

CITY OF LANCASTER  
LANCASTER, PENNSYLVANIA

BACKFLOW PREVENTION  
AND  
CROSS-CONNECTION CONTROL

POLICY AND PROCEDURES MANUAL

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## 1. INTRODUCTION

The City of Lancaster owns the water distribution system, which is operated and maintained by the City of Lancaster - Department of Public Works, Bureau of Water. The Lancaster water distribution system covers approximately 55 square miles in Lancaster County. The City recognizes that certain water Customers have water systems that have connections to, apparatus, vessels, etc., which may have impurities in varying degrees and, if not properly isolated and contained, could contaminate and/or pollute both the Customer's water system and the City's water distribution system.

This manual defines the policy and procedures of the City of Lancaster and the water Customer's responsibility regarding backflow prevention and cross-connection control. The policies and procedures contained herein shall apply to all water supply Customers served by the City and located within the City's service area.

## 2. DEFINITIONS

The first major element in developing an effective backflow prevention and cross-connection control program is to have a clear understanding of cross-connection, backflow, and back siphonage concepts and the control measures needed to eliminate them.

The following words and terms shall have the following meaning unless clearly indicated otherwise in this Manual:

1. Air-Gap Separation. The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying potable water to a tank, plumbing fixture, or other device and the flood level rim of the receptacle. The differential distance shall be at least double the diameter of the supply pipe, measured vertically above the top of the rim of the vessel. In no case shall the air gap be less than one (1) inch.
2. Alarm Check. A device which signals an alarm and/or summons the fire department, etc. when a sprinkler head flows water; on wet-pipe systems, provides directional flow. Alarm checks are not an acceptable backflow prevention device.
3. American Water Works Association (AWWA). An organization that advances the knowledge of the design, construction, operation, and management of water utilities, whose goal is to benefit the public and members of the water works field through improved water service and water works practice.
4. Antifreeze Loop. A fire protection system, connected to a water supply and located in an area with temperatures below freezing, in which antifreeze is added for freeze protection. An automatic sprinkler system that contains antifreeze will first discharge antifreeze, and then discharge water when the sprinklers are opened by a fire.

5. Approved Backflow Prevention Device. A backflow prevention device or method that has been accepted by the City of Lancaster as suitable for the proposed use.
6. ASSE. American Society of Sanitary Engineering.
7. Atmospheric Vacuum Breaker (AVB). A fixture outlet device containing shutoff valve followed by a valve body containing a soft-seated float-check, a check seat, and an air inlet port. If the shutoff valve is open, the flow of water causes the float to close the air inlet port. If the shutoff valve is closed, the float falls and forms a check valve against back siphonage and at the same time opens the air inlet port.
8. Auxiliary Water System. Any water source or system on the premises of or available to the Customer other than the City's approved water supply system.
9. AWWA. American Water Works Association
10. Backflow. A flow condition, induced by a differential in pressure, that causes the flow of water or mixtures of water and other liquids, gases, or other substances into the distribution pipes of a potable water supply system from a source other than the City water supply. Backflow can be backpressure or back siphonage.
11. Backflow/Cross-Connection Technician (BCCT). An employee of the City of Lancaster or its agent responsible for the implementation of the City's Backflow Prevention and Cross-Connection Control Program
12. Backflow Preventer. A device or other means that will prevent the backflow of water or any other substance into the public water supply system.
13. Backflow Prevention Assembly. A device or other means that will prevent the backflow of water or other liquids into the public water supply system.
14. Backpressure. The backflow of water or a mixture of water and other liquids, gases, or other substances from a plumbing fixture or other Customer source into a public water supply system due to an increase of pressure in the fixture or Customer source to a value that exceeds the system pressure.
15. Back siphonage. The backflow of water or a mixture of water and other liquids, gases, or other substances from a plumbing fixture or other Customer source into the public water supply system due to a temporary negative or sub-atmospheric pressure within the public water supply system
16. Bulk Account. A type of water account where potable water is transported to another water purveyor.
17. Certified Backflow Prevention Assembly Technician. Individuals trained and competent in the specialized area of backflow prevention assembly testing, repair, and maintenance, who have

taken the training course and received certification by American Society of Sanitation Engineers (ASSE) or any other course approved by the City.

18. Certified Cross-Connection Control Surveyor. Individuals trained and competent in the area of detecting cross-connections, who have taken the training course and received certification by American Society of Sanitation Engineers (ASSE) or any other course approved by the City.
19. CFSC. Certified Fire Sprinkler Suppression Contractor.
20. Cistern. An artificial reservoir for storing water or other liquids, most often in the form of a tank for storing rainwater for use as an auxiliary water source. A backflow prevention device shall be installed and maintained in accordance with this manual for all locations in which a cistern is present; the cistern shall not be interconnected with the City's public water supply.
21. City of Lancaster. The City of Lancaster, Bureau of Water, which is responsible for operating and maintaining the public water supply system.
22. Combined Fire Protection System. A fire protection system that includes bulk and express riser pipes to supply both sprinkler and standpipe systems.
23. Commercial Account. Customers who are engaged in selling, warehousing or distributing a commodity; the rendering of a service to the public, including nursing homes, personal care homes and the like; providing professional services; wholesale and retail stores; office buildings or offices; hotels; clubs; lodges; associations; restaurants; warehouses; railroad and bus stations; banks; laundries; dry cleaners; undertaking establishments; garages; gasoline stations; theaters; bowling alleys; bars; grills; taverns; retail bakeries; hospitals; schools; churches; religious and charitable institutions; governmental agencies; not-for-profit businesses or the like where the business activity is not primarily involving the manufacturing or processing of a product. Included in this classification are establishments where water service is provided through one meter set to one or more dwelling units in a multifamily residence or building, or through one meter set to a combination of one or more dwelling units and one or more business premises.
24. Customer. The owner or person in control of any premises supplied by or in any manner connected to the public water supply system.
25. Customer's Water System. Any water system located on the Customer's premises that is supplied by or in any manner connected to a public water supply system. A household plumbing system is considered to be a Customer's water system.
26. Containment. Cross-connection control that isolates the Customer's entire facility from the public water supply system so as to provide the protection necessary to prevent contamination of the public water supply in the event conditions occur that would cause backflow or back siphonage from the Customer's facility.

27. Contamination. The degradation of drinking water quality by wastewaters, process fluids, or any water having a quality less than accepted water quality standards to a degree that could create an actual hazard to the public health through poisoning or through the spread of disease.
28. Cross-Connection. An arrangement allowing either a direct or indirect connection through which backflow or back siphonage, can occur between a system containing a source or potential source of contamination and a public water supply system.
29. Cross-Connection Control. The enforcement of an ordinance or other legal statement regulating cross connections.
30. Day. A 24-hour period. For the purpose of this manual, the number of days shall be counted as calendar days.
31. Degree of Hazard. The potential risk to health and the adverse effect upon the public water supply system.
32. Directional Check. A device that indicates directional flow only. This is not an acceptable backflow prevention device.
33. Double Check Valve Assembly (DCVA). A testable assembly composed of two (2) single, independently acting check valves that includes tightly-closing shut-off valves located at each end of the assembly and suitable connections for testing the water tightness of each check valve. This assembly shall only be used to protect against a non-health hazard (pollutant).
34. Double Check Detector Assembly (DCDA). A testable assembly composed of a line-size double check valve assembly with a bypass containing a 5/8" x 3/4" water meter and a double check valve assembly. The meter shall register accurately for only very low rates of flow of up to 3 gallons per minute (gpm) and shall show a registration for all rates of flow. This assembly shall only be used to protect against a non-health hazard (pollutant) and is primarily used on fire sprinkler systems.
35. Dual Check Backflow Preventer (DCBP). A non-testable backpressure-type backflow-prevention device designed especially for containing water systems in residences and mobile homes consisting of two (2) independently operating, soft-seated, spring-loaded, consecutive check valves. This is also called a residential dual check.
36. FDA – Food and Drug Administration
37. Foundation for Cross-Connection Control and Hydraulic Research. A research facility established at the University of Southern California (USC-FCCCHR) dedicated to

education and providing assistance to the water industry, in order to protect potable water supplies from contamination or pollution through cross-connections and/or backflow.

38. Factory Mutual Insurance (FM). An approved testing facility that provides laboratory and field evaluation of fire protection and related devices.
39. Fire Main. A pipeline that supplies water for firefighting purposes only.
40. Fire Protection. Providing a reasonable degree of protection for life and property from fire through installation of sprinkler systems, hose connections, and hydrants.
41. Geo-Thermal Heating. Energy system consisting of a heat pump that, when operated through a connection with the public water supply system, would be a potential health hazard.
42. Health Hazard. Any condition, device, or practice in a water system or its operation that creates, or may create, a danger to the health and well-being of its users. The word "severe" as used to qualify "health hazard" means a hazard to the health of the user that could reasonably be expected to result in death.
43. High Hazard. A potential threat of a cross-connection problem that is physically, chemically, or biologically hazardous in nature. These hazards pose a danger to the health and safety of the Customer or the general public.
44. Hose-Bibb Vacuum Breaker (HBVB). A fixture outlet device that contains a soft-seated, spring-loaded, air inlet and is designed to be attached to an outlet having a hose connection thread.
45. Industrial Accounts. Customers who are engaged in manufacturing or processing which creates or changes raw materials or unfinished materials into another form or product
46. Industrial/Process Fluids. Any fluid or solution that may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollution, or plumbing hazard if introduced into a public water supply. This may include, but not be limited to: polluted or contaminated used waters; all types of process water and "used waters" originating from the public potable water system that may deteriorate in sanitary quality; chemicals in fluid form; plating acids and alkalis; circulated cooling waters connected to an open cooling tower and/or cooling waters that are chemically or biologically treated or stabilized with toxic substances; contaminated natural water, such as from wells, springs, streams, rivers, bays, harbors, seas, irrigation canals or systems, etc.; oils, gases, glycerin, paraffins, caustic and acid solutions, and other liquid and gaseous fluids used in industrial or other processes or for firefighting purposes.
47. Interchangeable Connection. An arrangement or device that will allow alternate, but not simultaneous, use of two (2) sources of water.

48. Internal Protection. Cross-connection control that isolates all non-outlet, water-use appliances within a facility (e.g., kitchen appliances, air conditioners, boilers, process tanks, photo developing equipment) from the water distribution system within the facility. Internal protection prevents backflow contamination within the facility's water system.
49. Low Hazard. A potential threat to the potability of a public water supply system that could cause aesthetic problems or have a detrimental effect but would not constitute a hazard to the health of the Customer or the general public.
50. Multiple Services. A condition in which two or more services are provided to one Customer (Customer).
51. NEWWA. New England Water Works Association.
52. Non-Health Hazard. Any condition, device, or practice in a water system or its operation that creates, or may create, an impairment of the water quality to a degree that does not create a hazard to the public health, but which does adversely and unreasonably affect the aesthetic qualities of such water for domestic use.
53. Non-potable Water. Water not safe for drinking, personal, or culinary use.
54. Outside Faucets. A fixture for drawing water that is located outdoors.
55. Person. Any individual, partnership, association, company, corporation, municipality, municipal authority, political subdivision, or any agency of federal or state government. The term includes the officers, employees, and agents of any partnership, association, company, corporation, municipality, municipal authority, political subdivision, or any agency of federal or state government.
56. Plumbing Hazard. An internal or plumbing type cross-connection in a Customer's water system that may be either a pollution or contamination type hazard. This includes, but is not limited to, toilets, sinks, lavatories, wash trays, washing machines, and lawn sprinkling systems. Plumbing type cross-connections can be located in many types of structures, including homes, apartment buildings, hotels, and other commercial or industrial establishments.
57. Plumbing Official. A person within a political jurisdiction, most likely within the Building and Safety Department, who has the responsibility of reviewing building plans and inspecting plumbing as it is being installed, and who has the responsibility of preventing cross-connections from being designed and built into the structures within his jurisdiction.
58. Pollution. The presence in water of any foreign substance that tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality of the water to a degree

that does not create an actual hazard to the public health, but that does adversely and unreasonably affect such waters for domestic use.

59. Potable Water. Water that is satisfactory for drinking, culinary, and domestic purposes and that meets federal and state drinking water quality standards.
60. Pressure Vacuum Breaker (PVB). A fixture outlet device containing an independently-operating, soft-seated, spring-loaded check valve and an independently-operating, soft-seated, spring-loaded, air inlet valve on the discharge side of the check valve.
61. Private Hydrant System. A fire protection system that includes yard piping and hydrants owned and maintained by the Customer.
62. Public Water Supplier. A public owner or operator of a public water system; for the purposes of this manual, the City of Lancaster.
63. Public Water Supply System. A system providing water to the public for human consumption that has at least 15 service connections or that regularly serves an average of at least 25 individuals daily at least 60 days out of the year. A public Water Supply System can be either a community or noncommunity water system and includes any collection, treatment, storage, and distribution facilities under the control of the operator of the system and used in connection with the system. The term includes collection or pretreatment storage facilities not under such control that are used in connection with the system. The term also includes a system that provides water for bottling or bulk hauling for human consumption.
64. Reduced Pressure Zone Device (RPZD). (Also referred to as a Reduced Pressure Check Assembly (RPCA) or Reduced Pressure Principal Assembly.) A minimum of two (2) independently acting check valves, together with an automatically operated pressure differential relief valve located between the two (2) check valves. During normal flow and at the cessation of normal flow, the pressure between these two (2) check valves is less than the supply pressure. In the case of leakage of either check valve, the differential relief valve, by discharging to the atmosphere, operates to maintain the pressure between the checks at less than the supply pressure. The unit must include tightly-closing shut-off valves located at each end of the device, and each device shall be fitted with properly located test cocks. This assembly is designed to protect against a high hazard.
65. Reduced Pressure Zone Detector Assembly (RPZDA). (Also referred to as a Reduced Pressure Detector Check Assembly (RPDCA) An assembly composed of a line-size reduced pressure check assembly with a bypass containing a 5/8" x 3/4" water meter and a reduced pressure check assembly. The meter shall register accurately for only very low rates of flow up to 3 gpm. This assembly shall be used to protect a high hazard contaminant (or a health hazard) and is primarily used on fire sprinkler systems that use antifreeze storage tanks or an auxiliary water source.

66. Residential Accounts. Customers receiving the City's water service exclusively to a single-family dwelling or building, or through one meter set to three or fewer dwelling units in a multi-family residence or building. Water service provided through one meter set to a combination of one or more dwelling units and one or more business premises shall not be considered service to a residential Customer.
67. Residential Fire Protection. (Also referred to as a Domestic Fire Line) A fire protection sprinkler system installed in a private home after the water meter and backflow preventer.
68. RMP. Registered Master Plumber.
69. Service Connection. The terminal end of a service line from the public water supply system, typically at the first valve off the Authority's main.
70. Service Protection. Means of backflow prevention located at the service connection.
71. Single Detector Check. A device that detects unauthorized use of water for other than fire service; detects leaks in fire protection systems; with by-pass check, provides directional flow. Not an acceptable backflow prevention device.
72. Solar Heating. Solar energy systems for domestic hot water heating, space heating or cooling, industrial process water heating, swimming pool heating, or other uses that may have cross- connections with the domestic water system. The solar energy system may contain antifreeze solutions or chemical corrosion inhibitors.
73. Sprinkler System. A fire protection system that includes express riser pipes to convey water to the laterals for supply to the sprinkler heads.
74. Standpipe System. A fire protection system that includes bulk riser pipes equipped with hose connections, usually located at each floor and roof, for exclusive use by the fire department; laterals on each floor may also supply water to hose cabinets for use by the building occupants to control fires until the fire department arrives.
75. System Hazard. A condition posing an actual or potential threat of damage to the physical properties of the public water system or the Customer's water system.
76. Thermal Expansion. The expansion of water when heated. If a backflow prevention assembly is installed on a Customer's water system that includes a water heater, the expanding hot water may create unacceptably high pressure.
77. Underwriters Laboratory (UL). A non-profit organization founded to establish, maintain, and operate laboratories for the investigation of materials, devices, products, equipment, construction, methods, and systems with respect to hazards affecting life and property.
78. USC FCCCRHC –University of Southern California Foundation for Cross Connection Control and Hydraulic Research

79. Used Water. Waters in industrialized water systems; water in reservoirs or tanks used for firefighting purposes; irrigation reservoirs; swimming pools; fishponds; mirror pools; memorial and decorative fountains and cascades; cooling towers; baptismal, quenching, washing, rinsing, and dipping tanks. All of these supplies, including public potable water over which the City of Lancaster does not exercise sanitary control, become a potential hazard to the public water system. These waters may become polluted or contaminated because of industrial processes; contact with human body, dust, vermin, birds, etc.; or by means of chemicals and/or organic compounds that may have been introduced into the tanks, lines, or systems for scale, corrosion, algae, bacterial, or odor control, or for similar treatment.
80. Water Supervisor. The Customer or a person on the premises appointed by the Customer charged with the responsibility of maintaining the Customer's water system(s) on the property free from cross-connections and other sanitary defects, as required by regulations and laws. A certified backflow prevention assembly technician may not act as a water supervisor unless he is a full-time employee of the Customer having the day-to-day responsibility for the installation and use of pipelines and equipment on the premises and for avoidance of cross-connections.
81. Wells. Residential well which is normally drilled (sunk) into an aquifer over which the City does not have sanitary control.
82. Yard Hydrants. Fire hydrants that are part of a fire protection system maintained and owned by the Customer.

### 3. AUTHORITY

- 3.1 United States Environmental Protection Agency (EPA). Under the provisions of the Safe Drinking Water Act of 1974, the Federal Government has established, through the EPA, national standards of safe drinking water. The states are responsible for the enforcement of these standards, as well as the supervision of public water supply systems and sources of drinking water. The water purveyor (supplier) is held responsible for compliance to the provisions of the Safe Drinking Water Act, to include a warranty that water quality provided by his operation is in conformance with the EPA standards at the source, and is delivered to the Customer without the quality being compromised as a result of its delivery through the distribution system. As specified in the Code of Federal Regulations (Volume 40, Paragraph 141.2, Section (c)): "Maximum contaminant level means the maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a public water system, except in the case of turbidity, where the maximum permissible level is measured at the point of entry to the distribution system. Contaminants added to the water under circumstances controlled by the user, except those resulting from corrosion of piping and plumbing caused by water quality, are excluded from this definition."
- 3.2 The Commonwealth of Pennsylvania. Rules and Regulations of the Department of Environmental Protection (the Department), Section 109.709, effective December 8, 1984, states:
- A. No person shall introduce contaminants into a public water supply through a service connection of a public water system.
    - 1) It shall be the responsibility of the Customer to eliminate cross connections or provide backflow devices to prevent contamination of the distribution system from both back siphonage and back pressure. Individual backflow preventers shall be acceptable to the public water supplier.
    - 2) If the Customer fails to comply with paragraph (1) within a reasonable period of time, the water supplier shall discontinue service after reasonable notice has been made to the Customer.
  - B. At the direction of the Department, the public water supplier shall develop and implement a comprehensive control program for the elimination of existing cross-connections or the effective containment of sources of contamination and prevention of future cross-connections.
- 3.3 The City of Lancaster. The City of Lancaster enacted Ordinance 2022-13, which updated section 295-61 of the City Code to add the Control of Backflow and Cross Connection program. A copy of this ordinance is included in Appendix B.

#### 4. POLICY

The City of Lancaster is responsible for providing safe water to every Customer at the service connection. In the exercise of this responsibility, the City must take precautionary measures to protect the City's water distribution system from hazards originating on the premises of its Customers that may degrade the public water supply. The City has established a policy and procedures for the protection of the public water supply through the method of containment. This policy and these procedures, which are defined in this Policy and Procedures Manual, are summarized below:

1. All Commercial, Industrial, and Bulk water Customers shall have an approved backflow prevention device consistent with the degree of hazard, as defined by the City, at the service connection. The backflow protection shall be a properly installed double check valve assembly, or a reduced pressure zone device as determined by the City.

In addition, all fire systems that constitute a potential cross connection shall have a City approved double check detector assembly at the lines leading to the fire system.

2. Residential Customers shall be required to install an approved backflow prevention device when they apply for a plumbing permit.
3. The City will terminate water service to a facility if it is determined that a serious contamination potential exists.
3. The City requires that the Customer shall provide for the testing, maintenance, and repair of backflow devices by a certified backflow prevention assembly technician at least once a year or whenever failure has occurred or is suspected in order to maintain the devices in satisfactory operating condition. The Customer shall also provide, through a certified backflow prevention assembly technician, for the overhaul or replacement of such devices if they are found to be defective. Records of such tests, repairs, overhauls, and replacements shall be submitted by the Customer to the Backflow/Cross-Connection Technician (BCCT) of the City of Lancaster, Bureau of Water. Property owners shall be responsible for maintaining records of such tests and related maintenance for a period of the most recent three (3) years.
4. Non-compliance with the preceding requirements after due notification may result in the discontinuation of water service. The Customer may be required to reimburse the City for all costs associated with such action.

#### 5. RESPONSIBILITIES

To protect the City of Lancaster's water supply and distribution system, full cooperation is needed among many parties. This includes the City of Lancaster's water staff, including the

Backflow/Cross-Connection Technician (BCCT), the Plumbing/Building Official, the Fire Marshall, the Customer, the Certified Cross-Connection Control Surveyor, and the Certified Backflow Prevention Assembly Technician is required. Each party has specific responsibilities in regard to the Backflow Prevention and Cross-Connection Control Program that must be carried out in order to prevent pollution or contamination of the water supply. These responsibilities are outlined below.

- 5.1 City of Lancaster. The City's responsibility begins at the source and includes all of the public water distribution system, including the service connection, and ends at the point of delivery to the Customer's water system(s). In addition, the City shall exercise all reasonable vigilance to ensure that the Customer has taken the proper steps to protect the public water system. To ensure that the proper precautions are taken, the City is required to determine the degree of hazard to the public water system. When it is determined that a backflow prevention assembly is required for the protection of the public water system, the City shall require the Customer, at the Customer's expense, to install an approved backflow prevention assembly at each service connection; to test the assembly immediately upon installation, annually, and/or more often; to properly repair and maintain such assembly or assemblies; and to keep adequate records of each test and subsequent maintenance and repair, including materials or replacement parts.
- 5.2 Backflow/Cross-Connection Technician. The BCCT has the responsibility of implementing the City's Backflow Prevention and Cross-Connection Control Program and insuring adherence to the policy and procedures established in this Manual.
- 5.3 Plumbing/Building Official and Fire Marshall. The building and safety department of the appropriate political jurisdiction has the responsibility to not only review building plans and inspect plumbing as it is installed, but also the explicit responsibility of preventing cross-connections from being designed and built into the structures within its jurisdiction. Where the review of building plans suggests or detects the potential for cross-connections being made as an integral part of the plumbing system, the Plumbing/Building Official has the responsibility, under most building codes, for requiring that such cross-connection practices be either eliminated or provided with approved backflow prevention equipment. The Fire Marshall has the responsibility for requiring that such cross-connection practices in fire lines be either eliminated or provided with approved backflow prevention equipment.

The Plumbing/Building Official's responsibility begins at the point of service (i.e., the downstream (Customer's) side of the water meter or service connection) and carries throughout the entire length of the Customer's water system. The Fire Marshall's responsibility begins at the point of fire service and carries throughout the entire length of the Customer's fire protection system. The plan inspector will inquire about the intended use of water at any point where it is suspected that a cross-connection might be made or where one is actually called for by the plans.

When such a cross-connection is discovered, an approved backflow prevention assembly shall be required and properly installed.

- 5.4 Customer . The Customer has the responsibility of preventing pollutants and contaminants from entering his/her potable water system(s) and the public water system. The Customer's responsibility starts at the point of delivery from the public water system and includes all of his/her water systems. The Customer, at his/her own expense, shall have a Certified Cross-Connection Control Surveyor inspect/survey the Customer's premises in order to identify actual or potential cross-connections. The Customer, at his/her own expense, shall have a Certified Backflow Prevention Assembly Technician install, operate, test, maintain, and repair approved backflow prevention assemblies as directed by the Backflow Cross Connection Technician (BCCT). The BCCT shall be notified at least one (1) week prior to installation, testing, and repair activities. The Customer shall maintain accurate records of tests and repairs made to backflow prevention assemblies for a period of the most recent three (3) years and provide the BCCT with copies of such records. The records shall be on forms provided by the City and shall include the list of materials or replacement parts used. Following any repair, overhaul, re-piping, or relocation of an assembly, the Customer shall have it tested to ensure that it is in good operating condition and will prevent backflow.

When requested by the BCCT, the Customer shall appoint a water supervisor who shall be responsible for conformance with all applicable laws, rules, and regulations pertaining to cross-connection control, including the installation, operation, and use of all water piping systems, backflow prevention assemblies, and water-using equipment on the premises; and for the avoidance of unprotected cross-connections. The water supervisor can be the Customer or any full-time employee appointed by the Customer who has a thorough knowledge of the installation, operation, and maintenance of all water systems and backflow prevention assemblies on the Customer's premises.

NOTE: In the event of pollution or contamination of the public or the Customer's potable water system due to backflow on or from the Customer's premises, the Customer or water supervisor shall promptly take steps to confine further spread of the pollution or contamination within the system and shall **IMMEDIATELY NOTIFY** the City at 717- 291-4816 of the condition. The BCCT will require the backflow preventer to be tested immediately and replaced if necessary. The person responsible for the Customer's water system(s) (Customer or water supervisor) shall take appropriate measures to free the water system(s) of any pollutants or contaminants and shall be responsible for all clean-up operations. After the Customer's water system is cleaned, the Customer will be responsible to have the backflow preventer tested prior to utilizing his/her water system.

- 5.5 Certified Cross-Connection Control Surveyor. The Certified (by the City see section 15.3) Cross-Connection Control Surveyor has the responsibility of surveying the Customer's premises (at the Customer's expense) in order to identify actual or potential cross-connections. In addition, the Certified Cross-Connection Control Surveyor will have the responsibility of providing written survey results to the Backflow Cross Connection Technician (BCCT). Note: The Certified Cross-Connection Control Surveyor is a separate certification than that received by a Certified Backflow Prevention Assembly Technician. (See Section 15.4 for City Certification Requirements.)
- 5.6 Certified Backflow Prevention Assembly Technician. When directed to test, repair, overhaul, or maintain backflow prevention assemblies, a Certified (by the City) Backflow Prevention Assembly Technician (See Section 15.3 for City certification requirements) will have the following responsibilities:
- (a) Consult with the BCCT for approval prior to the installation of any backflow prevention assembly.
  - (b) Perform accurate field tests, and repair and overhaul backflow prevention assemblies in accordance with the City's procedures for testing, repairing, and maintaining any backflow prevention assembly (Refer to Section 15, Tests, Maintenance, and Repairs).
  - (c) Make accurate reports of such testing and/or repair to the Customer on forms provided by the City. The Certified Backflow Prevention Assembly Technician must include the list of materials or replacement parts used to repair an assembly.
  - (d) Be capable of using all necessary tools, gauges, and other equipment necessary to properly test, repair, and maintain backflow prevention assemblies.
  - (e) Ensure that replacement parts are equal in quality to parts originally supplied by the manufacturer of that assembly.
  - (f) Maintain the design, material, and operational characteristics of an assembly during repair or maintenance.

Note: The Certified Backflow Prevention Assembly Technician is a separate certification than that received by a Certified Cross-Connection Control Surveyor.

- 5.7 Compliance Schedule. New construction and plumbing improvements must comply with the regulations of the City of Lancaster's Backflow Prevention and Cross-Connection Control Manual dated December 2025 in accordance with Ordinance No.2022-13. Existing facilities must comply by the period listed in Table 1 unless they receive an extension from the City of Lancaster. Extensions will be granted on a case-by-case basis and at the sole discretion of the City of Lancaster's Bureau of Water. Those facilities which present an immediate danger to the public water system must comply and install backflow protection immediately and will not follow the schedule in Table 1.

COMPLIANCE SCHEDULE FOR BACKFLOW CROSS-CONNECTION CONTROL		
	Compliance Schedule Timeline	ACTIVITY
Industrial/Bulk Accounts		
	9 Months	Survey/Inspections by Certified Cross-Connection Surveyors completed, and survey forms returned to the BCCT
	15 Months	City Approved Backflow Prevention device installed by Certified Backflow Prevention Assembly Technician
Commercial Accounts 4-inches or greater		
	12 Months	Survey/Inspections by Certified Cross-Connection Surveyors completed, and survey forms returned to the BCCT
	24 Months	City Approved Backflow Prevention device installed by Certified Backflow Prevention Assembly Technician
Commercial Accounts Less than 4-inches		
	24 Months	Survey/Inspections by Certified Cross-Connection Surveyors completed, and survey forms returned to the BCCT
	36 Months	City Approved Backflow Prevention device installed by Certified Backflow Prevention Assembly Technician
Residential – Non-Commercial		
	0 Months	Required to install backflow preventer when obtaining plumbing permit

## 6 VIOLATIONS

The City may terminate water service or take any other measures it deems necessary to protect the water quality of its public water system, after issuing a notice to the Customer that a violation of Ordinance 2022-13 exists on the premises. Violations include:

1. Failure to install, test, and maintain in a manner acceptable to the City any backflow prevention assembly required by this Policy.
2. Removal or bypassing of a backflow prevention assembly.
3. Existence of an unprotected cross-connection on the premises.
4. Failure to notify the City within 24 hours after an internal backflow incident has occurred.
5. Failure to immediately notify if the internal backflow failure could cause pollution or contamination of the public or the Customer's potable water system due to backflow.

Water service shall not be restored until the danger has been eliminated in compliance with the provisions of this Manual.

If, in the course of a routine inspection or special investigation, a City representative discovers a condition of imminent or actual high hazard system contamination, the representative is authorized to IMMEDIATELY TERMINATE service to the facility. Service will not be restored until the hazardous condition has been corrected and re-inspected by the City or its authorized agent.

Any Customer found contaminating the public water system through a hydrant owned by the City will be responsible for any required clean-up. All City owned hydrants are to be utilized for fire protection only unless one obtains prior authorization from the City in writing.

