



**City of Phoenix**  
**OPERATIONS & MAINTENANCE TECHNICIAN**  
**TRAINEE**  
**(Non-classified)**

**JOB CODE 50360**

Effective Date: 1/14

**DISTINGUISHING FEATURES OF THE CLASS:**

The fundamental reason this classification exists is to learn and perform with increasing independence the water/wastewater treatment facilities operational control, maintenance, and electrical/instrumentation skills necessary to become an Operations & Maintenance Technician. During the one-year Trainee Program, incumbents train and perform a variety of tasks while assigned to an experienced technician. Incumbents must complete the required classroom and on the job training, and have a satisfactory performance review in order to advance to the Operations & Maintenance Technician classification. Upon promotion to the Operations & Maintenance Technician classification, employees must serve a one-year probationary period.

**ESSENTIAL FUNCTIONS:**

- Learns and performs with increasing independence Operations & Maintenance Technician duties, rotating through various facilities;
- Responds to chemical emergency alarms wearing appropriate personal protective equipment such as respirators and Self-Contained Breathing Apparatus (SCBA);
- Brings mechanical or process deficiencies to the attention of an experienced technician or supervisor;
- Operates and maintains water/wastewater treatment processes and equipment to control flow, processing of water/wastewater sludge, and maintain effluent quality;
- Starts and stops motorized equipment such as pumps, motors, air compressors, blowers, and thickeners;
- Operates valves and gates for process control;
- Observes variations in operating conditions and logs and interprets readings from meters, gauges, charts, and instruments;
- Inspects, repairs, and maintains machinery and mechanical equipment in operation and detects and reports deficiencies in the operational process;
- Obtains samples and performs routine laboratory analyses (i.e., chlorine residual, turbidity, taste, fluoride, odor, pH, flocculation, solids determinations, Sludge Volume Index, F/M Ratio, Mixed Liquor Suspended Solids) to determine chemical feed and facility performance;



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- Cleans equipment and facilities using hoses and power washing equipment;
- Assists in unloading, transferring, storing, and using various chemicals such as liquid chlorine, calcium hypochlorite, sulfuric acid, caustic carbon soda, hydrofluorosilicic acid, carbon, sulfur dioxide, sodium bisulfate, ferric chloride and polymers;
- Maintains legible, accurate records of shift operations and updates the treatment process computer database;
- Performs basic maintenance tasks for treatment plant systems and sub-systems associated with: bar screens, grit collectors, chemical feed systems, basins, digesters, and sludge handling equipment;
- Performs primary maintenance tasks at remote facilities associated with booster stations, sewer lift stations, pressure reducing valves, metering stations, tank sites, and distribution chlorination stations;
- Assists with the repair of mechanical equipment such as pumps, motors, sludge removal machines, centrifuges, chemical feeders, blowers, coolers, air compressors, and heating equipment in a water or wastewater treatment plant; reclamation plants, groundwater wells, pumping stations, and reservoirs;
- Lubricates, aligns, adjusts, and cleans mechanical equipment and performs other preventive maintenance tasks;
- Attaches and tows equipment such as cement mixers and compressors or trailers holding equipment;
- Mixes and pours cement, when required;
- Assists with replacing chlorine supplies at remote facilities;
- Prepares surfaces for painting and does brush, roller, and spray painting;
- Cleans equipment and work areas for the safety of staff and the maintenance of buildings;
- Completes paperwork to document work completed;
- Checks calibration of, cleans, and assists in the repair of various flow measuring equipment;
- Updates database with information regarding the status of assigned work orders;
- Performs routine and very basic instrumentation and electrical work;
- Assists in pulling wire and conduit;
- Installs, replaces, or adjusts light bulbs, belts, or similar objects;
- Lockout/Tagout simple devices;
- Replaces "plug-in" sump pumps;
- Connects "plug-in" equipment;
- Uses volt meters;
- Maintains regular and reliable attendance;
- Demonstrates superior seamless service, integrity, and commitment to innovation, efficiency, and fiscally responsible activity.

