

## WATER QUALITY TECHNICIAN

### JOB DESCRIPTION

**Classification Responsibilities:** A Water Quality Technician is assigned to either the Water Quality or Backflow Prevention group and is responsible for performing a wide variety of duties in the inspection, testing, sampling, and monitoring of the distribution water system to ensure compliance with federal and state requirements. Work in the Water Quality and Backflow Prevention Program involves continual learning in order to understand and stay current with regulations and procedures. An incumbent in this class also will be required to interact regularly with other City employees in various divisions along with City contractors and residents. The position performs related duties as required.

**Water Quality Assignment:** A Water Quality Technician assigned to Water Quality may work in the field and/or perform desk related duties as assigned. An employee in this classification is responsible for maintaining compliance documentation such as chain-of-custody sheets, compliance data logs, and/or internal tracking forms; and routinely collect and test water samples from the distribution systems.

**Backflow Prevention Assignment:** A Water Quality Technician assigned to Backflow Prevention may work in the field and/or perform desk related duties as assigned. Duties performed include: testing backflow assemblies; monitor tester integrity; enter data from backflow assembly test reports into the compliance database; prepare for and perform cross connection surveys for identification of hazards to public distribution system and customers plumbing system; inspect new construction projects for appropriate installation of backflow assemblies; prepare notices of violation for correcting code deficiencies; and review construction plans to insure appropriated backflow assemblies are specified where needed. Communicates with customers and contractors in person, through email and phone conversations.

**Distinguishing Features:** This class is distinguished from the Water Quality Inspector class by its primary responsibility for collecting field samples and the level of supervision and proficiency while performing job expectations associated with the City of Mesa Water Quality and Cross Connection Control programs. A Water Quality Technician will perform duties with increased proficiency and decreased supervision in preparation for promotion to an inspector. Performance standards and expectations must be accomplished prior to promotion. Employees in this class can progress to the Water Quality Inspector class by noncompetitive, criteria-based promotion after successful completion of on-the-job training and achievement of satisfactory performance appraisals. This class is supervised by either the Water Quality Supervisor or Cross Connection Control Inspector. This class is FLSA nonexempt.

### QUALIFICATIONS

**Employee Values:** All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

**Minimum Qualifications Required.** Any combination of training, education, and experience equivalent to graduation from high school or GED, supplemented by college-level courses in Chemistry, Biology, Water/Wastewater Technology, or a related field. One year experience in water/wastewater system operation and maintenance and/or experience in backflow prevention programs/testing, water quality sampling, or closely related area is required.

**Special Requirements.** Must possess a valid Arizona Driver's License by hire date. Must possess a Grade I Operator Certification in either Water Distribution **OR** Water Treatment from Arizona Department of Environmental Quality (ADEQ) by application date.

**Substance Abuse Testing.** Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, tobacco, drug and/or controlled substance testing as outlined in City policy and procedures.

**Preferred/Desirable Qualifications.** Coursework in water and wastewater technology, experience in testing backflow assemblies outside of lab environment, experience working in the field under all weather conditions, proficiency in computer operation, backflow prevention assembly tester certification, cross connection specialist training, dealing with the public through email, letters, phone and face-to-face contact and plumbing experience is desirable.

## **ESSENTIAL FUNCTIONS**

**Communication:** Maintains good working relationships with building contractors and industrial officials by providing information regarding regulations and answering general questions regarding backflow and water quality. Returns phone messages and email inquiries no later than the next business day. Communicates clearly and accurately in negative situations, such as dealing with customer complaints or code compliance issues. Communicates effectively with supervisor in a timely manner regarding sensitive issues using both verbal and written methods. Effectively communicates with City of Mesa water customers in regard to water quality issues such as tastes, odors, discoloration, and health issues. Schedules testing with engineering inspectors and the general public. Schedules site visits to new construction projects. Advises property owners/contractors of needed code corrections with documentation and follow-up to ensure corrections have been made, to bring project into compliance. Communicates with customers, contractors and city personnel in-person, through email and phone conversations.