## 7. GENERAL STEPS OF THE BACKFLOW PREVENTION AND CROSS-CONNECTION CONTROL PROGRAM

The Backflow Prevention and Cross-Connection Program ("the Program"), which is being implemented for the effective control of cross-connections in accordance with this Manual, requires the cooperation of the City of Lancaster, the Plumbing/Building Official, the Fire Marshall, the Customer, and the Certified Backflow Prevention Assembly Technician. Each party has responsibilities as outlined in Section 5 of this Manual, and each must carry out its phase of a coordinated Program. The general steps of the Program are summarized as follows:

- Step 1: Survey of Premises. The initial step of the Program is for a Certified Cross-Connection Control Surveyor to assist the Customer in identifying actual or potential cross-connections on the Customer's premises. The BCCT will provide

the Customer with a list of City-approved Certified Cross- Connection Control Surveyors.

- Step 2: Backflow Protection Required. After performing the initial survey of the Customer's premises, the Certified Cross-Connection Control Surveyor will provide survey results to the BCCT. The BCCT will provide written notification to the Customer informing the Customer what type of backflow prevention device is required on the premises.
- Step 3: Submission. Prior to installation of the backflow protection device, drawings or plans shall be submitted to the BCCT that depict the type of device and installation arrangement. The submission must be approved by the City's BCCT before installation of the device.
- Step 4: Installation of Backflow Prevention. In accordance with this Manual, the required backflow protection shall be installed in accordance with local codes or requirements.
- Step 5: Follow-Up Inspection. Based on the discretion of the BCCT, a re-inspection of the Customer's premises may be made to update records and/or to determine if any new items have been added to the premises that were not covered by the initial inspection.
- Step 6: Annual Inspection/Testing. The City will provide the Customer with test report forms for the annual testing of the backflow prevention assembly. It will be the Customer's responsibility to have the assembly tested by a Certified Backflow Prevention Assembly Technician. The report form, which shows the condition of the assembly and any repairs made, shall be prepared and forwarded to the City.

## 8. REQUIREMENTS

This section describes the City of Lancaster's backflow prevention by containment requirements for all newly constructed and existing facilities.

- 8.1 Backflow Protection at the Service Connection. The degree of hazard is the City's assessment of the potential harm that may result from potential cross-connections within a water-using facility. In order to protect the City's water supply from contamination that originates within a Customer's water system, an approved backflow prevention device, consistent with the degree of hazard, shall be installed at the Customer's expense, at the service connection on the outlet (Customer) side of the meter. A facility that has a high hazard potential or exhibits a high potential for the occurrence of backflow shall have an approved reduced pressure zone device that conforms to the City's cross-connection requirements. A facility that has a low hazard potential shall have an approved double check valve assembly. A single-family resident shall have an approved

dual check valve assembly, unless the degree of hazard warrants greater protection.

## 8.2 Facilities Where Backflow Protection is Required.

8.2.1 New Construction. Plans for new construction shall be submitted to the City's BCCT and approved prior to construction to determine the degree of hazard and the type of backflow prevention assembly that shall be required. In order to provide guidance for designers of plumbing systems, the City has developed a list of examples, including systems, plants, and buildings for which backflow prevention requirements have been determined (See Section 10, Backflow Prevention for Typical Facilities) based upon the degree of hazard and potential for the occurrence of backflow. For cases that are not listed or where there are questions about installation requirements, the City will, upon request, provide a preliminary opinion on the specific containment requirements to the BCCT. Where adequate plans and specifications are not available and no realistic evaluation of the proposed water uses can be determined, the Customer, architect, engineer, or other authorized person shall be advised that installation of maximum backflow protection at the water service connection will be required. Therefore, the responsible person should anticipate the need for a backflow prevention assembly.

8.2.2 Existing Facilities. An inspection/survey of the Customer's facilities and water system shall be performed by the BCCT, or an authorized representative of the City, in order to determine the degree of hazard. The type of backflow prevention assembly will be identified by the BCCT.

## 9 ACCEPTABLE BACKFLOW PREVENTION DEVICES

9.1 General. Only three (3) devices meet the City's requirements of cross-connection control by containment. Acceptable devices include:

- Double Check Valve Assembly (DCVA),
- Reduced Pressure Zone Device (RPZD), and the
- Dual Check (DCBP).

The DCVA is used to protect against a non-health hazard (pollutant).

The RPZD is used to protect against a high hazard or a health hazard.

The DCVA is designed especially for residences and mobile homes to protect against a non-health hazard.

Detector assemblies, including the Double Check Detector Assembly (DCDA) and the Reduced Pressure Zone Detector Assembly (RPZDA), operate in a similar manner and provide similar protection to the DCVA and RPZD, respectively. However, in addition, the DCDA and RPZD each include a bypass containing a 5/8" x 3/4" meter for registering flows. The detector assemblies are used

primarily on fire protection systems. Devices for fire protection systems are addressed in Section 11, Backflow Prevention for Fire Protection Systems.

9.2 Determination of Acceptability. Acceptance of a device is based on one of the following two evaluation procedures:

- (1) A device will be placed on the City of Lancaster list of Acceptable Devices when it has successfully passed both the Laboratory and the Field Evaluation phases of the Foundation for Cross-Connection Control and Hydraulic research approval program, and the manufacturer has been granted a Certificate of Approval.
- (2) A device that meets or complies with each of the following three standards, as determined by an independent testing laboratory, will be placed on the City of Lancaster List of Acceptable Devices.
  - (a) Foundation for Cross-Connection Control and Hydraulic Research, Manual of Cross-Connection Control, Section 10 - Specifications of Backflow Prevention Devices.
  - (b) American Society of Sanitary Engineering Standards
  - (c) American Water Works Association Standards C510 and C511.

The Bureau of Water will review the evaluation report of the backflow prevention devices under test and will determine what sizes, if any, are permitted for use.

Based on the above, a list of acceptable devices will be published from time-to-time. As new units are found to be acceptable, the list will be revised and made available as a separate guideline from the City.

9.3 Unacceptable Devices. The following are examples of devices that are not acceptable for backflow prevention:

- (1) Check Valve
- (2) Gate Valve
- (3) Four-Way Plug Valve
- (4) Barometric Loop
- (5) Spool Connection
- (6) Swing Joint Connection
- (7) Vacuum Breaker
- (8) Alarm Check

## 10. BACKFLOW PREVENTION FOR TYPICAL FACILITIES

10.1 General. Backflow prevention for typical facilities is addressed in this Section. Facilities other than those addressed shall consult the City for specific requirements. Every service line shall be equipped with an approved backflow

prevention device, as generally described in Section 8, REQUIREMENTS, and as summarized below:

- (a) The requirements for backflow protection at the service connection, to plants, facilities, and buildings are listed in Section 10.2. These requirements are based on the degree of hazard and the potential for the occurrence of backflow, as determined by the City.
- (b) Single family residences shall be equipped with an approved dual check valve, unless the degree of hazard warrants greater protection.
- (c) In the case of facilities with multi-purpose usage, the most serious potential hazard will determine the type of protection required.

10.2 Typical and Required Facilities Protection. Listed below are examples of plants, facilities, and buildings and the type of backflow prevention device that is required at each. The following requirements apply to plants, facilities, or buildings, regardless of their size, plumbing type, and water usage patterns. Potential hazards found at these facilities are described generally in Section 10.3.

Plants or Facilities		Type of device Required	
		RPZD <sup>(1)</sup>	DCVA <sup>(2)</sup>
1.	Air and Missile Plants	X	
2.	Automotive Plants	X	
3.	Auxiliary Water Systems	X	(3)
4.	Beverage Bottling Plants	X	(3)
5.	Breweries	X	
6.	Canneries, Food Processing, Packing Houses and Rendering Plants	X	
7.	Car Wash Facilities	X	
8.	Chemical Plants – Manufacturing Processing, Compounding, or Treatment	X	
9.	Dairies and Cold Storage Plants	X	(3)
10.	Laundries, Dry Cleaning, and Dye Works	X	
11.	Film Processing Facilities	X	
12.	Irrigation Systems – Premises Having Separate Systems – i.e. Parks, Playgrounds, Golf Courses, Cemeteries, etc.	X	
13.	Laboratories and Chemically Contaminated Water Systems	X	
14.	Motion Picture Studio	X	
15.	Metal Manufacturing, Cleaning, Processing and Fabricating Plants	X	(3)
16.	Multiple Services – Interconnected	X	(3)
17.	Public Transportation Facilities and other Civil Work Sites (Airport, Bus or Train Station, etc.)	X	(3)
18.	Pulp and Paper Products Plants	X	
19.	Oil and Gas Production, Storage or Transmission Properties	X	
20.	Plating, Electroplating, Metal Finishing, and Circuit Board Manufacturing Plants	X	
21.	Power Plants (Heating/Ventilation/Refrigeration or Commercial Power)	X	

22.	Printing Plants	X	
23.	Radioactive Materials or Substances – Plants or Facility Handling	X	
24.	Restricted, Classified, or other Closed Facilities. (Facility Where Security Requirements or Other Prohibiting Restrictions Make it Impossible or Impractical to make a Complete Cross-Connection Survey)	X	
25.	Rubber Plants – Natural or Synthetic	X	
26.	Sand and Gravel Plants (Sand and Gravel Washing or Cement or Concrete Processing)	X	
27.	Sewage and Storm Drain Facilities, Reclaimed Water Systems	X	
28.	Solar Heating Systems – Direct and Auxiliary	X	
29.	Temporary Service – Fire Hydrants, Blow-offs, Air Valves, and Other Outlets	X	(3)
30.	Used Water	X	(3)
31.	Waterfront Facilities and Industries, Marinas	X	
32.	Sale of Water outside the distribution area	X	

Buildings		Type of device Required	
		RPZD <sup>(1)</sup>	DCVA <sup>(2)</sup>
1.	Apartment Complex	X	(3)
2.	Commercial Buildings	X	(3)
3.	Food Handling Establishments, including Restaurants	X	(3)
4.	Laboratories	X	
5.	Medical Facilities, including Hospitals, Clinics, Nursing Homes, Skilled Nursing, and Dialysis Units	X	(3)
6.	Morgue and Mortuary	X	
7.	Multi-Purpose Building	X	
8.	Office Building		X

9.	Office Building with a High Hazard Potential or High Potential for the Occurrence of Backflow <sup>(4)</sup>	X	
10.	Residential, Single-Family Homes	(5)	(5)
11.	Schools	X	(3)
12.	Supermarkets, Convenience Stores.	X	

Legend:

- (1) Reduced pressure Zone Device
- (2) Double Check Valve Assembly
- (3) A double check valve assembly may be acceptable after further evaluation of the degree of hazard by the City.
- (4) Examples of Buildings with a high hazard potential or high potential for the occurrence of backflow:
  - (a) Systems with a high hazard potential:  
Sump systems, sewer ejecting or sewer connected systems, sewage pumping, swimming pool, well, chilled-water, air conditioning systems equipped with cooling tower and circulation units, steam generation, boiler, built-in lawn sprinklers, heat exchanger, or water treatment units (e.g. water softener).
  - (b) Systems with high potential for the occurrence of backflow:  
High-rise building (e.g., four floors or more), booster pump, hydraulically operated equipment, water storage tank, multi-purpose building (e.g. mall).
- (5) A Dual Check Valve is required unless the degree of hazard warrants greater protection.

10.3 Types of Hazards. The types of hazards commonly found in plants, facilities and buildings include a cross-connection between the Customer's water system and the following, as generally described below:

- (1) Auxiliary Water Supply is a water supply or source not under the control or direct supervision of the City of Lancaster. Typical of such water supplies are natural waters derived from wells, springs, streams, rivers, harbors, bays, and oceans. In addition, "auxiliary water supply" includes cisterns and public potable water supplies furnished by some other water purveyor that may or may not be under good sanitary control or may be otherwise unacceptable to the City. The City of Lancaster requires a backflow prevention assembly at the service connection to premises where there is an auxiliary water supply, even if there are no existing cross-connections;

- (2) Chemicals used as an additive to the water supply for prevention of scale formation, corrosion, algae, slime growth, etc., where the water supply is used for transmission and distribution of chemicals, or where chemicals are used with water in compounding processing products;
- (3) Sewer-connected facilities, such as bedpan washers, flush valve toilets and urinals, autoclaves, specimen tanks, sterilizers, pipet tube washers, cuspidors, aspirators, autopsy and mortuary equipment, etc. In facilities of this type, attention must be given to the maintenance of air gaps or atmospheric vacuum breakers. In multi-storied buildings, the supply line to the toilets, urinals, lavatories, laboratory sinks, etc., on the lower floors must not be taken off the suction side of the house pump where, as a result, sewage or other contaminated substances could be drawn into the house supply line;
- (4) Dehydration Tanks and Outlet Lines from storage and dehydration tanks used for purging purposes in the oil and gas production industry;
- (5) Dye Vats, in which toxic chemicals and dyes are used;
- (6) Equipment Under Hydraulic Tests, such as tanks, lines, valves, fittings, and pumps, pressure cylinders, or other hydraulic equipment that may be used to provide pressure for testing purposes. In such cases, air, gas, or hydraulic fluid may be forced back into the public system;
- (7) Fire Fighting Systems, including storage reservoirs that may be treated for the prevention of scale formation, corrosion, algae, slime growth, etc., or fire systems that may be subject to contamination with antifreeze solutions, Fomite, or other chemicals or chemical compounds used in fighting fire, or fire systems that are subject to contamination with auxiliary or used water supplies, stagnant water, or industrial fluids;
- (8) Hydraulically Operated Equipment, where the public supply water pressure is used directly and may be subject to backpressure;
- (9) Industrial Fluid Systems and Lines, which may contain cutting and hydraulic fluids, coolants, hydrocarbon products, glycerin, paraffin, caustic and acid solutions, etc.;
- (10) Irrigation Systems that may be equipped with pumps, injectors, pressurized tanks or vessels, or other facilities for injecting or aspirating into the irrigation system agricultural chemicals, such as fungicides, pesticides, soil conditioners, and other similar noxious, toxic, or objectionable substances;

- (11) Irrigation Systems subject to contamination from submerged inlets (sprinkler heads), auxiliary water supplies, ponds, reservoirs, swimming pools and other sources of stagnant, polluted, or contaminated waters. Agricultural chemicals that are broadcast above ground may contaminate water collecting around sprinkler heads;
- (12) Laboratory Equipment, which may be chemically or biologically contaminated;
- (13) Laundry Machines, which have under-rim or bottom inlets;
- (14) Mechanical Equipment connected to a hose or piping for use in pavement saw cutting, sand blasting, hydraulic boring or jacking, pressure testing piping, gas chlorinating, street washing, etc. In the case of boring and jacking equipment, the operation is normally performed in a pit that may submerge the equipment in muddy water. Pressurizing with pumps and gas chlorination equipment connected to pipelines or vessels or questionable sanitary conditions may create pressures in excess of that in the public water system main;
- (15) Mud Pumps and Mud Tanks used in the oil and gas production industry;
- (16) Oil and Gas Handling Facilities, including oil well casings (for dampening pressures), oil and gas lines (for testing, evacuating, and slugging purposes), and oil and gas tanks (to create hydraulic pressures and to hydraulically raise the oil and gas levels);
- (17) Open Reservoirs, Lagoons, Tanks, or Similar Facilities used as props in the making of motion pictures. These facilities may be heavily contaminated with body wastes, dyes, or biological or chemical contaminants used in the prevention of algae and slime growths, and to color the waters for color picture purposes;
- (18) Plating, Electroplating, Metal Finishing or Circuit Board Manufacturing Facilities, which involve the use of highly toxic cyanides, heavy metals in solution (such as copper, cadmium, chrome, nickel, etc.), and acids and caustic solutions;
- (19) Plating, Electroplating, Metal Finishing or Circuit Board Manufacturing Solution Filtering Equipment with pumps and circulating lines, which are subject to backpressure and back siphonage;
- (20) Pulp, Bleaching, Dyeing, and Processing Facilities, which may be contaminated with toxic chemicals;

