

## WASTEWATER TREATMENT PLANT MAINTENANCE MECHANIC

### DEFINITION

Plans, maintains and repairs a variety of mechanical and electrical equipment and control instrumentation at the City's wastewater treatment plant; develops and implements a preventative maintenance plan for all equipment; operates and maintains a variety of hand, power and shop tools; performs related work as assigned.

### SUPERVISION RECEIVED AND EXERCISED

The Wastewater Treatment Plant Senior Maintenance Mechanic receives direction from the Wastewater Treatment Plant Operations Supervisor. No direct supervision is provided, although work instruction and review may be provided to operations staff on a project basis.

### CLASS CHARACTERISTICS

This is a skilled, journey-level class in the plant equipment maintenance trade that performs the full range of diagnostic, maintenance and repair work of a wide variety of equipment and instrumentation for a secondary wastewater treatment plant. Successful performance of the work requires the ability to plan and work independently and a knowledge of both the mechanical and electrical trades. This class is distinguished from other public works maintenance classes by the specialized knowledge and skill required for the maintenance and repair of specialized equipment and facilities of a wastewater treatment plant as well as a basic knowledge of treatment plant operations.

### EXAMPLES OF DUTIES (Illustrative Only)

- Plans maintenance, repair and special installation projects and preventive maintenance programs.
- Inspects and diagnoses problems and performs repairs to pumps, motors, valves, piping, chemical feeders and other mechanical components common to a wastewater treatment plant.
- Utilizes acetylene and electric arc welding equipment as required for repairs and to fabricate needed components.
- Inspects, tests and diagnoses problems and performs repairs to electrical circuits and appurtenances as well as electronic processing and control instrumentation.
- Develops and implements a preventative maintenance schedule for mechanical and electrical equipment and instrumentation to ensure reliable, safe and cost effective operation.
- Determines when repairs require the services of maintenance contractors; inspects contract work after completion to ensure compliance with industry specifications and standards.
- Performs maintenance painting and minor repair to facilities and structures, piping and machinery.
- Performs grounds maintenance and general custodial work to keep the plant and grounds in a clean and orderly condition.
- Reads and interprets manuals, drawings and specifications; estimates materials and parts required for repairs; maintains an inventory of parts and supplies; orders and picks up parts and supplies required to complete the work.

- Uses, performs minor maintenance on and calibrates hand and power tools and safety and testing equipment common to the plant maintenance trade.
- Documents all work performed and ensures compliance with regulatory agency standards; maintains accurate records of supplies and materials used.
- Recommends upgrading or replacement of mechanical and electric equipment and instrumentation as required by changing technology or regulatory requirements.
- Performs plant operational and standard laboratory testing duties on a relief or as needed basis.

## **QUALIFICATIONS**

### **Knowledge of:**

- Maintenance principles, practices, tools and materials used in the maintenance and repair of a variety of mechanical, and electrical equipment and control instrumentation common to a secondary wastewater treatment plant.
- Operation, maintenance and calibration of a variety of hand and power tools and testing equipment common to the trade.
- Wastewater treatment plant equipment servicing and preventive maintenance practices.
- Practices of acetylene and electric arc welding.
- Safety equipment and practices related to the work.
- Applicable codes and regulations.
- Shop arithmetic.
- Equipment troubleshooting and repair estimation principles and practices.
- Basic computer applications related to the work.
- Basic wastewater operational and laboratory procedures, methods and equipment.
- Basic record keeping practices.

### **Skill in:**

- Servicing, troubleshooting and performing preventive maintenance and repair on a variety of treatment plant mechanical and electrical equipment and instrumentation.
- Operating, maintaining and calibrating a variety of hand, power and shop tools and test equipment related to the trade.
- Estimating time, materials and supplies necessary to complete repairs.
- Reading and interpreting manuals, specifications and drawings.
- Maintaining an inventory of required parts and supplies.
- Making accurate arithmetic calculations.
- Maintaining accurate logs and records of work performed.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.

### **Education and Experience:**

Equivalent to graduation from high school and two years of journey-level experience in the maintenance and repair of mechanical and electrical equipment and electronic instrumentation

Wastewater Treatment Plant Senior Maintenance Mechanic  
Page Three

found in a wastewater treatment plant or similar facility. Technical training in mechanical and electrical maintenance and repair is desirable.

**Licenses:**

Must possess and maintain a valid California class C driver's license and a satisfactory driving record. Must possess or obtain a class B driver's license, and Grade I Wastewater Treatment Plant Operator and Mechanical Technologist certificates within one year of employment.

**Working Conditions:**

Works inside and outside. . Must be available for regular standby assignments and work off-hours shifts and emergency overtime as required. Must be willing to work out of doors in all weather conditions and with exposure to potentially hazardous chemicals and conditions.

**Physical Demands:**

Must possess strength, stamina and mobility to perform heavy physical work on equipment and work in confined and difficult spaces to perform needed repairs; strength and stamina to lift and carry 50 pounds; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio.