

# **SAN BERNARDINO MUNICIPAL WATER DEPARTMENT CLASSIFICATION SPECIFICATION**

**TITLE: WATER RECLAMATION MECHANIC II**

**DATE: 7/1/2020**

**JOB CODE: 21810**

**FLSA STATUS: NON-EXEMPT**

**UNIT REPRESENTATION: GENERAL**

*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.*

## **DUTIES SUMMARY**

Under general supervision or direction, to perform a wide variety semi-skilled and skilled duties related to the inspection, diagnosis, troubleshooting, construction, installation, the maintenance, repair, and servicing of industrial mechanical equipment and machinery used in the operation of the Water Reclamation Division; assist higher-level maintenance staff; may be directed to provide guidance and/or training to lesser un-skilled or semi-skilled workers; and perform related duties as assigned.

## **DISTINGUISHING CHARACTERISTICS**

The Water Reclamation Mechanic II is the semi-skilled class in the Department's Water Reclamation Maintenance Mechanical series. Under general supervision, incumbents perform a variety of routine predictive, preventive, and/or reactive semi-skilled and skilled duties in the construction, installation, maintenance, repair, and servicing of industrial mechanical equipment and machinery used in the operation of the Water Reclamation Division. The Water Reclamation Division is responsible for maintaining two (2) wastewater treatment facilities (33 MGF and 41 MGD) and fifteen (15) collections system lift stations (12 small and 3 large ranging from minimal to 12 MGD). This class is distinguished from the Water Reclamation Mechanic III by the higher level of knowledge, experience, and relative independence with which skilled duties are performed by an incumbent in the latter class.

Incumbents in the Water Reclamation Mechanic II class are expected to exercise discretion and independent judgment within established guidelines. All incumbents are qualified to perform preventive, predictive, and corrective maintenance of the Department's equipment and facilities.

Employees in this class typically report to the Water Reclamation Maintenance Supervisor.

## **EXAMPLES OF DUTIES**

*The following duties are typical essential duties for positions in this classification. Any single position may not perform all of these duties and/or may perform similar related duties not listed here:*

- Provide courteous and expeditious customer service to the general public and City and Department staff; act as a resource person to Water Reclamation Mechanics I or other junior maintenance or mechanical staff;
- Routinely adhere to and support/promote City and Department goals;
- Adhere to and actively promote the use of Standard Operating Procedures (SOPs) and all other maintenance directives and policies; perform all work in accordance with established safety policies, procedures, and methods including OSHA regulations relating to confined space entry and working around dangerous gases; take appropriate precautions to preserve own safety and the safety of others during the course of work;
- Perform semi-skilled and skilled work to manufacturer's specifications in the inspection, diagnosis, troubleshooting, construction, installation, predictive, preventive, or reactive maintenance, removal, disassembly, reassembly, replacement, realignment, repair, and servicing of industrial mechanical equipment, components, facilities, and machinery used in the operation of the Water Reclamation Division; various plant equipment can include small, medium, and large stationary diesel, methane, and natural gas engines and associated equipment, positive displacement blowers, gearheads, and lift pumps, centrifugal blowers, bar screens, pumps (piston/plunger, eccentric screw, screw, gear, diaphragm, rotary vane, peristaltic, progressive cavity/positive displacement, centrifugal, vane, turbine, axial flow, and propeller), valves (check, gate, plug, ball, needle), flow gates, compressors, conveyors, belt drying systems, odor scrubbing systems, filter systems, digester gas flare systems, flame arrestor systems, clarifier drives and skimmers, grit classifiers, air dryers; work with pipes, tubes, rods, seals, shafts, stuffing boxes, packing, gears, motors, bearings, couplings, chemical storage and feed systems, motor controllers, transmitters, level controllers, and alarm systems; test and monitor equipment and machinery for vibrations, bearing temperature, and output capacity;
- Perform mechanical maintenance and repair of de-energized ultraviolet (UV) system components outside electrical and control cabinets as well as inside de-energized air conditioning module, i.e. all work on and around UV racks and lamps as well as mechanical maintenance and repair on air conditioning components;
- Perform a wide array of related duties associated with housekeeping, cleaning, clearing, relocating/moving, plumbing, masonry, fabrication, painting, repair, and maintenance of plant, field, and shop equipment, components, facilities, and machinery;
- Use a variety of hand and power hand tools;
- Operate equipment (standardized and specialty) and shop tools in the repair of wastewater plant equipment; operate compressors, jackhammers, portable and stationary generators, mechanical lift devices, steam cleaners, pneumatic, hydraulic, and electric tools, and related tools and equipment;
- Where appropriately certified, safely and legally operate trucks (standard, flatbed, dump, boom, etc.), forklifts, backhoes, loaders, tractors, cranes, water trucks, scrapers, and related equipment;
- Clean, oil, and lubricate generators, compressors, pumps, turbines, and other moving equipment; check for malfunctions;