- (21) Reservoirs, Cooling Towers, and Circulating Systems, which may be heavily contaminated with bird droppings, vermin, algae, bacterial slimes, or toxic water treatment compounds, such as copper sulfate, pentachlorophenol, chromates, metallic glucosides, compounds of mercury, quaternary ammonium compounds, etc.;
- (22) Reservoirs and/or Solar Collector Fluids found in solar heating and/or cooling systems, which may have antifreeze, toxic corrosion inhibitors, non-potable water, etc.; single wall heat exchangers between the Customer's water or fluids; and negative pressure zones created by circulation pumps;
- (23) Retention and Mixing Tanks, which include machines or pieces of equipment having pumps that can pump contaminated fluids through cross-connections into the public water supply;
- (24) Sand and Gravel Washing Equipment, which is supplied by a private well or water pumped from sumps or retention basins on a recirculating basis. These cross-connections may be under pump pressure, which, in many cases, may be considerably higher than the pressure in the public water system main;
- (25) Sewage Pumps for priming, cleaning, flushing, or unclogging purposes. The City of Lancaster requires backflow protection at the service connection to any premises on which there is located a sewage pumping station, even if there are no cross-connections;
- (26) Sewer-Connected Pumping Fixtures and Facilities, such as flush valve toilets and urinals without atmospheric vacuum breakers or with improperly maintained atmospheric vacuum breakers. This hazard is critical because little or no attention is given to the maintenance of an atmospheric vacuum breaker and frequently the working parts or the entire assembly may be removed from the line;
- (27) Sewer Lines for the purpose of disposing of filter or softener backwash water or water from cooling systems or to provide for a quick drain for the building lines or for flushing or blowing out obstructions, etc.;
- (28) Shrinking, Bluing, and Dyeing Machines found primarily in laundries and dye works with direct connections to circulating systems;
- (29) Special Effects Equipment in which chemicals and other materials may be injected into the water supply for special effects;
- (30) Steam Connected Facilities, such as pressure cookers, autoclaves, retorts, etc. and other similar steam-connected facilities; washers, cookers, tanks,

lines, flumes, and other equipment used for storing, washing, cleaning, blanching, cooking, flushing, or fluming, or for transmission of foods, fertilizers, or wastes;

- (31) Steam Generating Facilities and Lines, which may be contaminated with boiler compounds. A particular hazard is the possibility of steam getting back into the domestic system, causing either a system or a health hazard;
- (32) Tanks for Construction Water, including water trucks, water wagons, or stationary elevated tanks that are directly filled from an outlet for use with construction water activities. Water in the tank may become polluted or contaminated with bird droppings, dust, vermin, etc., or by chemicals that may have been introduced into the tank for dust control.
- (33) Tanks for Spray Rigs, which utilize equipment used for pest control, hydro-mulch, or agricultural spraying, which are directly filled from an outlet. Water in the tank is subject to a variety of chemical and organic additives, including fertilizers, herbicides, pesticides, organic matter, etc.;
- (34) Tanks, Can and Bottle Washing Machines, and Lines, where caustics, acids, detergents, and other compounds are used in leaning, sterilizing, and flushing;
- (35) Tanks, Vats, Automatic Film Processing Machines, or Other Facilities used in processing film, which may be contaminated with chemicals, such as acetic acid, potassium ferricyanide, and/or one of the many different types of the aromatic series of organic chemicals;
- (36) Tanks, Vats, and Other Vessels used in painting, descaling, anodizing, cleaning, stripping, oxidizing, etching, passivating, pickling, dipping, or rinsing operations, or other lines or facilities needed in the preparing or finishing of the product;
- (37) Used Water, which is water that has passed beyond the City of Lancaster's control (at the point of delivery) and may be stored, transmitted, or used in such a manner as to become polluted or contaminated. Typical of used water supplies are waters in industrialized water systems; water in reservoirs or tanks used for firefighting purposes; irrigation reservoirs; swimming pools; fishponds; mirror pools; memorial and decorative fountains and cascades; cooling towers; and baptismal, quenching, washing, rinsing, and dipping tanks. Any of these supplies, over which the City does not exercise sanitary control, become a potential hazard to the public water system. These waters may become polluted or contaminated because of industrial processes; contact with human body, dust, vermin, birds, etc.; or by means of chemicals and/or organic compounds that may

have been introduced into the tanks, lines, or systems for scale, corrosion, algae, bacterial, or odor control, or for similar treatment;

- (38) Washers, Cookers, Tanks, Lines, Flumes, and Other Equipment used for storing, washing, cleaning, blanching, cooking, flushing, fluming, or for transportation of foods, fertilizers, or wastes;
- (39) Water-Cooled Equipment that may be Sewer Connected, such as compressors, heat exchangers, air conditioning equipment, etc. In multi-storied buildings, the supply line to the toilets, urinals, lavatories, laboratory sinks, tanks, etc., on the lower floors may be taken off the suction side of the house pump and, as a result, sewage or other contaminated substances may be drawn into the house supply line;
- (40) Water-Operated Sewage Pump Ejector for operational purposes. The City of Lancaster requires backflow protection at the service connection to any premise on which there is located a sewage ejector even if there are no cross-connections;
- (41) Water Storage Tanks equipped with pumps and recirculating systems.

## 11. BACKFLOW PREVENTION FOR FIRE PROTECTION SYSTEMS.

11.1 General. The public water supply system shall be protected when serving fire protection systems. As in other cross-connection control situations, the degree of backflow protection necessary for a particular fire-protection system will depend on specific conditions present. Examples of potential contamination hazards include the following:

- stagnant water within the fire protection system piping;
- antifreeze solution within the fire protection system piping;
- toxic chemicals, such as liquid foam concentrates used for fighting certain types of fires;
- fire protection systems supplied by an auxiliary water supply;
- fire protection systems that include a pumper connection for direct connection to fire trucks with tanks that have corrosion inhibitors or other chemicals added;
- underground fire system pipelines parallel to and within 10 feet horizontally of sewer pipelines or other pipelines carrying toxic materials;
- high hazard materials that are used, stored, or handled in the fire protected structure.

11.2. Classification of Fire Protection Systems. For cross-connection control, fire protection systems are divided into classes on the basis of water source and arrangement of supplies as follows:

Class 1 - Directly supplied from the City's public water mains only; no pumps, tanks, or reservoirs; no physical connection from other water supplies; no antifreeze or additives of any kind; no connections to sewer pipes; all sprinkler drains discharging to atmosphere, dry wells, or other safe outlets.

Class 2- Directly supplied from the City's public water mains; same as Class 1, except that City approval has been obtained for a booster pump installed on the Customer's side of the service line. NOTE: Must have special approval and be permitted by the City.

Class 3 - Directly supplied from the City's public water mains; same as Class 1, plus one or more of the following: elevated storage tanks, pressure tanks, or fire pumps taking suction from an above-ground covered reservoir or tank.

NOTE: All on-site storage facilities must be filled from the public water supply, and the contents must be maintained in a potable condition.

Class 4 - Directly supplied from the City's public water mains; similar to Classes 1 and 2, except that an auxiliary water supply is available on or near the premises or is located within approximately 1,700 feet of the pumper connection.

Class 5 - Directly supplied from the City's public water mains and interconnected with an auxiliary supply, such as: pumps taking suction from rivers, ponds, or reservoirs exposed to contamination, driven or drilled wells, or industrial water fire systems where antifreeze or other additives are used.

Class 6 - Directly supplied from the City's public water mains only; with or without gravity storage or pump suction tanks; with or without interconnections with industrial systems.

11.3 Types of Backflow Protection Devices. The purpose of certain checking devices used, or likely to be used, with fire protection systems is outlined below to identify those that are acceptable for use as backflow-prevention devices, as well as those that are not.

11.3.1 Acceptable Devices.

- (a) Double Check Detector Assembly (DCDA).
- (b) Reduced Pressure Zone Detector Assembly (RPZDA).
- (c) Double Check Valve Assembly (DCVA): Acceptable for use with a full-service master meter or a combination service connection only.

- (d) Reduced Pressure Zone Device (RPZD): Acceptable for use with a full-service master meter or a combination service connection only.

#### 11.3.2 Unacceptable Devices.

- (a) Directional Check.
- (b) Alarm Check
- (c) Single Detector Check: Single detector checks that are used on fire protection systems (Class 1, 2 or 3) cannot be considered part of a backflow preventer. Specifically, the addition of a second single check to one of these devices cannot be substituted for a DCDA, which is approved for backflow prevention.

11.4. Backflow Protection Required. Fire protection systems as defined and classified above shall be contained from the City's water supply system by City-approved backflow-prevention assemblies. Assemblies shall be located in a building, hot box, or other location approved by the City. Assemblies shall be listed by the Underwriters Laboratories (UL) or Factory Mutual Insurance (FM), as required. Containment methods, by fire protection system classification, are as follows:

- (a) All Classes of Sprinkler Systems and Standpipe or Combined Systems shall be contained by the installation of an acceptable Double Check Detector Assembly or Double Check Valve Assembly.

To test the backflow prevention assembly, two (2) shutoff valves are required. Valves shall be FDA-approved, fused epoxy coated inside and out, with resilient seats. The inlet valve shall include an approved test cock on the upstream side. All components shall be listed for fire protection service by UL or FM Insurance, as required.

11.5. Residential Fire Protection Systems. Fire protection systems for private residences, namely residential fire sprinkler systems, shall be classified as described in Section 11.2. Backflow protection shall be required as described in Section 11.4. The majority of residences do not have a separate service connection to the public water supply for fire protection purposes. Residential sprinkler systems most often utilize the domestic water supply line. For fire systems utilizing the domestic water supply, a Dual Check Valve Assembly or Reduced Pressure Zone Device shall be installed in a location downstream (Customer's side) of the water meter. Other backflow preventers for a fire system utilizing a domestic water supply may be installed only after receiving approval from the City's BCCT.

## 12. INSPECTION OF FACILITIES

The Customer shall furnish to the BCCT all pertinent information regarding the Customer's water system, including water usage and activities.

Nothing herein shall relieve the Customer of the responsibility for conducting or causing to be conducted periodic surveys of water-use practices on his/her premises to determine if and where there are actual or potential uncontrolled cross-connections within the Customer's water system

through which contaminants or pollutants could flow back into his/her own and/or the City of Lancaster's water supply system. If the premises are classified as restricted or high security with no admittance by the BCCT or authorized representative, reduced pressure check protection at the service connection is required.

Facilities considered to pose an actual or potential contamination and/or pollution threat to the public water supply system will be subject to inspection by the BCCT or another authorized representative of the City of Lancaster and, when deemed necessary, accompanied by a representative from Municipal Plumbing/Building Inspection, Health, and/or Fire Departments. Inspections will focus on plumbing outlets and potential contaminating or polluting substances within a facility. Inspections will be scheduled at a time mutually agreeable to the Customer and the BCCT. Using information furnished by the Customer and gathered during the inspection, the BCCT will determine the degree of potential backflow hazard and specify the type of backflow protection required at the Customer's service connection.

If the hazard poses immediate danger, the Customer shall bring the facility up to full compliance immediately. If the hazard does not pose immediate danger, the Customer shall bring the facility up to full compliance within a thirty (30) day period.

### 13. INSTALLATION REQUIREMENTS.

13.1 General. Drawings in Appendix B illustrate the installation design standards for mechanical devices; the same or similar methods as shown shall be used. All work must be done in accordance with all applicable codes and regulations by a Certified Backflow Prevention Assembly Technician approved by the City of Lancaster.

#### 13.2 Prior to Installation.

- (a) Plans and/or drawings shall be submitted to the BCCT that show the type of backflow prevention assembly, its location, and installation arrangement. These plans must be approved by the City before assembly installation.
- (b) The Certified Backflow Prevention Assembly Technician should caution the owners of certain facilities that the installation of a backflow prevention assembly could create a closed system, thereby creating the potential for thermal expansion. If such a closed system is created, see Section 14, Special Caution: Thermal Expansion.
- (c) Backflow prevention assemblies must be City-approved. If any unapproved backflow prevention assembly is found on any water service connection, that assembly shall be removed and replaced with a City-approved assembly.
- (d) The water line shall be thoroughly flushed to expel all debris prior to installation. Debris lodging under one of the check valves is one of the most

common causes of malfunctioning assemblies, especially with the Reduced Pressure Zone Device.

- (e) All assemblies should be located within a building at the service connection, directly after the meter and before any branches or taps. In certain cases, a backflow prevention assembly may be installed at an alternative location, as approved by the City. The assembly shall be protected from freezing, flooding, and vandalism and shall be in a readily accessible area that provides a safe working environment for testing and maintenance and shall not be installed as to create a safety hazard (i.e. installed over an electrical panel, steam line, boiler, or within a ceiling).
- (f) Booster pumps may only be installed on the service line to or within any premises, after being approved and permitted by the City's BCCT. Such permitted pumps will be equipped with a low-pressure cut-off device designed to shut off the booster pump when the pressure in the service line on the suction side of the pump drops to 25 psi or an automatic throttling valve approved by the City is installed set to maintain a minimum of 25 psi on the suction side of such pump. It will be the duty of the water Customer to maintain the low-pressure cut-off device or throttling valve in proper working order at all times. In addition, some booster pumps require water for cool packing, therefore an additional RPZD is required on that feed line.

Note: The City will not be responsible for any damages resulting from the operation of Customer owned and maintained booster pumps.

13.3 Installation at the Service Connection. All backflow prevention devices shall be installed in a horizontal orientation, unless stated otherwise in the City's latest approved listing, and in accordance with the manufacturer's specifications and the following instructions:

- (a) The backflow prevention unit shall be maintained as an assembly. The backflow device shall be equipped with proper shutoff valves, which are attached to the device for maintenance and testing. Such shutoff valves shall be the type that are supplied by the same backflow preventer manufacturer or the type that are approved or manufactured to conform to standards set by AWWA, USC-FCCCHR, ASSE, UL, or FM.
- (b) There shall be no outlet, tee, tap, or connection of any kind to or from the supply pipe between the meter and the backflow prevention assembly. If a takeoff is absolutely necessary, it must be equipped with a proper backflow prevention assembly approved by the City.
- (c) In some facilities, backflow prevention assemblies installed in parallel on a service line may be necessary to meet the needs of a facility:

- a. If a facility requires continuous uninterrupted service where it is not possible or practical to provide water service from two (2) separate service lines into the premises, provisions must be made for the installation of two (2) backflow prevention assemblies in parallel.
  - b. If the water service line to be protected is greater than 10-inch diameter or greater than the size of the approved backflow prevention assembly available, branching the line and installing parallel assemblies may be required.
  - c. If a parallel or by-pass installation is desired, both lines shall be equipped with two (2) approved backflow prevention devices. The combined hydraulic capacity of the parallel lines/devices shall be equal to or greater than that of the line that is being subdivided. Closed gate valves on the bypass line do not constitute protection.
- (d) When a backflow prevention assembly is located inside a building, there shall be a suitable means of addressing any discharge without creating a safety or nuisance problem. For example, when a Reduced Pressure Zone Device (RPZD) is to be installed, measures shall be taken to provide water discharge under some normal and most abnormal operating conditions. An air gap drain funnel or approved equal shall be installed to permit plumbing of discharge from the relief port of the RPZD. The relief port shall not be directly connected to a floor drain or other disposal point. A resilient seat outside screw and yoke (OS&Y) gate valve in sizes above 2 inch shall be on the inlet and outlet sides of the device. The device shall be provided with three (3) ball valve test cocks; a fourth test cock shall be provided on the upstream side of the inlet shutoff valve. No intervening connection(s) shall be made or permitted between the shutoff valves and the backflow preventer.

