

# **WASTEWATER MAINTENANCE LEADWORKER**

## **JOB PURPOSE AND SUMMARY**

This position serves in a lead capacity and as a highly skilled technician for the wastewater treatment facility, pump station and portions of the collection system. In the lead role, the position prioritizes, assigns, coordinates, monitors, evaluates work; provides technical assistance; resolves work and minor personnel problems; provides input to the Wastewater Operations Manager regarding performance evaluations, discipline, training, major job reassignments, and recruitment selection.; contributes to annual planning and in decision making in the coordination of maintenance activities; and provides input in establishing department base line budget. This position is expected to perform work with considerable independence in all types of climates, and is responsible for and participates in the work of the unit.

In the capacity as the highly skilled technician the position, installs, modifies, repairs, calibrates, and maintains electronic, hydraulic, mechanical, and pneumatic instruments used to provide data to Programmable Logic Controllers and SCADA systems in addition to inspection, adjustment, installation, troubleshooting, repair and preventive maintenance of all equipment and structures associated with the wastewater treatment facility.

Work is reviewed under general supervision by the Wastewater Operations Manager. The manager makes assignments by defining objectives, priorities and deadlines and assists the incumbent with unusual situations or problems that do not have clear precedent. The incumbent plans and carries out the work independently and is expected to resolve problems in accordance with instructions, policies, and accepted practice.

## **CLASSIFICATION DISTINCTIONS**

This classification is the leadworker for a group of Wastewater Maintenance Technicians I and II. In the alternative, the position may be principally responsible for the complex work related to the instrumentation and control equipment in the Plant. The Wastewater Maintenance Technician classification requires specialized knowledge of equipment maintenance and repair techniques as applied to a modern wastewater treatment plant.

Maintenance Technician II employees exercise independent judgment and demonstrate an advanced level of mechanical and electrical expertise with the ability to resolve complex or unique equipment and repair problems. The Maintenance Technician I and II employees receive day to day direction from the Wastewater Maintenance Lead, however, along with the other treatment plant employees, report directly to the Wastewater Operations Manager.

## **KEY OR TYPICAL TASKS AND RESPONSIBILITIES**

### **As Lead:**

- Coordinates and leads the work of Maintenance Technicians.
- Performs and oversees electrical work on mixers, pumps, variable frequency drives (VFD), lights, etc.
- Maintains, inspect, repairs, installs, troubleshoots, lubricates and adjusts machinery and equipment of some or all of the following types:
  1. Varying sizes of electric motors including variable speed driven electric controls and switch gear.
  2. Pumps varying in size and type from small chemical metering pumps through large capacity wastewater pumps.
  3. Gas fired boilers, heat exchangers, blowers, aeration systems, valves, regulators, disinfection equipment, bar screens, grit removal equipment, conveyance systems, level and flow controls, air compressors, auxiliary engines and diesel generators, pneumatic, hydraulic, and electric control systems.
- Participates in and oversees the development, planning and implementation of ongoing preventative maintenance programs.
- Operates a variety of shop equipment including welding, drilling, grinding and sawing equipment, skillfully use hand and power tools, performs corrective maintenance as required.
- Trains and provides general preventative and corrective equipment maintenance and repair advice as needed to less experienced treatment plant employees assisting with maintenance work.
- Uses computer system to track work orders, spare parts inventories, and maintain maintenance records.
- Maintains effective working relationships with all other plant staff, outside vendors, regulatory agencies, other County departments, and the public.
- Designs and fabricates special electrical and mechanical systems as required.
- Maintain and repair the main sewer line, force main and outfall line.
- Works closely with engineers and inspectors on projects, reviews and comments on design and construction/maintenance plans and specifications.

