

SENIOR 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 general supervision, troubleshoots, services, and performs increasingly complex preventative and corrective maintenance and repairs on, and rebuilds equipment, vehicles, and machinery found in wastewater treatment plants, collection systems, pumping stations, and related facilities and infrastructure; cleans sewer lines, manholes, and wet wells; ensures high-precision, millwright craftsmanship work quality; operates and maintains specialized industry tools and various hand and power tools and equipment; oversees and directs work of staff during confined space entry or special projects as assigned; and performs duties as assigned.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from assigned supervisory and/or managerial staff. Exercises no direct supervision of staff.

CLASS CHARACTERISTICS

This classification is the third of five levels within the mechanical maintenance job series. Positions are responsible for performing 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. Work is normally reviewed upon completion and for overall results. This class is distinguished from the Lead Mechanic in that the latter is responsible for performing the most complex duties assigned and serves in a lead capacity over assigned staff.

EXAMPLES OF ESSENTIAL JOB FUNCTIONS (Illustrative Only)

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:

- Performs a variety of increasingly complex technical duties in the preventative and corrective maintenance, repair, service, troubleshooting, and rebuilding of equipment and machinery found in wastewater treatment plants, collection systems, pumping stations, and related facilities.
- Performs preventive mechanical maintenance by inspecting and cleaning equipment; and performs corrective mechanical maintenance by troubleshooting cause of malfunction using visual inspection and precision measuring and testing instruments and replacing or repairing broken parts.
- Rebuilds equipment by disassembling, cleaning, and repairing mechanical malfunctions; reassembles, installs, and tests equipment to ensure proper working condition.
- Reads and interprets schematic drawings to determine location and layout of equipment; creates blueprints and schematics as required to assist in all facets of repair.

- Prepares traffic control plan; conducts traffic control when working in high traffic areas; controls and diverts traffic using traffic cones, flag stands, signs, arrow boards and hand paddles.
- Performs general maintenance work at treatment plants or in the field, including vegetation control or general cleanup; clears and cleans easements as necessary.
- Completes and logs written and/or electronic daily work sheets and service sheets; reviews equipment service logs for previous comments or repairs on equipment; takes photographs to document equipment condition and maintenance and repair; completes work orders for malfunctions identified during routine maintenance inspections; maintains all records.
- Operates and maintains a variety of specialized industry tools, hand tools, power tools, pneumatic tools, and other equipment in the performance of assigned duties; drives OC San vehicles, including towing small trailers as necessary.
- Researches and orders replacement parts and outside services to perform maintenance and repairs as necessary; researches vendors, collects cost quotes, and schedules deliveries of parts.
- Responds to public inquiries in a courteous manner; provides information within the area of assignment; addresses complaints in an efficient and timely manner.
- Responds to a variety of wastewater emergencies on an assigned standby shift.
- Initiates and completes documentation for confined space entry procedures; may oversee and direct work of staff during a confined space entry or special project requiring a team to complete the task; reads schematic drawings to determine location and layout of equipment.
- Performs isolations, shut-downs, tag-outs, and start-ups of pump station operation equipment before and after testing and emergency repairs are performed.
- Ensures safety and health procedures and precautions are adhered to, corrects unsafe work conditions/practices, and/or reports unsafe work conditions/practices to assigned supervisory or managerial staff.
- Performs duties as assigned.

When assigned to Field Maintenance:

- Performs increasingly complex mechanical maintenance work on process equipment in the plant, including boilers, pumps, mobile and stationary engines, air and gas compressors, evaporators, scrubbers, blowers, centrifuges, bar screens, augers, hydraulic systems, and conveyor belts.
- Replaces oil and adjusts and/or replaces belts, gear boxes, pistons, rollers, filters, valves, gaskets, and other related parts.
- Replaces or repairs broken parts such as gauges, gaskets, plugs, coils, wires, bearings, drive lines, valves, pistons, rings, crankshafts, and pumps.
- Performs rounds and inspects power plant and gas compressors; monitors power generation and general operations to ensure proper working conditions by monitoring, inspecting, overhauling, maintaining, and troubleshooting internal combustion engines, steam turbine generators, energy steam systems, and auxiliary and safety equipment such as pumps, compressors, centrifuges, engine turbo, engine heads, heat exchangers, catalytic converters, fans, valves, filters, equipment drives, and motors; identifies complex problems and troubleshoots issues and/or refers to appropriate supervisor.
- Aligns machines and motors using laser alignment systems and/or reverse dial indicator method.

When assigned to Rebuild Shop:

- Performs increasingly complex repair functions and complete rebuilds on various wastewater treatment plant equipment, machines, and related components such as gear boxes and gear reducers, mechanical and hydraulic variable drive assemblies, grinders assemblies, grit assembly, regulators, and valves.
- Inspects the fabrication, installation, and repair of parts, equipment, facilities, machinery, and special purpose tools to ensure high-precision, millwright craftsmanship work quality.
- Disassembles all machinery in pump shop to carefully evaluate for required machine work and parts; cleans, bead blasts, primes, and paints prior to reassembly.

- Test runs equipment on specially designed test stands to ensure proper operation; tests mechanical seals for leaks either hydrostatically or pneumatically; reassembles machinery and attaches tag with installation instructions.