NOTE: When a RPZD is installed in a line subject to periodic no-flow conditions, and supply pressure is subject to fluctuation, an auxiliary directional check with soft disc, capable of functioning in any position, shall be provided between the inlet shutoff valve and the backflow preventer head to lock through the vent/relief port. Makeup lines to chilled water systems and hydropic heating systems are examples of installations where a drop in supply pressure may occur during no-flow conditions. When a water pressure reducing valve is required in the same line with the RPZD, it is usually possible to locate the reducing valve upstream of the device and take advantage of the check valve effect of the reducing valve. In such a case, the auxiliary directional check would not be required.

- (e) Where siting problems prevent installation, as specified in Section 13.3, the City may approve an alternate installation provided that a written request including plans or drawings is submitted to the BCCT. All alternative installations must provide at least the same level of backflow protection as the standard installation.

- (f) The requirements for installation of backflow prevention assemblies at alternative locations, in lieu of the service connection within a building, are given in Section 13.4.

#### 13.4 Installation Beyond the Service Connection.

The BCCT must approve all backflow preventers prior to installation. Installation of backflow preventers must follow the manufacturer's requirements. A strainer is required upstream of a backflow preventer. Strainers incorporated within a water meter are considered adequate.

##### 13.4.1 Indoor Installation.

- (a) An approved backflow prevention assembly may be installed on the discharge side of a pump system when a Customer's water pump system experiences or could experience operational problems due to low City water pressures in the area surrounding the building.
- (b) There shall be no outlet, tee, tap, or connection of any kind to or from the supply line between the meter and the assembly. If a takeoff is absolutely necessary, it must be equipped with a backflow prevention assembly designated by the City.

##### 13.4.2. Outdoor Installations.

- (a) Reduced Pressure Zone Device (RPZD) and Reduced Pressure Zone Device Assembly (RPZDA) Installation. A RPZD and RPZDA shall be installed above ground with a minimum 12 inches of clearance (the distance between the ground level and the bottom of the assembly). An on-site constructed or premanufactured shelter must be installed to provide additional protection against freezing and vandalism.
- (b) Double Check Valve Assembly (DCVA) and Double Check Detector Assembly (DCDA) Installation. A DCVA and DCDA shall be installed below ground, in a City-approved pit (vault) or chamber designed to prevent flooding. If installation is made in a meter (master) pit, the design of such pit shall follow the City's Meter Pit Standards and shall be approved by the BCCT.

All backflow prevention assembly installations in pits or chambers must have the following provisions:

- (i) There shall be no outlet, tee, tap, or connection of any kind to or from the supply line between the meter and the backflow prevention assembly.

- (ii) The assembly shall be protected against freezing. Access for routine testing and maintenance shall be provided.
- (iii) If a drain in the pit or chamber is absolutely necessary, the drain shall be a backflow drain and there shall be no connection between the drain and a sewer or appurtenance that permits the passage of polluted water into the pit or chamber.
- (iv) When below ground, a flange or swivel coupling nut shall be on the inlet and outlet sides of the checking device and all assembly bolts on bronze DCVAs and DCDA's shall be resistant to electrolysis. A full-port ball valve in sizes through 2 inch, and a resilient-seat OS&Y gate valve in sizes above 2 inch, shall be on the inlet and outlet sides of the device. The device shall be provided with three (3) ball valve test cocks; a fourth test cock shall be provided on the upstream side of the inlet shutoff valve. No intervening connection(s) shall be between the shutoff valves and the backflow preventer.

NOTE: When a meter or other device with bronze strainer, integral or attached, is not immediately upstream of the backflow preventer, a bronze strainer shall be provided between the inlet shutoff valve and the DCVA on sizes through 2 inch.

- (c) Dual Check (DCBP) Installation. This device shall not be buried in earth but may be installed below ground in a meter box or other similar enclosure. A union shall be provided on each end, and a full-port ball valve shall be near the inlet and outlet sides to allow removal for maintenance. The two (2) checking devices shall be capable of independent operation as per ASSE Standard - 1024.

NOTE: When a meter or other device with bronze strainer, integral or attached, is not immediately upstream of the DCBP, a bronze strainer shall be provided between the inlet shutoff and the DCBP.

#### 14. SPECIAL CAUTION: THERMAL EXPANSION

Water expands when heated and takes up more space (greater volume). Installation of a backflow preventer does not permit expanding hot water to backflow into the service line. The result may be an unacceptably high pressure. If the Customer's water system contains a water heater, and the water heater thermostat and pressure relief valve fail, water can become superheated. Such a scenario could potentially cause damage to pipes and joints, allowing scalding steam to be released from faucets, or, in an extreme case, cause the water heater to explode. When water is heated and stored in a Customer's water system, or a branch of the system, including water softeners, that has been closed by the installation of a backflow-

prevention device or any other checking device, an auxiliary relief valve, or an expansion chamber, must be installed to provide for thermal expansion of the water being heated.

## 15. SURVEYS, TESTS, MAINTENANCE, AND REPAIRS

### 15.1 General.

15.1.1 All backflow-prevention devices, both existing and new, and all parts thereof, shall be maintained by the Customer in a safe and reliable operating condition.

15.1.2 The Customer shall be responsible for the cost of surveying his/her premises for actual and/or potential cross-connections and for the cost of testing, maintenance, and repair of all backflow-prevention devices downstream (Customer's side) of the service connection within the premises and on his/her own private system.

15.1.3 The Customer is responsible for contamination and/or pollution through backflow. If contamination or pollution of the City of Lancaster's water supply system occurs through an illegal cross-connection and/or an improperly installed, maintained, or repaired device, or a device that has been bypassed, the Customer shall be liable for all associated costs of cleanup required of the City's water supply system and any associated damages.

### 15.2 Frequency.

15.2.1 Tests and maintenance on backflow prevention assemblies are to be made in accordance with the following schedule or more frequently, when inspections indicate a need or are specified in the manufacturer's instructions:

- (a) Dual Check Valves (1 inch x 3/4 inch in size) shall be inspected and spot tested as determined by the BCCT.
- (b) Double Check Valve Assemblies and Double Check Detector Assemblies shall be inspected and tested at the time of installation, at least annually thereafter, and after each repair.
- (c) Reduced Pressure Zone Devices and Reduced Pressure Zone Device Assemblies shall be inspected and tested at the time of installation, at least annually thereafter, and after each repair.

15.2.2 All assemblies failing to meet the City's performance standards shall be repaired or replaced and retested promptly. All repairs and replacements must be completed within fourteen (14) calendar days from the initial test. Assemblies that are found to have a history of not meeting the City's performance standards shall be tested on a semi--annual or quarterly basis until the assembly is replaced.

- 15.2.3 All backflow prevention devices shall be rebuilt or replaced when inspections indicate the need.
- 15.2.4 All backflow assembly test kits used to test backflow prevention assemblies shall be calibrated on a yearly basis. The calibration results of test kits shall be recorded and submitted to the City.
- 15.3 Certified Backflow Prevention Assembly Technicians and Certified Cross Connection Control Surveyors

Cross-connection control surveys shall be performed by an independent Certified Cross- Connection Control Surveyor. The Customer shall arrange for the survey of his/her premises by such an independent City-certified surveyor. An updated listing of City-certified surveyors is maintained at the City of Lancaster, Bureau of Water. To obtain City-certification, individuals who are trained and competent in the specialized area of cross-connection control and backflow prevention shall submit proof of certification to the BCCT for recognition. The City only recognizes the following individuals: City-Certified Registered Master Plumbers (RMP) and City-Certified Fire Sprinkler Suppression Contractors (CFS) who have taken the training course offered by the American Society of Sanitation Engineers (ASSE) or any other course approved by the BCCT. Certification must be renewed every two (2) years. Certification holders failing to recertify within one (1) month after the expiration date of the Certificate shall have their names removed from the City's certified list.

Responsibilities of the Certified Cross-Connection Control Surveyor are detailed in Section 5, Responsibilities.

15.4 Records and Reports.

A test and maintenance record for each backflow prevention assembly shall be maintained by the Customer. Following each survey, test or repair, a completed report form provided by the City, or its agent, must be sent to the BCCT, which shall include the following:

- (a) Date of installation and location of device;
- (b) Manufacturer's name, model, and serial number;
- (c) Date and time of each test or visual inspection;
- (d) Name of authorized person performing test;
- (e) Test results;

(f) Description of repairs or servicing required;

(g) Date repairs completed.

#### 15.5 Associated Fees

The Customer shall be responsible for payment of any fees associated with the annual testing of backflow prevention directly to third parties as may be required to ensure the City can properly maintain its backflow testing and reporting database

APPENDIX A

CITY OF LANCASTER ORDINANCE (On Next Sheet)

**FILE OF THE CITY CLERK**

**ADMINISTRATION ORDINANCE NO. 13 – 2022**

**ADMINISTRATION BILL NO. - 13 - 2022**

**INTRODUCED – JULY 12, 2022**

**ADOPTED BY COUNCIL – AUGUST 9, 2022**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LANCASTER AMENDING CHAPTER 295 - WATER, ARTICLE 3 - SERVICE CONNECTIONS, ARTICLE 4 - SERVICE APPLICATIONS AND SPECIAL CONTRACTS, ARTICLE 5 - METERS, ARTICLE 6 - BILLING AND ADMINISTRATION, ARTICLE 7 - WATER RATES AND ARTICLE 9 - GENERAL WATER REGULATIONS; PROVIDING FOR THE REPEAL OF INCONSISTENT ORDINANCES; PROVIDING FOR THE SEVERABILITY OF THE ORDINANCE; AND PROVIDING THAT THE ORDINANCE SHALL TAKE EFFECT IN ACCORDANCE WITH PENNSYLVANIA LAW.**

**WHEREAS**, the City's water regulations are codified in Chapter 295 of the Code of the City of Lancaster ("Chapter 295"); and

**WHEREAS**, in accordance with appropriate water regulations, the City is required to update and modify its backflow and prevention system, those updates and changes needing to be incorporated into Chapter 295; and

**WHEREAS**, as a result of changes to the City's PUC tariff, and administrative changes required for the proper operation and efficiency of the City's water system, the City has determined it is in the best interest to make changes to several other provisions set forth in Chapter 295.

**NOW, THEREFORE, BE IT ORDAINED AND ENACTED** by the City Council of the City of Lancaster, Lancaster County, Pennsylvania as follows:

Section 1.

Chapter 295 be and hereby is rewritten to read as set forth on the attached Exhibit "A".

Section 2.

All Ordinances or Resolutions or parts of Ordinances or Resolutions in so far as they are inconsistent herewith are hereby repealed and rescinded.

Section 3.

In the event any provision, section, sentence, clause or part of this Ordinance shall be held to be invalid, such invalidity shall not affect or impair any of the remaining provisions, sections, sentences, clauses or parts of this Ordinance; it being the intent of the City of Lancaster that the remainder of the Ordinance shall be and shall remain in full force and effect.

Section 4.

This Ordinance shall take effect in accordance with Pennsylvania Law.

**DULY ORDAINED AN ENACTED**, this 9<sup>th</sup> day of August, 2022, by the City Council of the City of Lancaster, Lancaster County, Pennsylvania in lawful session duly assembled.

  
Danene Sorace, Mayor

ATTEST:

  
Bernard W. Harris Jr., City Clerk

*The following Code does not display images or complicated formatting. Codes should be viewed online. This tool is only meant for editing.*

## Chapter 295

# Water

**[HISTORY: Adopted by the City Council of the City of Lancaster as Articles 935, 937, 939, 941, 943, 945, 947, 949, 951, 955 and 957 of the Codified Ordinances. Amendments noted where applicable.]**

### Article I

#### Terminology

#### § 295-1 Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

#### **APPLICANT**

An individual or agency applying for water service.

#### **BUREAU OF WATER OR UTILITY**

The Bureau of Water of the City.

#### **COMMERCIAL CUSTOMERS**

Customers who are engaged in selling, warehousing or distributing a commodity; the rendering of a service to the public, including nursing homes, personal care homes and the like; providing professional services; wholesale and retail stores; office buildings or offices; hotels; clubs; lodges; associations; restaurants; warehouses; railroad and bus stations; banks; laundries; dry cleaners; undertaking establishments; garages; gasoline stations; theaters; bowling alleys; bars; grills; taverns; retail bakeries; hospitals; schools; churches; religious and charitable institutions; governmental agencies; not-for-profit businesses or the like where the business activity is not primarily involving the manufacturing or processing of a product. Included in this classification are establishments where water service is provided through one meter set to one or more dwelling units in a multifamily residence or building, or through one meter set to a combination of one or more dwelling units and one or more business premises. This classification shall also include businesses operated from the home.

**[Added 11-9-1999 by Ord. No. 8-1999]**

#### **COMMERCIAL SERVICE**

The provision of water to premises where the customer is engaged in trade.

#### **COMMISSION**

The Pennsylvania Public Utility Commission.

#### **CUSTOMER**

The individual or agency contracting for a supply of water to a property as hereinafter classified:

- A. A building under one roof and occupied as one residence or business; or

- B. A combination of buildings in one enclosure and occupied by one family or business; or
- C. One side of a double house having a solid vertical partition wall and occupied by one family or business; or
- D. One side or part of a house occupied by more than one family or business, even though the closet and other fixtures are used in common; or
- E. Each apartment, office or suite of offices located in a building having several such apartments, offices or suites of offices and using in common one hall and one or more means of entrance.

**DATE OF PRESENTATION**

The date upon which a bill or notice is mailed, as evidenced by postmark, or delivered personally to the customer.

**DOMESTIC SERVICE**

The provision of water for household residential purposes, including water for sprinkling lawns, gardens and shrubbery, watering livestock, washing vehicles and other similar and customary purposes.

**FIRE PROTECTION SERVICE**

The provision of water for public and private fire protection.

**FLAT RATE**

A fixed periodic charge for an unmetered service.

**FLAT RATE SERVICE**

The provision of water in unmeasured quantities.

**INDUSTRIAL CUSTOMERS**

Customers who are engaged in manufacturing or processing which creates or changes raw materials or unfinished materials into another form or product.

[Added 11-9-1999 by Ord. No. 8-1999]

**INDUSTRIAL SERVICE**

The provision of water to a customer for use in manufacturing or processing activities.

**IRRIGATION SERVICE**

The provision of water for commercial agricultural, floricultural or horticultural use.

**MAIN EXTENSION**

The extension of distribution pipelines, exclusive of service connections, beyond existing facilities.

**MAINS**

The distribution pipelines located in streets, highways, public ways, alleys or private rights-of-way which are used to carry water to serve the general public.

### **METER RATE SERVICE**

The provision of water in measured quantities.

### **MUNICIPAL OR PUBLIC USE**

The provision of water to a municipality or other public body for other than fire protection purposes.