**Manual/Physical:** Candidates considered for the Water Quality Technician samples the water distribution system from a variety of locations throughout the City to include Entry Points to the Distribution System (EPDS), dedicated sample locations, wells, storage reservoirs, and customers' homes. Collects raw and potable water samples using Environmental Protection Agency (EPA) sampling protocols for bacteriological, organic, and radiological testing. Monitors and records drinking water parameters using field equipment such as chlorine, pH, conductivity, and turbidity and other analyses as directed. Performs and records routine calibrations and maintenance of field equipment and recognizes correct data. Notifies supervisor and operational staff of unusual field results. Recognizes customer complaints and collects samples from homes in a professional and tactful manner in order to enhance customer relations. Assists with the implementation of programs, policies, and procedures to ensure the City's compliance with all applicable federal, state, and local regulations. Transports and packs sample shipping containers weighing up to 80 lbs. using a cart or other aid. Uses common hand tools for installing sampling equipment, repairing backflow prevention assemblies, and maintaining equipment. Operates a pick-up truck requiring a standard Arizona Driver's License in order to drive to various locations throughout the City to take water samples and conduct site inspections. Enters data into the City's Laboratory Information Management System (LIMS) and updates spreadsheet files using a personal computer (PC). Enters data from backflow assembly test reports into the backflow compliance database. Tests City-owned assemblies, when requested. Works in an environment where safety clothing is required. Works around large pumps and valves, and on construction sites with open trenches and

heavy equipment present. Performs duties in a variety of weather conditions. Perform all duties using safe work practices. Meets scheduling and attendance requirements. Performs related duties as assigned.

**Mental:** Navigate City streets and freeways while driving many miles daily. Locates backflow assemblies and collects samples from designated water sampling and monitoring locations. Deals tactfully and professionally with irate customers and contractors. Participates in the preparation of sampling schedules. Learns operational and maintenance practices of the water distribution system. Learns and applies federal, state, and local laws, codes, and regulations pertaining to backflow and water quality compliance. Collects, records, and reviews data related to backflow program and water quality compliance issues. Calculates and compiles test data using database and spreadsheet applications. Maintains accurate and concise written records of field results. Collects and verifies field data for entry into backflow compliance database. Audits test data for assemblies that may have been tested under questionable circumstances. Reviews customer submitted construction plans for appropriate protection for all plumbing connected equipment and water service connections to public water system. Determines if all cross connections are protected as required by code. Uses a PC for databases, spreadsheets, documents, reports and email correspondence. Functions in a changing regulatory environment, which requires constantly updating knowledge and skills. Learns job-related material through on-the-job training and in classroom settings. Works in a self-motivated environment and prioritizes work assignments with supervision.

**Knowledge/Abilities:**

Knowledge of:

techniques involved in taking water samples and performing related field measurements.  
backflow assembly applications and testing;  
operational and maintenance practices of water distribution systems;  
dynamics and characteristics of water pressure and flow;  
basic and complex tools and equipment used in water monitoring and backflow prevention work;  
basic mathematical principles used in calculating measurements and calibrations;  
installation, maintenance, and operation of backflow prevention assemblies;  
City of Mesa backflow ordinance  
Arizona Administrative Code relating to “Backflow Prevention”  
Plumbing Code adopted by the City of Mesa  
USC Manual of Cross Connection Control  
and occupational and safety precautions of the workplace.

Ability to:

conduct bacteriological sampling and field testing using standard techniques;  
learn the ordinances, rules, and regulations governing the sampling and protection of distribution systems;  
take samples of the water distribution system and wells using portable lab equipment and standard sampling methods to determine compliance with federal and local regulations;  
maintain equipment maintenance files to track system performance and maintenance procedures;  
test water samples for chlorine, conductivity, temperature, Volatile Organic Chemicals (VOC), Synthetic Organic Chemicals (SOC), inorganics, and other analyses as required by state and federal regulations;  
conduct routine inspections of facilities to determine compliance with backflow prevention codes;  
respond to complaints concerning water quality, investigate the complaint, provide accurate information as to the source of the problem;

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maintain good working relationships with coworkers, other departments, and the general public;  
assist in the maintenance and repair of City-owned backflow prevention assemblies;  
enter and retrieve data from a PC using Microsoft Word, Excel, and Access;  
assist in developing and implementing sampling plans in response to a changing environment;  
write letters, memos, and reports pertaining to water quality and backflow;  
communicate effectively with the public; and  
assist the water quality inspectors and other unspecified duties as required.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

Revised to Update Special Qualifications 06/16

LW/st/th

CS3901.DOCX

EEO-Tech

JOB FCTN-TEC

INCREMENTS 81-200

PAY GRADE: 41

IND-7520

SWORN-No