### **As Highly Skilled Technician:**

- Installs, maintains, tests, troubleshoots, modifies and repairs a variety of instrumentation and control equipment including sensors, transmitters, monitors, recorders, detectors, flow meters, controllers, and other equipment common to large and complex wastewater treatment facilities. Based on assessment of cost effectiveness, recommend repair vs. replacement, in-house vs. out-sourced repair.
- Maintains, inspect, repairs, installs, troubleshoots, lubricates and adjusts machinery and equipment of some or all of the following types:

1. Varying sizes of electric motors including variable speed driven electric controls and switch gear.
  2. Pumps varying in size and type from small chemical metering pumps through large capacity wastewater pumps.
  3. Gas fired boilers, heat exchangers, blowers, aeration systems, valves, regulators, disinfection equipment, bar screens, grit removal equipment, conveyance systems, level and flow controls, air compressors, auxiliary engines and diesel generators, pneumatic, hydraulic, and electric control systems.
- Programs, troubleshoots, and maintains programmable logic controllers and microprocessor-based equipment.
  - Collects data on computerized process control systems and networks; troubleshoots and resolves identified problems.
  - Completes maintenance and repair records; assists in the requisition and/or purchase of parts, tools, materials, and equipment as needed.
  - Performs general housekeeping duties and ground maintenance.
  - Performs related duties as assigned and at times performs work similar to that assigned to a Wastewater Operator I employee.

## **QUALIFICATIONS**

- Requires demonstrated proficiency in reading complex technical manuals and other operation and maintenance manuals, writing journal entries, instructions, email/communicate with vendors, and mathematics, including basic algebra and math formulas.
- Formal or vocational training in industrial mechanical maintenance sufficient to demonstrate proficiency in all skills, knowledge, and abilities listed.
- Minimum 5 years working experience in industrial maintenance setting. Experience in leading the work of others is highly desirable for assignment Lead.
- Increasingly responsible experience using programming languages and tools, performing industrial process control systems design or related work.
- Responsible experience in installing, modifying, repairing, and serving electronic, pneumatic, mechanical, and hydraulic instruments.
- Must possess a valid driver's license.
- Possession of a limited electrical license is desirable.
- Any combination of experience of the noted essential job functions listed that establishes candidate's abilities, skills and knowledge will be considered to establish minimum years experience required.

**Knowledge of:** Departmental procedures, goals, objectives; supervisory and motivational techniques, and conflict resolution; current methods, practices and materials used in mechanical maintenance and repair work; construction, operation and common problems of valves, pumps, motors, boilers, electrical apparatus, and associated equipment used in wastewater treatment; occupational hazards and safety precautions and procedures applicable to work; computerized maintenance management systems.

**Skill in:** methods, materials, tools and testing equipment of the instrument technician trade; electronic, hydraulic, pneumatic, and mechanical theory and practices for installation, maintenance, troubleshooting and repair of process control instrumentation; the National Electric Code (NEC) and State and local electrical codes; pertinent safety practices and procedures.

**Ability to:** Follow oral and written instructions; detect and correct defects in process equipment and systems; read, comprehend, interpret and understand complex technical manuals, machine blueprints and specifications; use a computer to generate reports; work in confined spaces in awkward positions; perform accurate arithmetical calculations; drive a motor vehicle; establish and maintain effective working relationships; provide technical support to coworkers; effectively communicate in writing and orally; skillfully use tools, equipment and materials of the trade; wear and properly use all associated Personal Protective Equipment and perform all work in a safe manner.

### **WORK ENVIRONMENT & PHYSICAL DEMANDS**

Employees in this category work in all types of climates, both indoors and outdoors. Work may be performed in adverse weather and environmental conditions. This includes working in and around raw sewage, in small, often awkward, positions. Work may be performed from ladders or scaffolding and possibly in hazardous atmospheres. Heavy phone contacts with suppliers, manufacturers, other agencies will be regularly experienced as well as face to face interactions with the public. Employees are subject to shift work, may work alone, and will be subject to perform on-call duties 24 hours a day, seven days a week.

Physical demands include but are not limited to standing, crouching, climbing stairs and ladders, reaching, twisting, repetitive motion and lifting. Employees may be required to use a respirator and/or a self-contained Breathing Apparatus.

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