencies.
- Complete and log daily written and electronic work sheets and service sheets; review equipment service logs for previous comments or repairs on equipment; complete work orders detailing work completed during maintenance and repair tasks; maintain all records.
- Responds to public inquiries in a courteous manner; provides information within the area of assignment; resolve complaints in an efficient and timely manner.
- Estimate time, materials, and equipment required for jobs assigned; order all parts necessary to perform maintenance and repairs; research vendors to locate necessary items, determine compatibility, and, as needed obtain competitive prices; identify parts that need to be added to warehouse stores.
- May be assigned to respond to a variety of wastewater emergencies on an assigned standby shift.
- Perform related duties as required.

When assigned to Field Maintenance:

- Oversee and participate in work on process equipment in the plant, including but not limited to boilers, pumps, mobile and stationary engines, air and gas compressors, evaporators, scrubbers, blowers, belt filter presses, bar screens, augers, centrifuges, hydraulic systems, and conveyor belts.
- Perform the most difficult and complex preventive mechanical maintenance by inspecting and cleaning equipment, including but not limited to replacing oil, adjusting and/or replacing belts, gear boxes, pistons, rollers, filters, valves, water, gaskets and other related parts.
- Perform the most difficult and complex corrective mechanical 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, plugs, coils, wires, bearings, drive lines, valves, pistons, rings, crankshafts and pumps.
- Oversee and participate in rebuilding equipment by disassembling, cleaning, and repairing mechanical malfunctions; reassemble, install and test equipment to ensure that it is in proper working condition.
- Plan and draft confined space entry procedures; initiate and complete documentation for confined space entry.
- Draft documentation outlining confined space entry procedures; read schematic drawings to determine location and layout of equipment; isolate and tag equipment to be worked on before performing mechanical maintenance.
- Coordinate work with District personnel in areas where equipment shutdown, maintenance and repair activities are to be performed.

When assigned to Rebuild Shop:

- Perform the most difficult and complex repair functions and complete rebuilds on various wastewater treatment plant equipment and related components.
- Responsible for miscellaneous types of machines to include, but not limited to gear boxes and gear reducers, vari-drive assemblies both mechanical and hydraulic; grinders assemblies, grit assembly complete repair, regulators and valves, belt filter press rollers and related repair.
- Oversee and participate in disassembling all machinery in pump shop to carefully evaluate for required machine work and parts; clean, bead blast, prime and paint prior to reassembly.
- Test run equipment on specially designed test stands to ensure proper operation; test mechanical seals for leaks either hydrostatically or pneumatically.

- Oversee and participate in designing and fabricating special tools for installation and removal of different components when standard tools are not applicable.
- Oversee and participate in creating blueprints and schematics as required to assist in all facets of repair.

When assigned to any Mechanical Maintenance function:

- Lead, plan, train, and review the work of assigned staff responsible for the maintenance and repair of mechanical equipment, vehicles, and machinery; provide technical direction including assessment of performance for assigned staff; review work orders for work to be performed; assign and coordinate work assignments.
- Train assigned employees in their areas of work including proper mechanical, maintenance and repair work and safety methods, procedures, and techniques.

When assigned to Automotive/Heavy Equipment Maintenance:

- Oversee and participate in work on District automotive equipment including cars, trucks, electric carts, bicycles and portable equipment.
- Perform the most difficult and complex preventive mechanical maintenance by inspecting equipment and adjusting or replacing oil, filters, gear boxes, drive belts, brakes, air systems, exhaust systems, pressure systems and cab equipment.
- Perform the most difficult and complex corrective mechanical maintenance by troubleshooting cause of malfunction using visual inspection and precision measuring and testing instruments; troubleshoot electrical systems; replace or repair broken parts such as engines, computer diagnostic systems, brakes and front-end suspensions.
- Oversee and participate in overhauling, repairing, and adjusting engines, transmissions, and carburetors; tune-up engines as necessary.
- Schedule and participate in smog and opacity tests on gasoline and diesel engines.
- Read electrical diagrams to determine location and layout of equipment.
- Perform service calls on job sites to perform minor repairs.