### **PREMISES**

The integral property or area, including improvements thereon, to which water service is or will be provided.

### **PRIVATE FIRE PROTECTION**

Water service provided exclusively for the purpose of fire protection that is available to a specific customer only and not to all customers nor to the general public, and that is provided through automated sprinklers, fire hydrants or similar mechanisms.

[Added 11-9-1999 by Ord. No. 8-1999]

### **RESIDENTIAL CUSTOMERS**

Customers receiving the City's water service exclusively to a single-family dwelling or building, or through one meter set to three or fewer dwelling units in a multi-family residence or building. Water service provided through one meter set to a combination of one or more dwelling units and one or more business premises shall not be considered service to a residential customer.

[Added 11-9-1999 by Ord. No. 8-1999]

### **SERVICE LINES**

- A. **CUSTOMER'S SERVICE LINE** The connecting facilities from the utility's curb stop and curb box to a point of consumption.
- B. **UTILITY SERVICE LINE** The connecting facilities between the utility's distribution main and the customer's service line, in general consisting of a valve or corporation stop at the main, piping therefrom to the street curblin, terminating with a curb stop and curb box.

### **TARIFF SCHEDULES**

The entire body of effective rates, charges, rules and regulations, as set forth in this chapter.

### **TEMPORARY SERVICE**

The provision of service for circuses, bazaars, fairs, construction work, irrigation of vacant property and similar uses, that because of their nature will not be used steadily or permanently.

## **Article II Water Service**

### **§ 295-2 Service area.**

The service area of the Bureau of Water of the City outside of or beyond the City limits includes areas in the following townships in Lancaster County:

- A. East Hempfield Township.

- B. East Lampeter Township.
- C. Lancaster Township.
- D. Manheim Township.
- E. Manor Township.
- F. Pequea Township.
- G. West Hempfield Township.
- H. West Lampeter Township.
- I. Millersville Borough. **[Added 11-9-1999 by Ord. No. 8-1999]**

**§ 295-3 Supply of water.**

The Bureau of Water will exercise reasonable diligence and care to deliver a continuous and sufficient supply of water to the customer at a proper pressure and to avoid any shortage or interruption in delivery.

**§ 295-4 Quality of water.**

The Bureau of Water will endeavor to supply a safe and potable water at all times.

**§ 295-5 Classes of service.**

A. Services installed by the Bureau of Water will be classified as follows:

- (1) Residential.
  - (2) Commercial.
  - (3) Industrial.
  - (4) Irrigation (commercial).
  - (5) Municipal (excluding fire protection).
  - (6) Private fire protection.
  - (7) Public fire protection.
  - (8) Other utilities for resale purposes (emergency use only).
  - (9) Temporary.
- B. Metered service only is available, except service for public and private fire protection service.

## Article III Service Connections

### § 295-6 **Application for service connection.**

Any property owner desiring the introduction of a service line from the utility's main to the curb of his or her premises must first make written application on a form furnished by the Bureau of Water. The application shall be signed by the property owner or his or her duly authorized attorney.

### § 295-7 **Installation and ownership of utility's service lines.**

The Bureau of Water will, at its own expense, furnish and install a service of such size and at such location as the applicant requests, provided that such request is reasonable. The utility's service lines shall be maintained at its own expense as an integral part of its distribution system and they shall be the property of the utility and under its exclusive control.

### § 295-8 **Larger utility's service lines.**

Where the customer requests a service line larger than that deemed necessary by the utility, the utility shall install the larger service, provided that the customer pays the additional cost for the larger service.

### § 295-9 **Temporary, emergency or advanced utility's service lines.**

Any temporary or emergency feature of a service line requested by the customer shall be at the expense of the customer. If the owner of a parcel of ground desires a service line installed to the curb in advance of street improvement and where there is no present demand for a supply of water, such owner shall pay the cost of installing the service line, which cost shall be refunded if and when an application is made and approved for a supply of water through the service line.

### § 295-10 **Violation of rules and regulations.**

Where more than one customer is now supplied through one service line, a violation of these rules and regulations by any customer on the common service line shall be deemed a violation by all such customers, but water service to the premises shall not be discontinued until after the expiration of a reasonable time for the installation of a separate customer's service line by or for each customer after notice by the utility to all such customers of the violation of the rules and regulations. The utility shall install a sufficient number of separate curb stops and curb boxes at the termination of the utility's service line to permit the installation of a separate customer's service line for each customer or the utility may, at its election, permit the use of one customer's service line by all such customers other than the customer who has violated these rules and regulations.

### § 295-11 **Prohibited installations.**

No service line of the utility shall be installed at a time when street openings are prohibited by municipal regulations or, in the judgment of the utility, working conditions are unreasonable for such installations.

### § 295-12 **Prohibited placements of utility's lines.**

No service pipe shall be placed within 18 inches of any sewer line or in the same trench with a gas pipe or other facilities of a public service company or within three feet of any open vault or area or pass through any premises other than the one supplied, nor shall it be laid at a depth of less than 3 1/2 feet below the surface of the ground or less than 3 1/2 feet below the street grade, where one has been established by public authority, except when otherwise approved by the proper official of the Bureau of Water.

### § 295-13 **Installation on private property.**

No service line shall be installed by the utility on private property unless the owner furnishes a right-of-way satisfactory to the utility.

**§ 295-14 Placement of stop and curb boxes.**

When new service lines are installed or old ones replaced, the stop and curb box shall be placed inside the curb and within six inches of the same.

**§ 295-15 Changes in utility's lines.**

If a customer being supplied by an existing service line desires that its location be changed to suit his own convenience, such customer shall pay all costs of making the change, including all labor, materials and permits.

**§ 295-16 Tampering with curb stopcocks.**

Under no circumstances shall any person not authorized by the utility turn the curb stopcock on or off.

**§ 295-17 One customer per service pipe.**

All service lines will be the same size as the curb stop up to the water meter. The curb stop shall be six (6) inches behind curbs or pavement edges. If the curb box is in a driveway, the box must be a two (2) inch box. The curb box must be aligned with the shut-off valve, plumb, backfilled and tamped in place, and be at grade after any landscaping. The curb box must be straight and centered on the shut off valve before the City will take ownership of the valve.

**§ 295-18 Renewal or relocation of utility's lines.**

Where renewal of a service line of the utility is found to be necessary, the utility shall renew the service line in the same location as the old one. However, if the customer, for his own convenience, desires the utility's service line at some other location and agrees to pay all expenses of such relocation in excess of the cost of installing the new service line in the same location as the old and cutting off and disconnecting the old service line, the utility will lay the new service line at the location desired. Should the customer, for his convenience, request that the service be renewed using larger size materials than deemed necessary by the utility, the utility shall renew the service using the larger size materials, provided that the customer pays the additional cost.

**§ 295-19 Responsibility of utility limited.**

The utility is not responsible for the installation and/or maintenance of the customer's waterlines beyond the end of the utility's service line.

**§ 295-20 Installation and maintenance of customer lines.**

Each customer's service line shall be installed and maintained by or on behalf of such customer at his own expense. A customer's service line shall be of a material and at a location approved by the utility.

**§ 295-21 Placement of customer lines.**

The customer's service line shall not:

- A. Occupy the same trench with or be placed within 18 inches of any sewer pipe of any facility of any other public service company, except that a common trench may be ledged for the service if approved by the utility; or
- B. Be placed within three feet of any open excavation or vault; or
- C. Pass through any premises other than those served by such customer's service line.

**§ 295-22 Stop and waste cocks in customer lines.**

There shall be placed in the service line, inside the wall of the building supplied, at the expense of the customer, a roundway brass stop and waste cock, easily accessible to the occupants for their protection in enabling them to turn off the water in case of leaks and to drain the pipe to prevent freezing.

**§ 295-23 Check and relief valves in customer lines.**

Where any service line is directly connected to a heating unit (water heater, steam boiler, etc.), a check valve and a relief valve shall be inserted in the line between the utility's meter and such heating unit at the maximum distance possible from the utility's meter.

**Article IV**

**Service Applications and Special Contracts**

**§ 295-24 Information on application.**

- A. Each applicant for water service will be required to sign a form provided by the utility, and an agreement to abide by all the rules and regulations of the utility. The applicant shall provide the following:
1. Owner or builder name, phone number, and email address;
  2. New service address and the date on which the applicant will be ready for service;
  3. Whether the premises have ever before been supplied by the utility;
  4. The purpose for which the service is to be used;
  5. Lot number;
  6. The size of the service;
  7. The address to which bills are to be mailed or delivered;
  8. Whether the application is the owner or tenant of, or agent for, the premises;
  9. Plumber's name, phone number, and email address;
  10. Applicable plumbing permit if required by the municipality where service is requested;
  11. Acknowledgment of the applicable rate schedule
- B. Developers shall also complete a service installation form and a water application form for all lots in the development prior to any construction. The developer will provide the following:
1. A copy of the development plans, showing the lot number, address, and Lancaster County Real Estate tax map;
  2. Lot numbers painted on the curb;
  3. A W = water; painted or stamped on the concrete where the service is requested.
- C. The developer will be responsible for curb boxes until the utility has made final inspection. Only one water lateral will be permitted for each proposed lot.
- D. Commercial and Industrial applicants shall also provide:
1. Prints showing tap of the main and location of the meter;
  2. Completion of New Service Backflow Prevention Form, before construction;
  3. Provide a capacity request letter in gallons per day;
  4. Obtain utility approval before bidding to construct the new service;
  5. Provide copy of any municipal required street excavation permit if the street must be disturbed.
- E. The application is merely a written request for service and does not bind the applicant to take service for any period of time longer than the one upon which the rates and minimum charges of the applicable rate schedule are based; neither does it bind the utility to give service, except under reasonable conditions.

**§ 295-25 Change in customer's equipment.**

Customers making any material change in the size, character or extent of the equipment or operations utilizing water service or whose change in operations results in a large increase in the use of water shall immediately give the utility written notice of the nature of the change and, if necessary, amend the application.

**§ 295-26 Change of ownership of property.**

Where a customer is the owner of the premises supplied with water service, he shall immediately notify the Bureau of Water, if and when the property is sold, and the new owner or tenant shall sign an application for water service, so that bills for water service will be properly addressed.

**§ 295-27 Special contracts.**

Contracts, other than applications, may be required prior to service, under the following conditions:

- A. When construction of special extension facilities is necessary.
- B. For temporary service. (See §§ 295-47 through 295-53.)
- C. For fire protection service.
- D. For connections with other qualified utilities for emergency service.

**Article V  
Meters**

**§ 295-28 Ownership and maintenance of meters by utility.**

All meters shall be furnished and maintained, as far as ordinary wear is concerned, by the utility, and remain the property of the utility and be accessible to and subject to its control. A gate valve shall be placed on the service line on the street side of and near the meter (§ 295-22), and a suitable check valve and a relief valve shall be inserted in the line between the utility's meter and any heating unit directly connected to the service line (§ 295-23); all to be placed by and remain the property of the customer.

**§ 295-29 Responsibility of customer.**

The customer shall be responsible to the utility at all times for proper protection of the meter from injury or loss of the meter arising out of or caused by customer's negligence or carelessness or that of his servants, agents, employees or any person upon his premises under or by authority of his consent or sufferance. The customer shall permit no one who is not an agent of the utility or otherwise lawfully authorized to do so to remove, inspect or tamper with the utility's meter or other property of the utility on his premises. The customer is also responsible for all equipment that is used to monitor water consumption. If the meter is lost, broken, lighting damaged, frozen and breaks, or any part of the assembly (meter, wire, and outside pad) is damaged by the customer, the customer shall be responsible for the cost to replace the meter and/or damaged assembly parts.

**§ 295-30 Protection from hot water.**

If a range boiler or heating boiler is directly connected to the pipelines, the utility shall install an approved type of positive action relief valve on the outlet side of the meter to protect the meter from hot water, at the expense of the customer.

**§ 295-31 Size and location of meter.**

- A. The utility shall determine the size and location for the meter. The meter shall be placed at a convenient point approved by the utility so as to control the entire supply. Meters shall not be higher than 4

feet from the floor. Water lines shall not run under the floor to the meter. A valve will be installed in front of and after the meter. A flared or compression fitting must be used at the first valve before the meter. Copper pipe shall be used up to the valve. The ERT (encoder-receiver-transmitter) for the meter must be mounted on the wall no lower than 3 feet, at a location approved by the utility. If the customer fails to install the ERT and/or wire at the location required, the service line will be shut off until all requirements have been complied with. For ERT pit installations, complete any necessary drilling to hook up the antenna for the meter before the meter installation. Pits in a wooded area require pressure treated posts with half plastic piping to cover the wire from the pit to the post. Pits that are on a hill require the post to be mounted at the bottom of the hill, and in an area that allow the utility reader access to get to the ERT. If the utility decides the meter is to be placed within the building to be served, the customer shall provide free of charge and expense to the utility an easily accessible place near the entrance of the service pipe, If the utility decides the meter is to be located outside the building to be served, it must be placed in an approved meter box furnished by the utility at the expense of the customer

B. Meters moved for the convenience of the customer shall be relocated at the customer's expense. If the service line from the curb box to the location of the water meter exceeds 100 feet, a meter pit is required. The pit shall be located within 15 feet of the property line. Note that the utility engineer will review the meter pit. A backflow prevention device will be required in accordance with the Backflow Prevention and Cross Connection Control Policies and Procedures Manual promulgated and revised from time by the City of Lancaster Department of Public Works

**§ 295-32 Periodic meter tests.**

All meters shall be tested periodically by the utility without cost to the customer, and the customer may have the meter tested at any other time by making a written application to the Bureau of Water and providing a deposit, as indicated in § 295-34, to defray the cost of the special test.

**§ 295-33 Test upon customer's request.**

In case of a disputed account involving the accuracy of a meter, such meter shall be tested upon the request of the applicant, in conformity with the provisions of the rules and regulations pertaining to water service utilities of the Public Utility Commission.

**§ 295-34 Removal of meter for testing; testing rates.**

A. When meters are removed after installation, at the request of the applicant, for testing, the following rule of the Public Utility Commission shall apply:

"If the meter so tested shall be found to be accurate within the limits herein specified, a fee determined from the schedule indicated below shall be paid to the utility by the customer requiring such test; but if not so found, then the cost thereof shall be borne by the utility furnishing the service. The amount of the fee shall be \$2 for each water meter having an outlet not exceeding one inch; for other water meters having an outlet not exceeding two inches, the test fee shall be \$5 per meter.

B. Rates for testing meters not included in the above classification or which are so located that the cost is out of proportion to the fee specified will be furnished by the City Council.

**§ 295-35 Adjustment of account for faulty registration.**

If a meter is found to be in error at any test by more than 4%, an allowance or charge shall be made to the customer by the utility, equal to the excess or deficiency in quantity charged the customer, figured back from the date of test through the entire period of the current bill, unless it can be shown that the error is due to an accident or other cause, the exact date of which can be determined, in which case it shall be figured back to such date.

**§ 295-36 Meter repairs.**

When a meter has been found to be in error more than 4%, it will be repaired or replaced with a meter accurate within 4% by the utility without charge to the customer.