### **Required Knowledge, Skills and Abilities:**



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Knowledge of:

- Basic arithmetic such as addition, subtraction, multiplication, division, and basic algebra.
- Elementary principles of chemistry, biology, and general science.
- Basic mechanical, hydraulic and laboratory principles.

Ability to learn and perform:

- Operations & Maintenance Technician duties, while rotating through various facilities, and learning primarily through oral instruction and observation, in an on-the-job training setting.
- Routine and very basic instrumentation and electrical work.
- Computerized maintenance management system (CMMS) operation.
- DCS or SCADA operation.
- Operation of various types of equipment used in the water and wastewater treatment process in accordance with established procedures.
- Data, machinery, and equipment observation or monitoring to determine compliance with prescribed operating or safety standards.
- Authorized forklift operation.
- Work with and around chemicals, effluent, cleaning fluids, paints, cleaning agents, or solutions using approved protective equipment.
- Practices, methods, tools, materials, and equipment involving instrumentation and electrical equipment.
- Proper procedures for filling out Vehicle Inspection Reports, Hot Work Permits, and other reports or permits as required.
- Simple electrical sketch reading and drawing.
- Installation, maintenance, and repair of electrical fixtures and electric or electrical equipment.
- Installation, replacement, or adjustment of light bulbs, belts or similar objects.
- Replace "plug-in" sump pumps.
- Instrument calibration to measure electrical current and voltages.

Ability to:

- Work cooperatively with other City employees in a team environment.
- Move heavy objects such as pieces of equipment weighing 20-50 pounds or more short distances (20 feet or less).
- Bend or stoop repeatedly or continually over time to make repairs to equipment.
- Lift arms above shoulder level to paint or work on equipment or work on ceiling wiring system.
- Work safely without presenting a direct threat to self or others and comply with all safety and environmental regulations.



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- Communicate with co-workers utilizing telephone, pagers and two-way radios.
- Communicate orally with co-workers and customers in face-to-face one-to-one settings to explain repairs made or to discuss repair strategies.
- Perceive the full range of the color spectrum to repair mechanical devices.
- Be authorized as a confined space entrant/attendant.
- Work rotating shifts, including holidays and weekends.
- Travel across rough, uneven or rocky surfaces to access equipment that requires repair.
- Comprehend and make inferences from written materials such as operating manuals, and Material Safety Data Sheets (MSDS).
- Obtain and maintain Self Contained Breathing Apparatus (SCBA) certification.
- Work in small, cramped areas to repair equipment.
- Climb ladders or steps where equipment is located, to reach objects on shelves, or to monitor machinery and equipment.
- Learn job-related material primarily through oral instruction, structured lectures, reading, and observation in an on-the-job setting.
- Understand and follow oral and written instructions in the English language.
- Work in a variety of weather conditions with exposure to the elements.
- Use common hand tools, such as hammers, saws, screwdrivers, or similar tools.
- Understand and apply electrical theory in simple terms and terminology.
- Use a computer to input and retrieve information.

### **Additional Requirements:**

- Possession of an appropriate Arizona Department of Environmental Quality Grade I Certification by the end of the trainee period.
- The Operations & Maintenance Technician Trainee program requires successful completion of a wide variety of classroom and on-the-job training.
- Some positions require the use of personal or City vehicles on City business. Individuals must be physically capable of operating the vehicles safely, possess a valid driver's license and have an acceptable driving record. Use of a personal vehicle for City business will be prohibited if the employee is not authorized to drive a City vehicle or if the employee does not have personal insurance coverage. In addition, individuals may be required to pass an Arizona Department of Transportation physical exam and possess the appropriate commercial driver's license (CDL). Pre-employment drug testing is required for CDL positions. Employees in CDL positions will be subject to unannounced alcohol and drug testing as a condition of continued employment
- Some positions will require the performance of other essential and marginal functions depending upon work location, assignment, or shift.

### **ACCEPTABLE EXPERIENCE AND TRAINING:**



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Requires the ability to learn, in English, the treatment, collections, and distribution practices and procedures; and read, write, follow oral instructions, and perform basic math calculations. Other combinations of experience and education that meet the minimum requirements may be substituted.