When assigned to Collection Facilities Maintenance:

- Oversee and participate in cleaning sewer lines, manholes, and wet wells; read line location blueprints; open manhole covers; set up atmospheric monitors; enter confined spaces in a body harness; attaching a tire or ball to line cleaning rig to remove debris from lines; use a shovel and bucket to remove debris from manholes; remove floating debris; shovel grit at bottom of wet well and scrape all grease that is on wall of wet well.
- Direct wastewater flow by setting pillow plugs or diversion boards.
- Perform the most difficult and complex pump station repair work; troubleshoot pumps and other equipment; identify malfunctions and take corrective action including removing, replacing, or repairing parts and pumps; install and monitor flow meters and gas flaps in sewer lines.
- Oversee and participate in pump station maintenance work; scrub and clean facilities; remove rags and debris; perform routine inspections, cleaning and painting; communicate with the public regarding activities being performed at pump stations, including odor complaints.
- Oversee and participate in manhole frame and cover replacement duties; raise manhole covers to street level by operating jackhammer to remove asphalt and concrete; lift manhole ring with appropriate equipment; mix cement, sand, and gravel to form concrete; remove broken asphalt and concrete; pour and smooth concrete and reset ring cover.
- Direct crew in traffic control procedures for field work locations; drive District's vehicles and direct crew in driving, placing, and operating vehicles.
- Oversee and participate in general maintenance work at treatment plants or in the field including, vegetation control or general cleanup; clears and cleans easements as necessary.

QUALIFICATIONS

Knowledge of:

- Principles of lead supervision and training.
- Plan, organize, schedule, assign, and review the work of and train staff.
- The operation and minor maintenance of a variety of hand and power tools, vehicles, and power equipment.
- Traffic control procedures and traffic sign regulations.
- Basic math.
- Safety principles, practices, and procedures of all facilities, equipment, and materials used in wastewater treatment and wastewater collection systems.
- Operational characteristics of wastewater treatment plant systems and equipment.
- Computerized maintenance management system used to research history, data, and maintenance records.
- Advanced principles, methods, materials, and tools employed in the repair and maintenance of assigned equipment, vehicles, and/or machinery.
- Advanced methods and techniques of performing diagnostic troubleshooting services.
- Predictive maintenance methods and tools.
- Operating characteristics of computers and applicable software applications such as word processing, spreadsheets, and databases.
- Basic principles and practices of cost estimate preparation.
- Principles and procedures of record keeping.
- Confined space entry requiring the use and operation of Self Contained Breathing Apparatus (SCBA).
- Applicable Federal, State, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Modern office practices, methods, and computer equipment and applications related to the work, including word processing, database, and spreadsheet applications.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and District staff.

Ability to:

- Plan, schedule, assign, and oversee activities of wastewater collection system maintenance and repair personnel.
- Inspect the work of others and maintain established quality control standards.
- Train others in proper and safe work procedures.
- Identify and implement effective course of action to complete assigned work.
- Estimate the cost and time of repairs.
- Oversee and participate in maintenance and other related projects.
- Perform the most complex mechanical maintenance duties and operate related equipment safely and effectively.
- Operate specialized maintenance and repair equipment related to wastewater main cleaning.
- Perform preventive setup and operate traffic zones, including cones, barricades and flagging. Locate underground utilities by use of blue prints and electronic locating equipment.
- Perform work in accordance with Underground Service Alert (USA) regulations.
- Troubleshoot maintenance problems and determine materials and supplies required for repair.
- Operate precision alignment tools.
- 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 confined space entries.

- Maintain a variety of written and electronic accurate logs, records and basic written records of work performed.
- Understand and follow oral and written instructions.
- Interpret, apply, explain, and ensure compliance with Federal, State, and local policies, procedures, laws, rules, and regulations.
- Make sound, independent decisions within established policy and procedural guidelines.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment including computer equipment and software programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Use tact, initiative, prudence, and independent judgment within general policy and legal guidelines.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Employment Standards:

Any combination of education and experience that provides the required knowledge, skills, and abilities may be qualifying as determined by OCSD.

1. High school diploma or equivalent, supplemented by specialized training in the areas of mechanical equipment maintenance and repair; AND
2. Four (4) years of increasingly responsible experience applying preventive and corrective mechanical maintenance skills on field equipment and/or automotive equipment with at least two (2) years performing duties at a level comparable to a Senior Mechanic with the District.

License or Certificate:

- Possession of a valid California class C driver's license.

Rebuild Shop or Field Maintenance:

- Possession of a valid Grade III Mechanical Technology Certificate from the California Water Environment Association is desirable.

Automotive/Heavy Equipment Maintenance:

- Possession of a valid California class B driver's license.
- Possession of, or the ability to obtain, smog, Haz-mat, doubles, triples, tanker, and air brakes certification(s) is desirable.
- Possession of ASE Certification is desirable.

Collection Facilities Maintenance:

- Possession of a valid Grade III Collection System Maintenance Certificate from the California Water Environment Association.
- Possession of a valid California class B driver's license with air brakes and tanker certificate.

Disaster Service Workers:

All Orange County Sanitation District employees are designated Disaster Service Workers through state law (California Government Code Section 3100-3109). Employment with the Orange County Sanitation District requires the affirmation of a loyalty oath to this effect. Employees are required to complete all related training as assigned, and to return to work as ordered in the event of an emergency.

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 a minimum of 40 pounds, or 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.