

PLANT MAINTENANCE MECHANIC I
PLANT MAINTENANCE MECHANIC II

Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are not intended to reflect all duties performed within the job.

DEFINITION

Under general direction, perform a variety of assignments related to the installation, maintenance, troubleshooting, and repair functions on equipment in water/wastewater treatment plants, and pumping stations, including Supervisory Control and Data Acquisition (SCADA) systems, Computerized Maintenance Management System (CMMS), pumps, chemical feed equipment, valves, and related mechanical/electrical/electronic equipment, components used for water or wastewater treatment, storage, and distribution; perform maintenance and repair duties on water and wastewater and related equipment; and perform a variety of technical tasks relative to assigned areas of responsibility.

DISTINGUISHING CHARACTERISTICS

Plant Maintenance Mechanic I/II is a flexibly-staffed class series. Positions are normally filled at the I level. Advancement from the I to the II level is at the discretion of the appointing authority provided that the following criteria are met: (1) the minimum qualifications and time-in-grade requirements, (2) demonstration of the ability to independently perform the full scope of the assigned duties.

Plant Maintenance Mechanic I is the entry level class of the Plant Maintenance Mechanic series. Initially, under close supervision, incumbents perform the more routine plant maintenance duties and learn to handle a variety of the more difficult and complex maintenance assignments. As experience is gained, there is greater independence of action within established guidelines and incumbents are expected to perform a broader scope of duties and handle the more complex work.

Plant Maintenance Mechanic II is the journey level class in the Plant Maintenance Mechanic class series, fully competent to independently perform the full range of plant maintenance duties. Incumbents are expected to work more independently, to exercise a greater degree of discretion in the execution of duties, and to perform the more complex and difficult work on plant equipment and systems.

The Plant Mechanic differs from the Plant Operator class series in that the focus of the latter class is on the plant operations versus the plant maintenance. The work of the Plant Maintenance Mechanic class series involves the more complex plant maintenance and repair of mechanical, electrical, instrumentation, and analytical equipment.

EXAMPLES OF DUTIES

Duties may include, but are not limited to, the following. For Plant Maintenance Mechanic I, duties are performed at the entry level:

- Schedule and perform a variety of maintenance and repair functions on equipment in water and wastewater treatment plants and pumping stations including pumps, chemical feed equipment, valves, sludge removal equipment, controls, and related appurtenances.
- Diagnose and repair malfunctions in plant mechanical, electrical, electronic, hydraulic, and related systems and equipment.
- Read and interpret plans and specifications; perform work in accordance with these documents; make rough sketches of work to be performed or completed; utilize drawings to locate and troubleshoot related equipment.
- Diagnose mechanical problems and make rough estimates of labor, materials, and supplies required to complete assigned work; request required materials.
- Perform predictive maintenance such as vibration analysis and temperature readings; perform preventative maintenance such as oil changes and lubrication; confer with operations staff to solve problems and determine needs.
- Use welding and other shop equipment to fabricate and repair parts.
- Operate a variety of hand tools and power equipment such as welding equipment, lathes, drill presses, sanders, trucks, and a forklift.
- Prepare and maintain accurate and complete records of work performed; enter and retrieve data from a computer; ensure proper completion of reports including confined entry documentation.
- Communicate with other public and private agencies on mechanical, electrical, and electronic related topics.
- Adhere to and promote safe work practices and procedures.
- Recommend preventive maintenance procedures and schedules.
- Respond to emergency situations outside of normal work hours.
- Perform related duties as assigned.

EMPLOYMENT STANDARDS

Note: The level and scope of the knowledge, skills, and abilities listed in this section are related to the job duties as defined under Distinguishing Characteristics.

