

City of San José
CLASS SPECIFICATION
WASTEWATER SENIOR MECHANIC I/II (3623/3673)

DEPARTMENT	ACCOUNTABLE TO	FLSA STATUS
Environmental Services Department	Wastewater Mechanical Supervisor or Wastewater Power Generation Supervisor	Non-exempt

CLASS SUMMARY

Performs skilled journey-level work of moderate difficulty in the maintenance, repair, and overhaul of varied industrial mechanical equipment or in the operation and maintenance of large bore, medium speed, stationary, reciprocating engines and auxiliary equipment at the San Jose/Santa Clara Regional Wastewater Facility. Handles unusual and emergency conditions. Leads, provides direction, and trains lower level employees. Performs related work as required.

DISTINGUISHING CHARACTERISTICS

This is a two level flexibly-staffed classification. Incumbents in this classification train and lead Wastewater Mechanics, Wastewater Attendants, and other staff; and handle unusual and emergency situations. Depending on the work group, assignments will be made to any shift needed for an around-the-clock operation. Incumbents must also be available for work on Saturdays, Sundays, and Holidays.

Duties require a heavy level of physical exertion, including exerting up to 100 pounds of force occasionally, and or up to 50 pounds of force frequently, and/or up to 20 pounds of force constantly to move objects (e.g. large hand tools, pipes, or other wastewater equipment). Incumbents work with large industrial equipment and machinery, in confined spaces, and around hazardous materials. Incumbents may be required to utilize self-contained breathing apparatus (SCBA) equipment, which requires the ability to pass an annual fit and spirometry test.

QUALIFICATIONS

(These qualifications are typically required. An equivalent combination of education and experience sufficient to satisfactorily perform the duties of the job may be substituted.)

Minimum Qualifications

Senior Wastewater Mechanic I

Education: Successful completion of high school, General Educational Development (G.E.D.) Certificate, or California Proficiency Certificate.

Experience: Three (3) years journey level experience as a mechanic in hydraulics, wastewater treatment or closely related industry or in operation, maintenance, repair, and overhaul of mechanical and electrical equipment related to large stationary diesel and spark-ignited engines and/or power generators, including one (1) year at a level equivalent to Wastewater Mechanic I/II with the San José/Santa Clara Regional Wastewater Facility.

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Required Licensing: Possession of a valid State of California Class C driver's license. As a condition of employment in some designated positions, possession of a valid State of California Class A or B driver's license with applicable endorsements may be required in the performance of job duties.

Senior Wastewater Mechanic II

Education: Successful completion of high school, General Educational Development (G.E.D.) Certificate, or California Proficiency Certificate.

Experience: Three (3) years journey level experience as a mechanic in hydraulics, wastewater treatment or closely related industry or in operation, maintenance, repair, and overhaul of mechanical and electrical equipment related to large stationary diesel and spark-ignited engines and/or power generators, including one (1) year at a level equivalent to Wastewater Mechanic I/II with the San José/Santa Clara Regional Wastewater Facility, AND possession of certification as a Plant Mechanical Technologist Grade III from California Water Environment Association (CWEA),

Acceptable Substitution: An additional three years of journey-level experience as Wastewater Mechanic I/II or an additional two years experience and possession of Plant Mechanical Technologist Grade II for one year may be substituted for the certification as Plant Mechanical Technologist Grade III.

Required Licensing: Possession of a valid State of California Class C driver's license. As a condition of employment in some designated positions, possession of a valid State of California Class A or B driver's license with applicable endorsements may be required in the performance of job duties.

Other Qualifications

Incumbents may be required to have different combinations of the listed qualifications, or more specific job-related qualifications depending on the position.

Basic Knowledge, Skills and Abilities

(Needed at entry into the job in order to perform the essential duties.)

- Knowledge of hazards and safety practices, policies, procedures, and standards applicable to industrial plant operations and maintenance such as confined space, rigging and lifting, hearing protection, respiratory protection, lock out/ tag out, hazardous chemicals handling, scaffold setup and inspection procedures, trenching/shoring regulations, fall protection, starting/stopping large motors, etc.
- Knowledge of principles applicable to wastewater facility operation and maintenance.
- Knowledge of practical methods and procedures for moving heavy objects.
- Knowledge of piping systems including; layout, installation, repair, fabrication.
- Knowledge of standard operating procedures related to 5KV three phase alternating current generation and distribution.