- Where appropriately trained or certified, use gas and/or electric equipment to heat, cut, braze, and weld;
- Request or pick up parts and equipment needed for maintenance work and repair work;
- Prepare accurate reports and keep a variety of records, including timesheets, daily logs, work orders, safety worksheets, equipment and vehicle usage logs, and other related documents; make oral and written reports for work performed;
- Enter data into computerized maintenance management programs or databases and perform other basic computer-based functions;
- Attend and actively participate in briefings and meetings; participate in Department provided training;
- Plan and lay out work from instructions and/or work orders using sketches, drawings, or verbal instructions;
- Coordinate activities with other sections and Divisions of the Department;
- Ensure the timely and accurate completion of all assigned activities;
- May assist in training or instructing others in the work; may lead the work of others as a project leader;
- When appropriately trained, monitor gas and oxygen levels in confined spaces; enter confined spaces; or serve as an observer of a confined space;
- Will be required to respond to emergency situations in an on-call status; and perform related duties as assigned.

## **QUALIFICATIONS**

### **Knowledge of:**

- Standard practices, principles, procedures, methods, techniques, tools, materials, and equipment used in the installation, inspection, maintenance, and repair of industrial mechanical equipment, pumps, plumbing and pipe fitting, motors, controllers, drives, lift stations, and machinery common to Water Reclamation or similar industrial facilities;
- Occupational hazards and safety precautions/practices, safe work methods, and safety regulations pertaining to the trade;
- Principles of internal combustion engines, pumps and motors as well as lubricants, coolants, and other fluids used in industrial machinery;
- The Globally Harmonized System (GHS) of Classification and Labeling of Chemicals;
- Basic or applied mathematics applicable to facility and equipment maintenance and repair;
- General computer knowledge/use;

- Relevant state and federal regulation including codes, ordinances, and regulations pertaining to the trade.

**Ability to:**

- Perform all tasks noted in the Examples of Duties above;
- Learn the skilled functions of the Water Reclamation Mechanic III class within two (2) years of appointment;
- Learn and apply new information and skills;
- Perform heavy physical labor for extended periods of time in all weather conditions anticipated within the Department's Service Area and in confined spaces;
- Properly wear personal protective equipment, including protective respiratory equipment to include SCBA and personal escape respirator;
- Analyze and solve problems; identify and implement effective courses of action to complete assigned work;
- Use precision and diagnostic instruments to measure required tolerances of mechanical parts;
- Read and understand Safety Data Sheets (SDS);
- Demonstrate a basic understanding of the wastewater treatment process including chemical used within one (1) year of appointment for applicants not previously employed as a Water Reclamation Plant Mechanic I; Demonstration at the time of appointment for applicants previously employed as a Water Reclamation Mechanic I;
- Learn and properly adhere to permitted confined space entry and equipment protocols;
- Read and interpret plans, specifications, manuals, data, information, and documents; write at a level that is sufficient for job success; understand and appropriately carry out oral and written instructions; communicate effectively, both orally and in writing; keep accurate records; organize with the ability to prioritize work and exercise independent judgment, wisdom, common sense, and initiative, and work independently in the absence of supervision;
- Establish and maintain effective working relationships with City and Department staff, the public, and others encountered in the course of work; exercise patience, tact, diplomacy, and courtesy in dealing with the public and employees;
- Maintain a driving record which meets Vehicle Code Standards and is acceptable to the Department and its insurance carrier;
- Within six (6) months of appointment, obtain, and maintain during the course of employment, obtain the following:

- CPR and first aid certification
- Forklift certification;
- Work various shifts, overtime, on-call at night and on weekends and holidays, and respond to call-out emergencies as required; handle emergency situations as directed;
- Operate a vehicle observing legal and defensive driving practices.

