



**MAY 2024**

**FLSA: NON-EXEMPT**

## **UTILITY SYSTEMS MECHANIC I/II**

### **DEFINITION**

Under direct or general supervision, performs a wide variety of skilled utility maintenance and repair work at the City's water and wastewater treatment facilities and systems; provides general maintenance support to the Utilities Division; and performs related work as required. This classification is distinguished from the Utility Systems Operator I/II in that it performs technical utilities maintenance duties at the water/wastewater treatment plants and associated pump stations.

### **SUPERVISION RECEIVED AND EXERCISED**

Receives direct or general supervision and/or technical and functional direction from assigned supervisory or management personnel. No direct supervision of staff is exercised however incumbents may provide periodic technical and functional direction over support staff.

### **CLASS CHARACTERISTICS**

Utility Systems Mechanic I: This is the entry-level class in the water/wastewater treatment utility mechanic series. Initially under close supervision, incumbents with basic maintenance experience learn City water and wastewater treatment facilities and systems, use of tools and equipment, and a wide variety of practices and procedures. As experience is gained, assignments become more varied and are performed with greater independence. This class is alternately-staffed with Utility System Mechanic II and incumbents may advance to the higher level after gaining the knowledge, skill, experience, licenses and certifications which meet the qualifications for and demonstrating the ability to perform the work of the higher-level class.

Utility Systems Mechanic II: This is the journey-level class in the water/wastewater treatment utility mechanic series that performs the full range of duties required to ensure that water and wastewater treatment facilities and systems are maintained in a safe and effective working condition. Responsibilities include inspecting and attending to assigned areas in a timely manner, and performing a wide variety of tasks in the maintenance and repair of assigned facilities and systems. This class is distinguished from the Senior Utility Systems Mechanic in that the latter is responsible for technical and functional direction over lower-level utility worker and utility system mechanic staff and is capable of performing the most complex duties assigned to the division.

### **EXAMPLES OF ESSENTIAL 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 essential functions of the job.*

- Inspects, troubleshoots, repairs, and maintains water and/or wastewater treatment plants, pump stations, and regulating equipment including electric motors, engines, gas and electric powered pumps, air compressors, mechanical bar screens, boilers, emergency systems, power generation

systems, and pressure/flow regulators; checks proper equipment operation; notifies supervisors of alarms and equipment failure; writes work orders for needed repairs.

- Maintains and repairs specialized water and wastewater equipment such as flow meters, chlorination and other chemical feeding equipment.
- Develops and carries out an on-going inspection and preventative maintenance program to ensure adequate mechanical operation of the treatment and pumping facilities.
- Performs welding, masonry, carpentry, minor electrical and plumbing duties.
- Uses test equipment and makes operating adjustments to a variety of equipment.
- Checks and adds oil to pumps and engines, grease bearings and perform other related preventive maintenance work on equipment.
- Disassembles equipment and replaces packing and bearings; removes and replaces water and oil hoses on gasoline engines; replaces air and oil filters; replaces or repairs water or air valves.
- Records pump station flow meters and charts, including opening and closing floodgate when appropriate.
- Performs corrective maintenance on water and/or wastewater facilities and equipment including disassembly, rebuild, cleaning, and overhaul/replacement of valves, filters, pipe fittings, pumps, and other assorted equipment;
- Maintains, repairs and troubleshoots complicated sludge dewatering equipment including centrifuges, dredges and the associated infrastructure.
- Troubleshoots and performs preventive maintenance, including checking proper fluid levels, maintaining accurate records of work performed, and logging various system reads for complex electrical co-generation equipment and associated gas conditioning systems.
- Observes safe work methods and makes appropriate use of related safety equipment as required.
- Makes minor adjustments on service equipment; maintains tools and equipment in working order.
- Maintains logs of daily activities.
- Responds to maintenance and repair emergency situations as required.
- May assist Operations staff with operational duties while possessing appropriate certification.
- May order supplies and materials as required for completion of various work assignments; prepares and maintains related documents and records.
- Uses a computerized maintenance management system (CMMS) or other computerized monitoring and operating systems.
- Performs any of the duties of the Utility Worker position and other related duties as assigned.

## **QUALIFICATIONS**

### **Knowledge of:**

- Basic principles and practices of water and/or wastewater treatment plant operations.
- Practices, methods, equipment, tools and materials used in the maintenance construction, installation and repair of water and wastewater treatment facilities and systems or other industrial settings.
- Procedures, equipment, material and tools used in the operation, maintenance and repair of pneumatic systems, motors, engines, large capacity pumps, compressors, disinfection equipment, power generation systems, centrifuges, dredges, and other related equipment.
- Gas and diesel engine maintenance and repair.
- Hydraulics and control systems.
- Principles and practices of gas and electrical welding, masonry, carpentry and plumbing.
- Safe work methods and safety practices pertaining to the work.
- Basic computer software related to work.
- English usage, spelling, vocabulary, grammar and punctuation.

- Techniques for providing a high level of customer service to public and City staff, in person and over the telephone.

**Ability to:**

- Learn to inspect, operate, diagnose problems and perform preventive maintenance and repair work on industrial equipment including electric motors, gas and diesel engines, large capacity pumps, compressors, control equipment, dewatering equipment such as centrifuges and dredges and power generation and gas conditioning equipment.
- Perform a variety of fabricating and design duties related to water and wastewater systems construction, maintenance and repair; interpret sketches and diagrams.
- Analyze work problems and make corrections that will facilitate the completion of assignments.
- Read and interpret gauges and other recording devices, and interpret the information as it relates to repair and maintenance activities.
- Read and understand schematic diagrams.
- Safely and effectively use and operate hand tools, mechanical equipment, power tools, and equipment required for the work.
- Perform routine equipment maintenance.
- Maintain both manual and automated logs, records, reports and charts.
- Follow department policies and procedures related to assigned duties.
- Understand and follow oral and written instructions.
- Organize own work, set priorities and meet critical time deadlines.
- Use English effectively to communicate in person, over the telephone and in writing.
- Use tact, initiative, prudence and independent judgment within general policy, procedural and legal guidelines.
- Establish and maintain effective working relationships with those contacted in the course of the work.
- Successfully complete the City's respirator fit testing protocols; may be required to be clean shaven.

**Education and Experience:**

*Any combination of training and experience which would provide the required knowledge, skills and abilities is qualifying. A typical way to obtain the required qualifications would be:*

Utility Systems Mechanic I/II: Equivalent to the completion of the twelfth (12<sup>th</sup>) grade.

Utility Systems Mechanic I: Two (2) years of experience in construction, pipe fitting, millwrighting or general utilities maintenance work, or one (1) year of experience equivalent to that of a Utility Worker at the City of Eureka.

Utility Systems Mechanic II: In addition to the above, two (2) years of experience equivalent to Utility Systems Mechanic I at the City of Eureka.

**License:**

- Valid California class C driver's license with satisfactory driving record.
- Confined Space Certification (within six months of employment).
- First Responder Certification (within six months of employment).
- Other certification(s) specific to functional area of assignment may be required.

**PHYSICAL DEMANDS**

Must possess mobility to work in water and/or wastewater treatment plants and related facilities; 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; color vision to read gauges and identify

appurtenances; 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 necessary to perform job functions.

#### **ENVIRONMENTAL ELEMENTS**

Employees work partially indoors and partially outdoors and are exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, 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.

#### **WORKING CONDITIONS**

Employees are required to work various day, evening, weekend and holiday shifts as assigned.