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- Knowledge of regulatory requirements such as Bay Area Air Quality Management District (BAAQMD) requirements for operating engine and boilers.
- Knowledge of: calculating engine thermal efficiency, evaluating performance of fuel flow and fuel BTU monitoring equipment, quality control of fuel management Knowledge of how to adjust engine air/fuel ratio to achieve desired exhaust gas emission and engine performance.
- Knowledge of what causes engines to operate out of exhaust gas emission and thermal efficiency limitations and to affect repair to correct such operational problems.
- Knowledge of personnel practices including employee training, performance management, approving time-off requests, and scheduling work.
- Knowledge of City's procurement policies and guidelines.
- Skill in inspecting, testing, dismantling, installing, maintaining, troubleshooting, repairing, and overhauling wastewater treatment equipment such as: bar screens, grit collectors, conveyors, mechanical grinders, pumps, small engines, blowers, gas and air compressors, ventilation systems, chlorinators, large bore, medium speed reciprocating engines, centrifugal air compressors, reciprocating methane gas compressors, etc.
- Skill in training new and incumbent staff on work procedures and technical skills.
- Skill in using computers and related software applications, such as Excel, Word, Outlook, and computerized maintenance management system (CMMS).
- Skill in utilizing communication and interpersonal skills as to effectively interact with coworkers, supervisor, the general public, etc to exchange or convey information.
- Skill in reading and interpreting blueprints, schematics, diagrams and documents.
- Skill in operating hand and power tools and equipment in a safe manner.
- Skill in making rough estimates of materials, supplies, and equipment required for jobs and requisitioning parts and supplies.
- Skill in maintaining accurate records of time, labor, materials and equipment for work performed and document it using CMMS and prepare reports (oral and written) as necessary.
- Skill in reviewing and approving the work quality of others.
- Skill in providing feedback regarding the performance work.
- Ability to write instructions on the operation and maintenance of mechanical equipment .
- Ability to use Distributed Control System (DCS) information to diagnose equipment and system conditions.
- Ability to learn complex mechanical systems.
- Ability to read, understand, record, interpret and evaluate computerized control systems, meters and gauges and make equipment setting adjustments or mechanically modify equipment for more efficient operation when necessary.
- Ability to use advanced equipment technology such as Motorized Valves, Digital meters, Coupling alignment meters, Lasers and similar new equipment.
- Ability to operate welding, cutting and repair equipment in confined positions and spaces.
- Ability to prepare technical reports, testing records, work orders or other documents concisely and correctly.

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- Ability to provide lead direction and on-the-job training for inexperienced peers and subordinate employees.

Desirable Qualifications

(Knowledge, skills, and abilities; licenses, certificates, education, experience that is more position specific and/or likely to contribute to more successful job performance.)

- Possession of specialized certification such as Backflow preventer installation and maintenance, Welding, Confined Space Entry, Power Plant, Hazardous Material Handling, etc.
- Ability to trouble-shoot emergency and unusual situations, and to direct and perform corrective maintenance.
- Completion of technical trade school in the field of mechanics.
- Ability to operate power switchboard, and adjust distribution of electric power.
- Ability to direct the activities of journey-level mechanics, vendors, contractors and other staff.
- Ability to inspect, coordinate and oversee work done by outside contractors.

DUTY NO.	TYPICAL CLASS ESSENTIAL DUTIES: (These duties and estimated frequency are a representative sample; position assignments may vary depending on the business needs of the department.) Duties may include, but are not limited to, the following:	FRE-QUENCY*
	Directs and participates in the construction, maintenance, installation, overhaul, inspection, repairing, testing and troubleshooting of industrial wastewater plant equipment.	Continuous
	Serves as a lead to staff including assigning, scheduling and monitoring work, providing technical direction, determining priorities, and training staff. As a lead, may approve timecards and may give input to the supervisor regarding the employee’s performance evaluation, hiring, promotion, termination and discipline of employees.	Continuous
	Stays current with safety topics and provides for safe work areas and safe operation of equipment.	Continuous
	Requisitions the purchase of parts, supplies and equipment.	Continuous
	Maintains records and prepares reports.	Continuous
	Directs and performs preventative maintenance tasks, major overhaul, and emergency trouble-shooting of various equipment.	Frequent
	Leads and performs work in the diagnosis of malfunctions, tune-up, repair, and overhaul of plant equipment.	Frequent
	Operates and leads others in the operation of mechanical equipment.	Frequent
	Operates and/or leads in the operation of cranes, winches, hoist, dollies, rollers, and forklifts used to remove, install, and relocate heavy, unwieldy, or otherwise critical equipment.	Frequent

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DUTY NO.	TYPICAL CLASS ESSENTIAL DUTIES: (These duties and estimated frequency are a representative sample; position assignments may vary depending on the business needs of the department.) Duties may include, but are not limited to, the following:	FRE-QUENCY*
	Operates and maintains large bore medium speed engines operation on diesel and variable BTU methane , gas compressors and related auxiliary equipment.	Occasional
	Operates three phase alternating current 5KV generator switchgear.	Occasional
	Prepares and reads drawing s and determines materials needed for repairs.	As Required
	Reads, gathers data, and records data from meters, gauges, thermometers, Distributive Control systems, and makes equipment adjustments and repairs as needed.	As Required
	Manage the training and workload of Plant Mechanic Apprentices to ensure apprenticeship training requirements and all work processes are met.	As Required
	Performs other duties of similar nature or level.	As Required

*Frequency defined as %, (totaling 100%) *or* “Continuous” (daily or approximately 20%+), “Frequent”(weekly or approximately 15%+), “Occasional”(monthly or approximately 10%+), “As Required”(Intermittent or 5% or less)

CLASSIFICATION HISTORY: *Created 5/80; Rev. 11/86, 4/92, 4/98; Rev., Ret. (formerly Senr Plant Mechanic) & Consol. with Senr Heavy Diesel Equipment Operator/Mechanic 8/13; 3623s002*