## **MINIMUM QUALIFICATIONS**

**Education:** Graduation from high school or equivalent;

**Experience:** At least three (3) years of experience in the installation, maintenance, and repair of wastewater or water facilities or similar industrial mechanical maintenance and repair experience. Experience in the installation, maintenance, and repair of pumping equipment, including valves, pumps, and motors specifically in a wastewater treatment or collections system environment is highly desirable.

**Certificate:** Possession of a valid California Water Environment Association (CWEA) Mechanical Technologist Grade I certificate, or higher, is highly desirable.

## **NECESSARY SPECIAL REQUIREMENTS**

Possession of a valid Class “C” California driver’s license is required at the time of application. For out of state applicants, a valid driver’s license is required and a valid Class “C” California driver’s license must be obtained within ten (10) days of appointment (CA Vehicle Code 12505c).

Employee may be required to be clean shaven or have trimmed facial hair in order to properly use personal respirators or SCBA equipment. Must pass a respirator medical exam and be physically able to wear SCBA equipment. Must be able to work in enclosed spaces while wearing protective clothing under extreme temperatures and hazardous environment.

There may be additional special requirements, depending on assignment.

## **PHYSICAL TASKS AND ENVIRONMENTAL CONDITIONS**

*The physical tasks and environmental conditions below are representative of those necessary to perform the essential functions of this position. Reasonable accommodations for physical and/or mental disabilities may be considered on a case-by-case basis.*

Work is primarily performed in a field environment that is frequently loud and prolonged, in a variety of environmental and extreme weather conditions (both indoors and out), and in or near street traffic with significant exposure to hazardous drivers. Incumbents regularly work near moving mechanical parts, are exposed to wet and/or humid conditions and heavy vibrations and work in precarious places. Incumbents frequently work on slippery or uneven surfaces or work occasionally involves exposure to potential harm, to fumes or airborne particles, sewage (untreated wastewater), communicable disease, toxic, hazardous, or caustic chemical, smoke, or fumes in various states (gaseous, liquid, or solid), and risk of electric shock.

Incumbents require sufficient mobility to work in a field setting in varying weather conditions, to operate hand tools and mechanical and motorized equipment, to transport materials and

supplies, and to travel to various locations. Incumbents must regularly lift and/or move up to 50 pounds and frequently over 100 pounds.

Incumbents are regularly required to sit, walk, and stand, talk and hear, use hands to finger, handle, feel, or operate objects, tools, or controls, reach with hands and arms, perform repetitive movements of hands or wrists, climb or balance on ladders or stairs, stoop, kneel, bend at the waist, crouch or crawl, and smell. Incumbents may be required to work from heights on ladders, scaffoldings, motorized platforms, building roofs, or other elevated surfaces. Incumbents must be able to identify and tolerate unpleasant order and environments and take appropriate safety precautions.

Incumbents must be able to see in the normal visual range, with or without correction, with vision sufficient enough to read small print and gauges, to see up close and at a distance, use both eyes, have depth perception, color vision, and the ability to adjust focus. Must be able to hear in the normal audio range with or without correction.

## **CAREER LADDER**

**From:** Water Reclamation Mechanic II

**To:** Water Reclamation Mechanic III  
Water Reclamation Lead Mechanic  
Water Reclamation Maintenance Supervisor  
Water Reclamation Maintenance Superintendent

**Job Description:**

BOWC Approved (with budget)  
Rev

6/23/1998  
3/26/2019  
6/23/2020

**Testing Standards:** App Review/Supp App Review