



June 2008

BACKFLOW/CROSS-CONNECTION SPECIALIST

DEFINITION

Under general supervision, administers the City's cross-connection and backflow programs; performs a variety of technical duties involved in the installation, testing, assembly, repair, and inspection of backflow and/or cross-connection devices for the water distribution system to control exposure to contamination; prepares and mails monthly backflow prevention device test notices; tracks, logs, and files test reports returned by customers; ensures conformance with applicable Federal and State laws, codes, ordinances, specifications, and departmental regulations; fosters cooperative working relationships with various public and private groups; provides specialized technical assistance to the appropriate supervisory personnel; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from assigned the Utility Manager. May exercise technical and functional direction over volunteers.

CLASS CHARACTERISTICS

This is an experienced-level class that performs the full range of duties in cross-connection and backflow programs required to ensure that water utility systems function in a safe and effective working condition and provide the highest level of safety for public use. Responsibilities include inspecting and attending to assigned areas in a timely manner, and performing a wide variety of tasks in the investigation, inspection, and testing of assigned systems and facilities. Incumbents are expected to work independently and exercise judgment and initiative. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit. This class is distinguished from other Public Works maintenance class series in that it performs more highly skilled technical and mechanical maintenance operations activities related to cross-connection and backflow programs.

EXAMPLES OF ESSENTIAL FUNCTIONS (Illustrative Only)

Management reserves the rights to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations where appropriate so that qualified employees can perform the essential functions of the job.

- Implements the Backflow and Cross-Connection Control program to ensure that the City's water system is protected from contamination.
- Administers testing of backflow prevention devices when installed and annually thereafter to ensure proper operation; assists in troubleshooting and responding to complaints on backflow prevention devices.
- Contacts customers to ensure compliance with backflow device requirements and to ensure customers make appropriate repairs; generates and sends initial notices, follow-up notices, and final notices to

- owners of backflow devices for annual testing; maintains records and files on backflow prevention devices, locations, inspections, testing, and corrections.
- Coordinates and monitors the cross-connection inspection and control program; notifies customers to ensure compliance with State and local regulations; assists in conducting cross-connection surveys and performs inspections to identify user premises where cross-connections may occur; assists in determining the degree of hazard.
 - Reviews plans and specifications for a variety of new development construction projects; performs walk-through with developers and/or contractors; recommends design changes; ensures compliance with the City's cross-connection control program.
 - Inspects and surveys services for the prevention, control, and elimination of contamination or pollution hazards to water supply.
 - Conducts water use surveys to business, industrial, and residential customers.
 - Participates in the development and implementation of goals, objectives, and priorities for assigned program; identifies resource needs; recommends and implements procedures, including standard operating procedures for assigned program.
 - Participates in the development and administration of the program budget; prepares detailed cost estimates with appropriate justifications, as required; maintains a variety of records and prepares routine reports of program performance.
 - Acts as a representative to local residents, school districts, municipal and community groups, private businesses, and others concerning questions, problems, concerns, and activities related to specific programs.
 - Conducts special research assignments, analyzing data, and preparing conclusions and recommendations for consideration by management or special committees.
 - Receives, investigates, and responds to problems and complaints in a professional manner; identifies and reports findings and takes necessary corrective action.
 - Participates on and makes presentations to a variety of committees; attends and participates in professional group meetings.
 - Develops and prepares public information materials such as notices, brochures, flyers, newsletters, and other materials; updates website with informational materials.
 - Maintains accurate databases, records, and files related to the specific program.
 - Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Practices, methods, equipment, tools, and materials used in the assembly, repair, installation, and testing of backflow and cross-connection devices.
- Water sampling procedures and methods.
- Applicable Federal, State, and local codes, laws, and regulations.
- Operational characteristics of equipment and tools used in work activities including field analysis equipment for water quality sampling.
- Basic mathematical principles.
- Principles and procedures of record keeping and report preparation.
- Occupational hazards and safety equipment and practices related to the work.
- Modern office practices, methods, and computer equipment.
- Basic computer software related to work.
- Safe driving rules and practices.
- English usage, spelling, vocabulary, grammar, and punctuation.
- Techniques for effectively representing the City in contacts with governmental agencies, community groups, and various business, professional, educational, regulatory, and legislative organizations.

- Techniques for providing a high level of customer service to public and City staff, in person and over the telephone.

Ability to:

- Operate a variety of equipment, tools, and testing devices used in the assembly, repair, installation, and testing of backflow and cross-connection prevention devices.
- Assemble, repair, install, and test backflow and cross-connection prevention devices.
- Accurately determine project material needs and recommend purchases.
- Analyze, interpret, apply, and ensure compliance with Federal, State and local policies, procedures, laws, and regulations.
- Read, interpret, and apply a wide variety of technical information from manuals, drawings, specifications, layouts, blueprints, and schematics.
- Maintain accurate logs, records, and basic written records of work performed.
- Understand and follow oral and written instructions.
- Follow department policies and procedures related to assigned duties.
- Make accurate arithmetic calculations.
- Operate modern office equipment including computer equipment and software.
- Prepare and maintain accurate and complete records.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Comprehend and use English effectively including producing all forms of communication in a clear, concise and understandable manner to intended audiences.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience, which would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to the completion of the twelfth (12th) grade supplemented by two (2) years of college-level coursework or specialized technical training in a related field and two (2) years of increasingly responsible experience performing backflow device testing and maintenance, environmental compliance, and/or other water/wastewater utility related trade or specialty.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid driver's license by time of appointment.
- Possession of, or ability to obtain, a State of Oregon Backflow Assembly Tester Certificate.
- Possession of, or ability to obtain, a State of Oregon Cross Connection Specialist Certificate.

PHYSICAL DEMANDS

Must possess mobility to work in the field; to operate a motor vehicle, drive on surface streets, and make inspections; strength, stamina, and mobility to perform light physical work, and to operate varied tools, equipment, and testing instruments; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone or radio. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-

mentioned tools and equipment. Positions in this classification bend, stoop, kneel, reach, and climb to perform work and inspect work sites. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 75 pounds and heavier weights with the use of proper equipment.

ENVIRONMENTAL ELEMENTS

Employees primarily work in the in the field and are exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives and contractors in interpreting and enforcing departmental policies and procedures.