**§ 295-37 Meter failing to register.**

If a meter, by reason of any defect, has not registered for one month or any part of a quarter year, then the bill for that period shall be estimated on the basis of the average consumption during the three preceding periods. The customer shall at once notify the utility of any cessation of the registration of the meter. Every meter is installed subject to a minimum monthly or quarterly charge in accordance with the schedule of rates and such minimum charge shall be nonabatable or nonuse of water and noncumulative against subsequent consumption.

**Article VI  
Billing and Administration**

**§ 295-38 Deposit required.**

If the utility requires a deposit pursuant to the Rules and Regulations contained in this ordinance or the Water Regulations of the Pennsylvania Public Utility Commission, deposits will be handled in the manner required by and consistent with the applicable regulations of the Public Utility Commission and the Public Utility Code.

**§ 295-39 Notices to customers.**

- A. Notices from the utility to a customer shall normally be given in writing, and either delivered or mailed to him at his last known address.
- B. Where conditions warrant, and in emergencies, the utility may resort to notification either by telephone or messenger.

**§ 295-40 Notices from customers.**

**[Amended 07-27-2021 by Ord. No. 13-2021]**

Notice from the customer to the utility may be given by him or his authorized representative orally or in writing:

- A. At the office of the Bureau of Water (Treasury Department) located at 39 W Chestnut St, Lancaster, OA 17603; or
- B. To an employee of the utility.

**§ 295-41 Reading meters.**

Meters shall be read at regular monthly or quarterly intervals at the option of the utility, for the preparation of regular bills and as required for the preparation of opening bills, closing bills and special bills.

**§ 295-42 Bills for unmetered service.**

All bills for unmetered service shall be rendered quarterly in arrears.

**§ 295-43 Payment responsibility when service discontinued.**

The customer shall be responsible for the payment for all service rendered by the utility until written notice to discontinue the same is received and reasonable time from receipt of such notice has elapsed for the utility to take the final reading of the meter.

**§ 295-44 Shutting off service.**

**[Amended 07-27-2021 by Ord. No. 13-2021**

If any monthly or quarterly bill is not paid within 30 days after due, the water may be shut off, after all appropriate notices as required by the City's tariff and regulations adopted and promulgated by the Pennsylvania Public Utilities Commission are provided; it being the intent of the City of Lancaster that customers within the City receive the same notices and notifications required by Pennsylvania law for customers located outside the City and within the City's certificated territory as a regulated public utility company.

**§ 295-45 Postmarks on bills.**

Payments received within five days of the due date indicated on the bill will be deemed by the utility to be a payment within the period in which it becomes due.

**§ 295-46 Delivery of bills or notices.**

Bills or notices relating to the utility or its business shall be mailed or delivered to the customer's last address as shown by the books of the utility, and the utility shall not be otherwise responsible for delivery. The utility shall deliver or mail all such notices and bills to the address given on the application until a change, in writing, has been filed with the utility by the applicant. Failure to receive a bill shall not exempt any customer from the payment of the penalty. The presentation of a bill to the customer is a matter of accommodation and not a waiver of this rule.

**§ 295-47 Temporary service charge.**

Charges for water furnished through a temporary service connection shall be at the established rates for other customers.

**§ 295-48 Temporary installation charge and deposits.**

The applicant for temporary service shall be required:

- A. To pay the utility, in advance, the estimated cost of installing and removing all facilities necessary to furnish such service.
- B. To deposit an amount sufficient to cover bills for water during the entire period such service may be used, or to otherwise establish his credit.
- C. To deposit with the utility an amount equal to the value of any equipment loaned by the utility to such applicant for use on temporary services.

**§ 295-49 Responsibility for meters and installation for temporary service.**

The customer shall use all possible care to prevent damage to the meter or to any other loaned facilities of the utility which are involved in furnishing the temporary service from the time they are installed until they are removed or until 48 hours' notice, in writing, has been given to the utility that the contractor or other person is through with the meter or meters and the installation. If the meter or other facilities are damaged, the cost of making repairs shall be paid by the customer.

**§ 295-50 Temporary service from a fire hydrant.**

Water for construction purposes may be furnished by a metered service line from the main or by a utility issued permit to use a fire hydrant with a utility issued isolation device and billing meter. Fire hydrant connections are only available at the locations outlined in Section 295-51. There shall be no hook-ups at the curb stop. A permit fee may be required for the utility issued isolation device with billing meter. If temporary service is supplied through a fire hydrant, a permit for the use of the hydrant shall be obtained from the

municipality and the utility, It is specifically prohibited to operate the valve of any fire hydrant other than by the use of a spanner wrench designed for this purpose.

**§ 295-51 Non-Potable Bulk Water Loading Stations.**

PADEP required that the utility permit all locations where water is withdrawn from hydrants connected to the utility's distribution system. The Customer must contact the utility to arrange for a permit and a utility issued isolation device and billing meter before water may be withdrawn at any of the PADEP approved locations listed below:

1. Conestoga Water Treatment Plant, 150 Pitney Road, Lancaster, PA
2. Susquehanna Water Treatment Plant, 900 South Fifteenth Street, Columbia, PA
3. WH-14459 2250 Old Philadelphia Pike, Rear East Lampeter Township Building
4. WH-14460 2056 Waterford Drive
5. WH-12369 506 Ashton Place
6. WH-11161 642 Fountain Avenue
7. WH-12606 5 Bentley Lane
8. WH-14778 55 Cartledge Lane
9. WH-12460 140 South Tree Drive
10. WH-17766 400 Block of East Fulton Street North Side
11. WH-11735 451 College Avenue
12. WH-10385 Green Street at South Duke Street
13. WH-10848 347 North Reservoir Street
14. WH-10580 Ruby Street at 6th Street
15. WH-11822 304 South Broad Street
16. WH-10254 North Queen Street at Penn Square
17. WH-10621 Fairview Avenue at Fremont Street
18. WH-11786 750 West Chestnut Street
19. WH-11153 756 Hamilton Street
20. WH-10684 861 Marjory Terrace

The City may and will update this list from time to time by Resolution of City Council as may be necessary at the direction of the PADEP.

**§ 295-52 Unauthorized use of fire hydrant.**

Tampering with any fire hydrant for the unauthorized use of water therefrom or for any other purpose is a misdemeanor, punishable by law.

**§ 295-53 Penalty for delinquency.**

The penalty for delinquent water service payment shall be governed by § 249-30.

## Article VII Water Rates

**§ 295-54 Rates for inside City use.**

**[Amended 12-12-1995 by Ord. No. 17-1995; 11-9-1999 by Ord. No. 8-1999; 12-19-2006 by Ord. No. 17-2006; 12-15-2009 by Ord. No. 20-2009; 12-20-2011 by Ord. No. 17-2011; 1-27-2015 by Ord. No. 2-2015]**

The water rates for water service furnished by the City to consumers inside the City limits shall be fixed by the following schedule:

- A. Consumption charges: residential, commercial and industrial. **[Amended 12-15-2015 by Ord. No. 19-2015; 12-17-2019 by Ord. No. 19-2019]**

- (1) Metered volume.

Gallons per Month or per Quarter	Rate per 1,000 Gallons
For the first 25,000 gallons/month or 75,000 gallons/quarter	\$5.7000
For the next 575,000 gallons/month or 1,725,000 gallons/quarter	\$4.7500
For all over 600,000 gallons/month or 1,800,000 gallons/quarter	\$3.7500

All metered customers shall be subject to a monthly or quarterly customer charge based on the required size of meter to render adequate service and in accordance with the following schedule:

Size of Meter (inches)	Customer Charge	
	Per Month	Per Quarter
5/8 or 3/4	\$9.10	\$27.30
1	\$24.18	\$72.54
1 1/2	\$37.96	\$113.88
2	\$59.28	\$177.84
3	\$117.26	\$351.78
4	\$183.04	\$549.12
6	\$364.00	\$1,092.00
8	\$576.42	\$1,729.26
10	\$762.58	\$2,287.74

- (2) The minimum billing charge shall be the customer charge.
- (3) When more than one meter is installed on the premises of the convenience of the customer, the above consumption and customer charges will be assessed against the individual meters.

B. Flat rate: private fire-protection service.

- (1) Schedule.

Connection Size (inches)	Charge	
	per Month	per Quarter
1	\$2.46	\$7.38
1 1/2	\$5.52	\$16.56
2	\$9.80	\$29.40
3	\$22.06	\$66.18
4	\$32.14	\$96.42
6	\$52.30	\$156.90
8	\$90.46	\$271.38
10	\$121.40	\$364.20
12	\$252.63	\$757.89

- (2) No charge shall be made for water used for extinguishment of accidental fires. All consumption recorded by the disc (small flow) meter, whether from use of water for other purposes or from leakage from customer-owned pipelines, shall be billed at the meter rate for general service.

**§ 295-55 Rates for outside City use.**

The quarter-annual water rates for water service furnished by the City to consumers outside the City limits

shall be the latest rates as approved by the Pennsylvania Public Utilities Commission.

§ 295-56 **Effective date.**

[Amended 12-12-1995 by Ord. No. 17-1995; 11-9-1999 by Ord. No. 8-1999; 1-27-2015 by Ord. No. 2-2015; 12-15-2015 by Ord. No. 19-2015; 12-17-2019 by Ord. No. 19-2019]

The foregoing rates for water service shall become effective on January 1, 2020.

## Article VIII

### Service Discontinuance and Restoration

§ 295-57 **Customer's request for service discontinuance.**

When premises are unoccupied, the customer shall notify the utility in writing and the water shall be turned off and all charges for water will cease from the date that the water is turned off by the utility. When the property is again occupied, the customer shall again notify the utility, in writing, and the water will be turned on. No allowance or refund will be made for unoccupied property when written notice both at time of vacancy and at time of occupancy has not been given as above provided. No refund will be allowed for property unoccupied for a less period of time than one month.

§ 295-58 **Reasons for service discontinuance.**

Service may be discontinued by the utility after due notice to customer for any one of the following reasons:

- A. Use of water by a customer, or with his consent, for any purpose or at any location or property other than those or that described in the application.
- B. Failure of a customer to maintain and repair his portion of the service line.
- C. Undue waste of water by a customer or with his consent.
- D. Failure of a customer to pay a bill for water service within the period herein specified or failure to pay any other fee or charge herein provided.
- E. Violation by a customer, or with his consent, of any of these rules and regulations.

§ 295-59 **Tampering with curb cock.**

If the utility has reason to suspect that any customer has tampered with the curb cock after the water has been turned off from the premises, the utility may shut off the water at the main, and it shall not be again turned on until satisfactory assurance is given that the practice will be discontinued and all bills, including labor, supplies and permits, incurred in shutting off and turning on the water are paid in full.

§ 295-60 **Discontinuance and restoration charges.**

[Amended 4-8-1997 by Ord. No. 9-1997; 11-9-1999 by Ord. No. 8-1999; 12-20-2011 by Ord. No. 17-2011]

A charge of \$83, payable in advance, will be made for turning on water in restoration of service after discontinuance for any of the reasons specified in § 295-58.

## Article IX

### General Water Regulations

§ 295-61 **Cross-connections.**

Water service not supplied by the utility shall not be connected or cross-connected with the utility's facilities,

except with the written consent of the Bureau of Water.

- A. Backflow Prevention and Cross Connection Control -The utility recognizes that certain water customers have water systems that have connections to apparatus, vessels, etc., which may have impurities in varying degrees that, if not properly isolated and contained, could contaminate and/or pollute both the customer's water system and the utility's water distribution system. The utility has developed a Backflow Prevention and Cross Connection Control Policies and Procedures Manual, which manual is incorporated herein by reference, as updated from time to time and is available on the City's website. This Manual defines the policy and procedures of the City of Lancaster and the water Customer's responsibility regarding backflow prevention and cross-connection.
- B. All Commercial, Industrial, and Bulk water customers shall have an approved backflow prevention device consistent with the degree of hazard, as defined by the utility, at the service connection. The backflow protection shall be a properly installed double check valve assembly, or a reduced pressure zone device as determined by the utility. In addition, all fire systems that constitute a potential cross connection shall have a utility-approved double check detector assembly at the lines leading to the fire system
- C. Residential Customers shall be required to install an approved backflow prevention device when they apply for a plumbing permit
- D. The utility will terminate water service to a customer's facility if it is determined that a serious contamination potential exists
- E. The utility requires that the Customer shall provide for the testing, maintenance, and repair of backflow devices by a certified backflow prevention assembly technician at least once a year or whenever failure has occurred or is suspected in order to maintain the devices in satisfactory operating condition. The Customer shall also provide, through a certified backflow prevention assembly technician, for the overhaul or replacement of such devices if they are found to be defective. Records of such tests, repairs, overhauls, and replacements shall be submitted by the Customer to the utility. Customers shall be responsible for maintaining records of such tests and related maintenance for a period of the most recent three (3) years. The installation, care, maintenance, and repair of backflow devices are at the customer's expense.
- F. Non-compliance with the preceding requirements after due notification may result in the discontinuation of water service. The Customer may be required to reimburse the utility for all costs associated with such action

**§ 295-62 Frozen service lines.**

Should any service line become frozen, the utility shall thaw out, at its own expense, that portion of the frozen service line between the main and the curb. The customer shall, at his own expense, thaw out that portion of the frozen service line between the curb and his premises.

**§ 295-63 Use of abnormally large quantities of water.**

When an abnormally large quantity of water is desired for filling a swimming pool or for other purposes, arrangements shall be made with the utility prior to taking such water.

**§ 295-64 Permission for large quantities of water.**

Permission to take water in unusual quantities shall be given only if it can be safely delivered through the utility's facilities and if other customers are not inconvenienced.

**§ 295-65 Tampering with fire hydrants.**

No persons, other than those designated and authorized by the proper authority or by the utility, shall open any fire hydrant, attempt to draw water from it or in any manner damage or tamper with it. Any violation of this regulation shall be prosecuted according to law.

**§ 295-66 Moving fire hydrants.**

When a fire hydrant has been installed in the location specified by the proper authority, the utility has

fulfilled its obligation. If a property owner or other party desires a change in the size, type or location of the hydrant, he shall bear all costs of such changes, without refund. Any change in the location of a fire hydrant shall be approved by the contracting municipality.

**§ 295-67 Responsibility for equipment.**

The customer shall, at his own risk and expense, furnish, install and keep in good and safe condition all equipment that may be required for receiving, controlling, applying and utilizing water, and the utility shall not be responsible for any loss or damage caused by the improper installation of such water equipment or the negligence, want of proper care or wrongful act of the customer or of any of his tenants, agents, employees, contractors, licensees or permittees in installing, maintaining, using, operating or interfering with such equipment. The utility shall not be responsible for damage to property caused by spigots, faucets, valves and other equipment that are open when water is turned on at the meter, either when the water is turned on originally or when turned on after a temporary shutdown.

**§ 295-68 Right of entry.**

The utility or its duly authorized agents shall at all reasonable times have the right to enter or leave the customer's premises for any purpose properly connected with the service of water to the customer.

**§ 295-69 Inspections and recommendations.**

Any inspection or recommendations made by the utility or its agents on plumbing or appliances or use of water on the customer's premises, either as the result of a complaint or otherwise, shall be made or offered without charge.

**§ 295-70 Interruptions in service.**

The utility shall not be liable for damage resulting from an interruption in service. Temporary shutdowns may be resorted to by the utility for improvements and repairs. Whenever possible, and as time permits, all customers affected shall be notified prior to such shutdowns.