Knowledge of:

- Operational characteristics of mechanical maintenance equipment and tools.
- Basic mathematical principles.
- Operational characteristics of water and wastewater treatment systems including pumps, gauges, chemical feeds, and related equipment and instrumentation.
- Operational methods and practices associated with water and wastewater treatment process.
- Operations, services, and activities of a computerized maintenance management program.
- National Electric Code, specifically in the area of working on troubleshooting and repairing 480 VAC all-in-one panel and circuits.
- Cal/OSHA rules and regulation for electrical workers.
- Methods and techniques involved in the maintenance and repair of pumps, valves, and similar large mechanical equipment and components.
- Occupational hazards and standard safety practices including Cal OSHA practices.
- Rules and regulations governing confined space operations.
- Pertinent federal, state, and local laws, codes, and regulations.

Ability to:

- Perform the most complex maintenance and repair functions on City water and wastewater treatment and distribution systems including mechanical, electrical, electronic, hydraulic, and related trades.
- Perform mechanical maintenance on pipelines, equipment in pumping stations and water and wastewater treatment plants.
- Operate a variety of mechanical maintenance and diagnostic equipment and instruments in a safe and effective manner.
- Diagnose operational problems in mechanical equipment and instruments and recommend corrective action.
- Diagnose and repair electrical (480 VAC three-phase) systems.
- Diagnose, repair, and program SCADA systems and Programmable Logic Controllers.
- Read, interpret, and work from plans, drawings, and specifications.
- Estimate and track labor and materials required to correct problems utilizing a computer maintenance management system.
- Prepare clear and concise reports by utilizing Microsoft Office application software, such as Word and Excel.
- Work independently in the absence of supervision.
- Apply concepts of the City's confined space program
- Communicate clearly and concisely, both orally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of work.

Minimum Qualifications

Experience and/or Education:

Plant Maintenance Mechanic I

Two years of experience in troubleshooting and repair of pumps, valves, and related electrical equipment including the repair and maintenance of electronic controls. Two years of full-time college course work or training in a related apprentice program in plant operations, electronics, mechanical, or a closely related field may substitute for one year of the required experience.

Plant Maintenance Mechanic II

EITHER: Two years of full-time experience as a Plant Maintenance Mechanic I with the City of American Canyon; – OR-

Four years of experience in a water or wastewater treatment plant performing electrical, electronic, and mechanical stationary plant maintenance work; – OR-

Five years of increasingly responsible experience in the maintenance of mechanical, electrical, electronic, and hydraulic equipment and components.

Note: Completion of a recognized apprenticeship in a related field (mechanical, electrical, or electronic) may substitute for up to one year of the required experience depending upon the length of the completed program for either of the two outside experience patterns.

License Requirement:

- California Water Environment Certifications in Wastewater Treatment Plant Maintenance, Electrical/Instrumentation, and Mechanical Technologist are desirable.
- Possession of a valid California Class C Driver License is required at the time of appointment. Individuals who do not meet this requirement due to a physical disability will be reviewed on a case-by-case basis.

Physical Requirements:

Work is performed in a typical outdoor environment on a year-round basis. (1) Mobility: frequent performance of heavy manual labor; frequent standing for long periods of time; frequent bending and squatting. (2) Lifting: frequent lifting up to 50 pounds; occasional lifting up to 75 pounds. (3) Vision: constant use of overall vision; able to distinguish colors. (4) Dexterity: frequent grasping, holding, and reaching. (5) Hearing/ Talking: frequent hearing and talking in person. (6) Emotional/ Psychological: frequent coworker contact; occasional working alone. (7) Environmental: frequent exposure to loud noise; frequent exposure to chemicals, fumes, and other environmental substances.

Other Requirements:

Evening, weekend, and/or shift work as required.

Classification	Adopted	Revised	Retitled From	Class Code	FLSA Designation	Rep Unit
Plant Mechanic I	11/2011			4833	Non-Exempt	4
Plant Maintenance Mechanic II	10/2006	11/2011	Plant Maintenance Mechanic	4832	Non-Exempt	4

APPROVED: _____
Human Resources Director

Date: _____