When assigned to Collection Maintenance:

- Develops cleaning plan for assigned crew; directs and participates in cleaning sewer lines, manholes, and wet wells; reads line location blueprints; opens manhole covers; sets-up atmospheric monitors; attaches a tire or ball to line cleaning rig to remove debris from lines; sets up a combo vacuum truck for staff to use to remove debris from manholes; removes floating debris; shovels grit at bottom of wet well and scraping all grease that is on wall of wet well.
- Monitors and controls wastewater flow and pump station processes to ensure efficient and safe operation of facilities and equipment.
- Performs increasingly complex pump station maintenance and repair work; scrubs and cleans facilities; removes rags and debris; exercises valves; greases and replaces fan belts; replaces air filters; conducts routine inspections, identifies malfunctions and determines root cause, troubleshoots pumps and other equipment, and takes corrective action including removing, replacing, or repairing parts and pumps; installs and monitors flow meters and gas flaps in sewer lines.
- Performs manhole frame and cover replacement duties; raises manhole covers to street level by operating jackhammer to remove asphalt and concrete; lifts manhole ring with appropriate equipment; mixes cement, sand, and gravel to form concrete; removes broken asphalt and concrete; pours and smooths concrete and resets ring cover.
- Performs work on off-site pumping systems, air compressors, scrubbers, blowers, and hydraulic systems.
- Assists in performing preventative and routine maintenance on interplant gas pipelines.
- Locates underground utilities by use of blueprints and electronic locating equipment in accordance with Underground Service Alert (USA) regulations.

QUALIFICATIONS

Knowledge of:

- Operations, services, and activities of a wastewater treatment maintenance program.
- Methods, specialized industry techniques, tools, devices, and materials for performing preventive, predictive, and corrective maintenance on and complete overhaul of assigned equipment.
- Operational characteristics and maintenance principles of wastewater treatment plant systems and equipment.
- Procedures for confined space entry initiation and documentation, including the use and operation of Self Contained Breathing Apparatus (SCBA).
- The operation and minor maintenance of a variety of hand and power tools, vehicles, and power equipment.
- Traffic control plan development and implementation procedures and traffic sign regulations.
- Applicable federal, state, and local laws, codes, and ordinances relevant to area(s) of responsibility.
- Mathematical principles and calculations.
- Principles and procedures of record keeping.
- Safety principles, practices, and procedures of all facilities, equipment, and materials used in wastewater treatment and wastewater collection systems.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Current 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 increasingly complex troubleshooting, repair, maintenance, rebuilding, servicing, and cleaning tasks on assigned equipment and machinery found in wastewater treatment plants, collection systems, pumping stations, and related facilities.
- Safely and effectively operate a variety of maintenance and repair equipment, specialized industry tools, and hand, power, and alignment tools.
- Set up and operate traffic area zones, including cones, barricades, and flagging.
- Locate underground utilities by use of blueprints and electronic locating equipment in accordance with Underground Service Alert (USA) regulations.
- Troubleshoot complex maintenance problems, identify root cause, and determine action required for repair.
- Make accurate arithmetic calculations.
- Read and interpret construction drawings and specifications.
- Initiate and complete documentation for confined space entry procedures; enter confined space requiring the use and operation of SCBA.
- Maintain accurate logs, records, and basic written records of work performed.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
- Independently organize work, set priorities, meet critical deadlines, and follow-up on assignments.
- Operate a motor vehicle and travel to various OC San sites, projects, and/or meetings.
- Use tact, initiative, prudence, and independent judgment within general policy and legal guidelines.
- Comply with safe work practices and procedures in the workplace.
- Provide a high level of customer service by effectively dealing with the public, vendors, contractors, and OC San staff.
- 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.

Employment Standards:

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

1. High school diploma or G.E.D. supplemented by specialized training such as relevant trade school in the areas of mechanical equipment maintenance and repair.
2. Three (3) years of increasingly responsible experience applying preventive and corrective mechanical maintenance skills on related wastewater plant equipment as well as analyzing mechanical systems and processes.

Licenses and/or Certifications:

- Must possess a valid California Class C Driver's License.
- In addition, when assigned to Collection Maintenance, must possess:
 - A valid Grade II Collection System Maintenance Certificate from the California Water Environment Association.
 - A valid California Class B Driver's License with air brakes and tanker endorsements.

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

- Mobility to work in the field; 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; to climb and descend ladders, to operate varied hand and power tools and equipment, and to operate a motor vehicle and visit various OC San sites, projects, and/or meetings.
- Perform moderate to heavy physical work; to lift, carry, push, and pull materials and objects averaging a weight of 51 pounds or heavier weights, in all cases with the use of proper equipment and/or assistance from other staff.
- Work requires entry into confined spaces and the use of confined entry equipment and protective safety equipment.
- Vision to inspect and operate equipment.
- Field work requiring frequent walking in operational areas to identify problems or hazards.
- Finger dexterity to operate and repair tools and equipment.

ENVIRONMENTAL ELEMENTS

- Field work in and around facilities with exposure to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, confining workspace, heights, 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.

OTHER REQUIREMENTS

- May be required to work extended hours, including nights, weekends, and holidays when necessary.
- Standby and Call Back: Employees in this classification may be required to participate in standby duty and are subject to call back, which may include nights, weekends and 24-hour emergency call out with little or no notice. Any employee designated to serve on standby, or report to an emergency, and refuses to do such, shall be subject to disciplinary action up to and including termination.
- Probationary Period: All OC San employees, except classifications considered “at-will”, are subject to the probationary period provisions as specified in the applicable Memorandum of Understanding, policies, and/or resolutions. Employees who have not yet successfully completed their initial probationary period serve “at-will” and may be released from employment without cause or recourse to any appeal or grievance procedures.
- Pre-Employment: All employment offers are contingent upon successful completion of OC San’s pre-employment process, which includes a background investigation, a physical examination, and a drug screen.
- Work Location Assignment: Employees will be assigned to a work location based on business needs which may be located at any/all of OC San locations; this work location may be changed at any time.