

CITY OF MERCED

WATER SYSTEMS OPERATOR

*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.*

SUMMARY DESCRIPTION

Under general supervision, maintain and repair water pumps, mains, chlorinators, meters, chemical application devices, pumping, and other related systems; operate the SCADA System and computers to perform necessary operations of the water system; and perform related work as required.

DISTINGUISHING CHARACTERISTICS

Incumbents in this classification perform necessary functions to meet all local, state, and federal requirements for the safe operation of the pumping and chemical systems. Positions receive minimal guidance and supervision.

REPORTS TO

Public Works Supervisor-Water or designee.

CLASSIFICATIONS SUPERVISED

This is not a supervisory classification.

REPRESENTATIVE DUTIES

The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.

1. Install, operate, and maintain pumps, booster pumps, electric motors, chlorinators, fluoridation equipment and other related equipment.
2. Examine, regulate, and maintain pressure gauges and switches, automatic valves and controls, remote recorders, electrical controls, testing equipment, meters, and other equipment.
3. Compile, evaluate, and analyze operational data and information to implement or recommend appropriate action; and use data to create reports.
4. Perform maintenance and make operating adjustments to the chemical treatment systems and distribution equipment as needed ensuring that chlorine residuals, fluoride residuals, pressures, and water tank levels are maintained properly.
5. Collect field samples for chlorine and fluoride level monitoring; run analyses on samples to check for proper residual levels.
6. Complete work order forms, electronic reports, and other related paperwork to meet all governing agency requirements in a proficient manner.
7. Complete or oversee well and pump efficiency tests.
8. Maintains, repairs, tests, and installs meters.
9. Maintain, adjust and calibrate fluoride equipment as necessary; and clean and maintain elevated tanks.

10. Deliver chemicals including sodium fluoride and sodium hypochlorite to well sites and other city facilities.
11. Collect water samples to ensure water quality meets all Title 22 requirements of the State of California Department of Health Services.
12. Operate dump trucks, large boom trucks, backhoes, cutting torches, hydraulic and pneumatic hand tools, and other related equipment as necessary.
13. Analyze and interpret various diagrams, gauges, recording devices, piping systems, and instrumentation diagrams.
14. Perform general custodial duties to ensure cleanliness of well sites, buildings, and grounds.
15. Perform routine repairs and adjustments to a variety of equipment related to the safe and efficient operation of the water treatment and production.
16. Recognize unusual, inefficient or dangerous operating and maintenance conditions and recommend or implement appropriate actions.
17. Operate a variety of electronic equipment including automatic control devices, personal computer, laptop, smart phone, tablet, and SCADA systems.
18. Perform monthly preventative maintenance on chemical pumping and injection systems; tear down and clean injection pumps, parts and lines; rebuild and ensure proper operation; inspect fire extinguishers, and eye wash stations.
19. Work with contractors installing new water systems to ensure and verify water quality, system integrity; and coordinate chlorination, flushing, and sampling of new water mains and services.
20. Maintain work, time, and material records; prepare statistical reports and data analyses of production activities; and prepare daily reports.
21. Mark and comprehend USA markings.
22. Operate small cranes and complete all necessary documentation.
23. Perform related duties as required.

QUALIFICATIONS

The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.

Knowledge of:

Operational characteristics of water production systems.

Operating and maintenance characteristics of various flow control and pressure valves.

Materials, methods, techniques, and terminology used in operation, maintenance, and repair of mechanical and electrical equipment and systems related to the City's water production facilities.

Operational characteristics of equipment and tools used in assigned work.

Principles and practices used in the maintenance and repair of electrical and electronic equipment and systems including control systems, SCADA system, instrumentation, and electric motors.

Fundamental mechanical, electrical and hydraulic principles.

Methods and techniques of performing preventative maintenance including preventive maintenance inspection methods.

Methods and techniques of performing diagnostic troubleshooting services.

Water treatment principles, methods and practices, including local, state and federal regulations.

Safe storage and handling procedures for chlorine or other hazardous chemicals.

General principles of water treatment and distribution mathematics.
Water sampling, testing procedures, and basic laboratory principles.
Occupational hazards and standard safety practices.
Safety equipment and practices used in the handling, storage, and application of chemicals.
Pertinent Federal, State, and local codes, laws, and regulations.
Office procedures, methods, and equipment including computers and applicable software applications such as word processing, spreadsheets, and databases.

Ability to:

Perform skilled and semi-skilled duties involved in the operation, maintenance, and repair of water production facilities including a full range of mechanical, electrical, and electronic maintenance and repair work in inspecting, diagnosing, troubleshooting, maintaining, and repairing equipment.
Recognize unusual, inefficient or dangerous operating conditions and take appropriate corrective action.
Demonstrate skill in the use of tools and equipment and in diagnosing and repairing equipment.
Complete necessary work order forms and other related paperwork in a proficient and understandable manner.
Perform a variety of tasks for extended periods of time and in unfavorable weather conditions.
Maintain records including time and material use records.
Compare, count, differentiate, measure, assemble, copy, and record and transcribe data and information.
Classify, compute, and tabulate data.
Use functional reasoning and apply rational judgement in performing diversified work activities.
Respond to production system maintenance/repair emergencies.
Safely drive and skillfully operate equipment and machinery.
Interpret and apply policies, procedures, and standards to specific situations.
Read and interpret maps, blue prints, and diagrams.
Accurately calculate the required chemical dosage and ensure sufficient material is available to meet the projected need.
Operate office equipment including computers and supporting word processing, spreadsheet, and database applications.
Communicate clearly and concisely, both orally and in writing.
Establish and maintain effective working relationships with those contacted in the course of work.

Education and Experience Guidelines - *Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:*

Education/Training:

Equivalent to the completion of the twelfth grade. Specialized training in water distribution and water treatment is desirable.

Experience:

Four years of experience in the operation, maintenance, and repair of electrical and mechanical equipment and systems. Experience in the operation and maintenance of water a municipal water system is desirable.

License or Certificate:

Possession of an appropriate, valid California Class A Driver License with endorsements for hazmat multi vehicle (trailer or doubles), and tanker.

Possession of a Grade III, or higher, Water Distribution Operator Certificate issued by the Department of Health Services.

Possession of a Grade II, or higher, Water Treatment Operator Certificate. Issued by the State of California Water Resources Control Board.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform these essential job functions.

Environment: Outdoor field environment; work is performed both in varying temperatures and weather conditions; travel from site to site; exposure to hazardous materials, smoke, gasses, noise, grease, solvents, toxic agents/chemicals, and fumes; work in or around water; work and/or walk on various types of surfaces including slippery or uneven surfaces; work at heights; exposure to hazards such as moving machine parts and electrical current; continuous contact with other staff; and regular contact with the public.

Physical: Incumbents require sufficient mobility to stand, walk, and sit for prolonged periods of time; to perform moderately physically demanding work, typically involving some combination of climbing and balancing, stooping, kneeling, crouching, lifting, carrying, pushing, and pulling; normal manual dexterity and hand-eye coordination; to lift, push, pull, and move objects weighing up to 90 pounds; to climb a stationary ladder a minimum of 150 vertical feet; to hear in the normal range with or without correction; to see in the normal range with or without correction; verbal communication; operate assigned motorized equipment and vehicles; use a variety of hand and power equipment; and operate a two-way radio, personal computer and telephone.