**§ 295-71 Interruptions beyond utility's control.**

The utility shall not be liable for interruption, shortage or insufficiency of supply, or for any loss or damage occasioned thereby, if caused by accident, act of God, fire, strikes, riots, war or any other cause not within its control. The utility, whenever it finds it necessary or convenient for the purpose of making repairs or improvements to its system, shall have the right temporarily to suspend delivery of water, and it shall not be liable for any loss or damage occasioned thereby. Repairs or improvements shall be prosecuted as rapidly as is practicable and, so far as possible, at such times as will cause the least inconvenience to the customers.

**§ 295-72 Changing rules and regulations.**

**[Amended 11-9-1999 by Ord. No. 8-1999]**

These rules cannot be changed without action of the City Council.

## Article X Water Mains

**§ 295-73 Assessment for laying water mains.**

Whenever any water main or mains have been extended in any streets, alleys or highways within the limits of the City, a front foot assessment shall be levied by the Bureau of Water upon all properties fronting upon the streets, alleys or highways at the rate of \$3 per foot on each side of the street, alley or highway in which the main is laid or extended. However, on any street, alley or highway in which it is impossible or impracticable to lay the main in the center of the street, the Director of the Department of Public Works may direct mains to be laid on both sides of the street at the curbs, in which case, the assessment per front foot shall be \$4 instead of \$3 as hereinbefore provided.

**§ 295-74 Nonpayment of assessment; surcharge.**  
**[Amended 7-26-2005 by Ord. No. 15-2005]**

The Director of the Department of Public Works shall levy or cause to be levied the water frontage assessment for the installation of such main or mains and certify the same to the City Treasurer. The assessment shall be due and payable upon notice of such assessment being given the City Treasurer to each owner assessed. If not paid within 30 days thereafter, a penalty in accordance with Chapter 36, Municipal Claims, shall be added thereto and an accurate description of their several properties shall be certified by the City Treasurer to the City Solicitor, who shall enter the same, plus all other amounts due under Chapter 36, Municipal Claims, and pursue any or all of the remedies identified in Chapter 36, Municipal Claims, including but not limited to as liens on the proper dockets and proceed to collect the same according to law.

**§ 295-75 Assessment on corner lots.**

In the case of corner lots, the assessment shall be levied in full for the length on which the improvements erected on such lots, or intended to be erected, front. When mains are laid in the street adjoining the side of such corner lot, an allowance of 100 feet shall be made. However, when a corner lot has erected upon it two or more separate tenements, there shall only be an allowance equal to the depth of the corner tenement.

**§ 295-76 Prospective extension.**

In all cases where an extension of City water mains has been requested by a prospective extendor and the anticipated income to be derived from such extension does not warrant that the capital investment required therefor be made by the City, then, if the proposed extendor still desires to have such water main extension made and is willing to pay the cost thereof and the City is willing to have such extension made to its water supply system, the same shall be done on the terms and conditions outlined herein.

**§ 295-77 Pipe dimension.**

- A. No extension of waterlines shall be permitted for a pipe having a diameter of less than six inches.
- B. The extendor shall cause such water main extension to be laid in accordance with City specifications and at all times subject to City inspection and approval and shall pay for the entire cost of such extension, provided that if the City so elects, it may require the extendor to make the extension of pipe having a larger diameter than the extendor requires for his own use. If the City requires the extendor to lay a larger pipe than the extendor requires, it shall pay the extendor the difference in the cost of the size pipe needed by the consumer and the size pipe prescribed by the City for such extension.
- C. Any extendor shall satisfy the Director of Public Works that he is financially able to pay for the cost of the proposed extension. Actual construction work for the same shall commence within 60 days of the date of the extension agreement between the City and the extendor and shall be completed within a reasonable time, or at the option of the City, the extension agreement shall be canceled at no cost to the City. The Director may, for good and sufficient cause, grant the extendor additional time to start construction, but such construction shall be started unless the entire project is assured of completion according to plan.

**§ 295-78 Leasing.**

Upon completion of such waterline and its approval and acceptance by the City, the line shall be and remain the property of the extendor, who shall thereupon lease the same to the City upon the following terms and conditions:

- A. The term of the lease shall be for a period of no more than 10 years from the time the line is placed in service.

- B. The City shall maintain and operate the line, bearing all expense with relation thereto, and serve water therefrom to the consumers and other parties connecting to the same.
  - C. The extendor shall receive water from the City through such line and pay the City for the same at the published rates of the City for such service which may be in effect from time to time during such service. The consumer shall be bound by all rules and regulations of the City relating to water service.
  - D. During the term of such lease, while ownership of the line remains in the extendor, no other person shall be allowed to connect to such line unless such person pays the extendor a connection fee in accordance with the following schedules which shall apply for single service connection to a single property.
- (1) The following connection fee rates shall apply when the extension was performed by municipalities, commercial enterprises and developers:

<b>Service Connection</b>	
<b>Size</b>	
<b>(inches)</b>	<b>Fee</b>
3/4	\$100
1	\$150
1 1/4	\$200
1 1/2	\$300
2	\$500
4	\$2,000

- (2) This connection fee shall be applicable where a three-fourths-inch or one-inch connection is made to an extension that was performed as a noncommercial, nondevelopmental extension by owners or occupants of residential properties acting either individually or in combination for the purpose of extending waterlines to their properties for their personal use. In such cases the connection fee for each new connection shall be a sum computed by multiplying the total cost of the water main, less any extension fees paid from time to time pursuant to Subsection E hereof, by a fraction, the numerator of which shall be one and the denominator of which shall be the sum of the number of properties single service connected to the water main as of the date of the new connection plus one representing the new property to be connected.
- (3) Example.
- (a) Assume six property owners combined to extend a water main at a cost of \$1,000. Further assume that a total of 10 properties are located along the line but that four of them did not elect to participate in construction of the line. The connection fee that would be charged in the event that any of the four properties would later elect to connect to the water main would be computed as follows:

$$\begin{array}{rcl}
 & \text{Total cost} & \\
 \text{Connection fee} = & \text{of} & \\
 & \text{Water Main} & 1 \\
 & & \times \\
 & \text{Number of properties} & + \text{ 1 for the new} \\
 & \text{single service} & \text{property} \\
 & \text{connected} & \\
 \$142.85 = & \$1,000.00 \times & 1 \\
 & & 6 + 1
 \end{array}$$

- (b) Based upon the above example, the seventh property to connect would pay an extension fee of \$142.85 which would be paid to the original six extenders, \$23.80 each, and would reduce their original cost from \$166.66 each or 1/6 of \$1,000 to \$142.85 or the same as the seventh connector. When the eighth property connected, its cost would be \$125 or 1/8 of \$1,000 with the connection fee being returned to the original six extenders and so on through the ninth and tenth connectors.
- E. In the case of another extendor who wishes to connect to such water main for the purpose of laying his own main to serve a number of prospective consumers therefrom, such extendor shall pay the owner/lessor an amount which represents no more than 50% of the cost of such water main up to the point of such connection after deducting from such cost any connection fees already paid for connections to the waterline up to the point of connection. Such other extendor shall not be entitled to receive any connection fees for connections made to the original line, but shall be entitled to be reimbursed for the line which he himself pays for in accordance with a lease similar to that provided for herein.
- F. At no time shall the extendor be entitled to recover more than the total cost of the waterline, calculated without interest. If such total cost has been recovered prior to 10 years from the date when the line was placed in service, the lease shall terminate at the time of the recovery of such cost. If the total cost has not been recovered within 10 years from the date when the line was placed in service, it shall terminate, in all events, at the end of the ten-year period and the right of the extendor to recover any more costs shall cease.
- G. The City shall charge an extendor or single service connector a service fee of 5% of the extension or connection fee, but not more than \$100, which shall be paid by the extendor or connector, in addition to the fee due, to compensate the City for services performed related to the connection or extension.
- H. Upon termination of the lease, the extendor shall dedicate the waterline to the City Authority and it shall thereupon become a part of the water distribution system.

**§ 295-79 City extensions.**

The City shall have the right at all times to make connections to the lines of the extendor and lay additional water mains at its own cost, without the payment of any connection fee to the extendor, provided that such extensions and additions so made by the City are solely for the improvement of its water service and no consumers are connected thereto. If any consumer connections are made to any such additions made by the City, then such lines shall be subject to the terms of the lease as if made by a private extendor.

**§ 295-80 City contribution to cost.**

In the event that the City makes a contribution towards the cost of laying the waterline, representing the difference in cost of the size of pipe as contemplated in § 295-77B, then such contribution shall be deemed to represent as many linear feet of waterline as the linear foot cost of the entire line, and the City Authority shall own the initial number of linear feet thus represented, so that the line owned by the extendor and leased to the City shall be deemed to start at the point where the initial number of linear feet ends. (Example: A twelve-inch waterline for 5,000 linear feet costs \$50,000 or \$10 per linear foot. The City contributes \$15,000 for the difference in cost between six-inch pipe and twelve-inch pipe. The City Authority would own the initial 1,500 feet of twelve-inch waterline and the remaining 3,500 feet would be owned by the extendor and leased to the City as herein provided.)

**§ 295-80 Extension decisions.**

The final decision on whether or not an extension to the waterlines shall be permitted on the conditions outlined herein or otherwise, shall be and remain with the City. The City Authority, which shall become the ultimate owner of waterlines extended as herein provided, shall be notified of each lease agreement relating thereto and receive a copy thereof.

**Article XI  
Private Wells**

**[Added 7-22-2003 by Ord. No. 8-2003]**

**§ 295-81 Definitions.**

For purposes of this Chapter 295, Article XI, the following words shall have the meanings set forth thereafter:

**AGRICULTURAL PURPOSES**

Commercial agricultural activities, including, but not limited to, irrigation of crops, watering of livestock and food production, processing or packaging.

**CITY WATER**

Water provided through the municipal water system owned and/or operated by the City of Lancaster, its successor or assigns.

**PRIVATE WATER SYSTEM**

Any system designed to extract water from the ground, springs or other water source, which is not City water or the City water system, including but not limited to wells and springs.

**§ 295-82 Private water systems prohibited.**

Except where City water is not available, it shall be unlawful to construct, reconstruct or repair any private water system which is designed or intended to provide water for drinking or agricultural purposes. The owners of property that currently do not have City water connections, have private wells and abut on or adjoin any street or highway in which City water line is located shall connect such property therewith, in accordance with all applicable City ordinances, rules and regulation (including the payment of all applicable fees) within 60 days after notice to such owner from the City. No private water system shall be used or maintained for drinking water or agricultural purposes at any time upon property which has been connected to the City water system or upon which City water is available.

**§ 295-83 City water required.**

All new construction within the City shall connect to the City water system, in accordance with all applicable

City ordinances, rules and regulations, including but not limited to the payment of all applicable fees.

**§ 295-84 Registration of private water systems.**

All owners of property within the City that obtain water for drinking and/or agricultural purposes upon the property from a private water system shall annually register such private water system with the City upon a form prepared by the Director of Public Works or his/her designee. If the Director of Public Works determines that such property can be served by City water without the substantial extension of the existing City water system or City water becomes available to the property, the Director of Public Works shall issue a notice to the property owner requiring such owner to connect to the City water system within 60 days of the notice, in accordance with all applicable ordinances, rules and regulations, including but not limited to the payment of all applicable fees, at the sole cost and expense of the property owner.

**§ 295-85 Closure of private wells.**

All private wells located on properties served by City water shall be filled and sealed, at the expense of the owner of the property upon which the private well is located, in accordance with all applicable laws, regulations and ordinances within 120 days of the adoption of this article or the provision of City water to the subject property, whichever occurs later.

**§ 295-86 Provision of notice.**

**[Amended 12-16-2008 by Ord. No. 17-2008]**

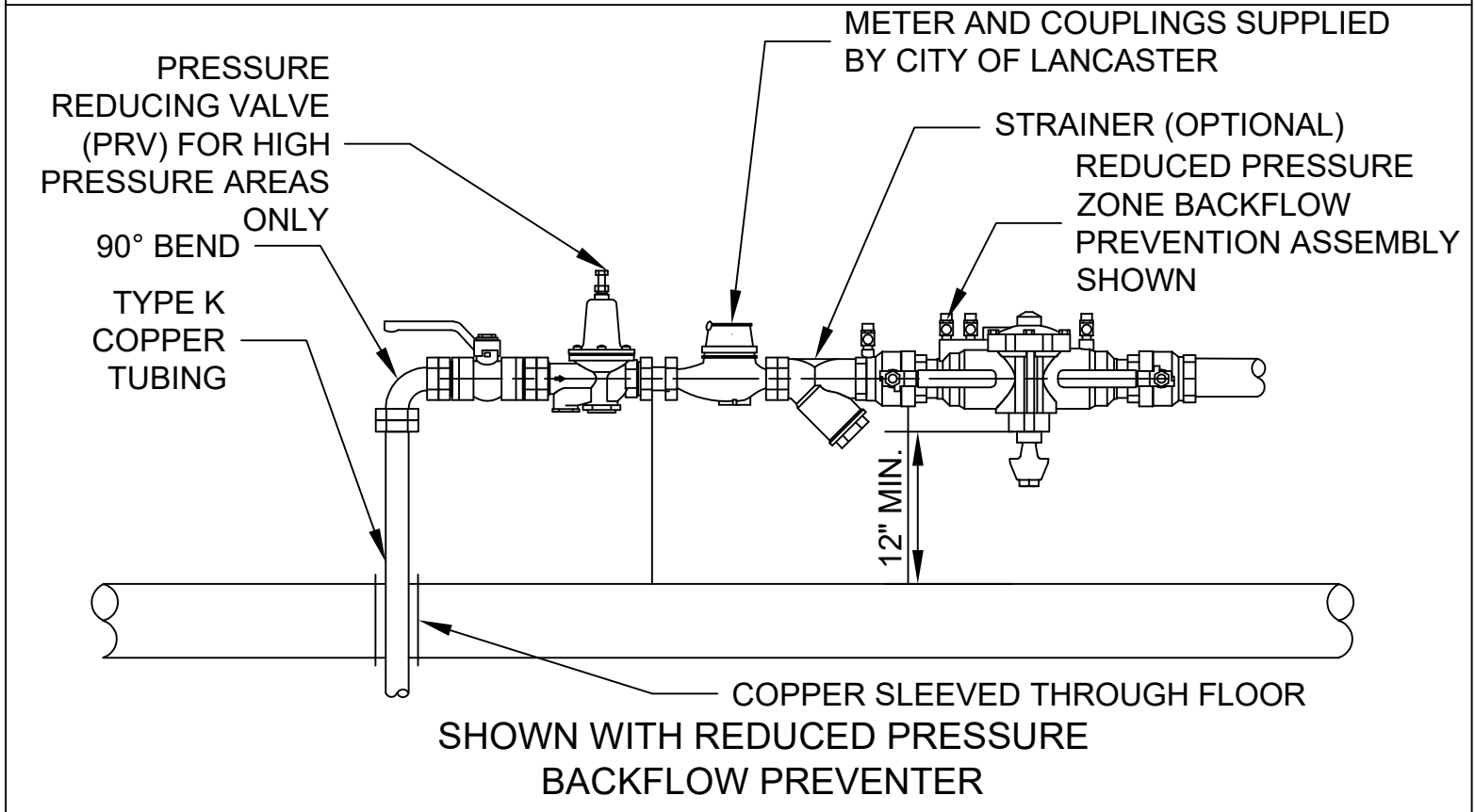
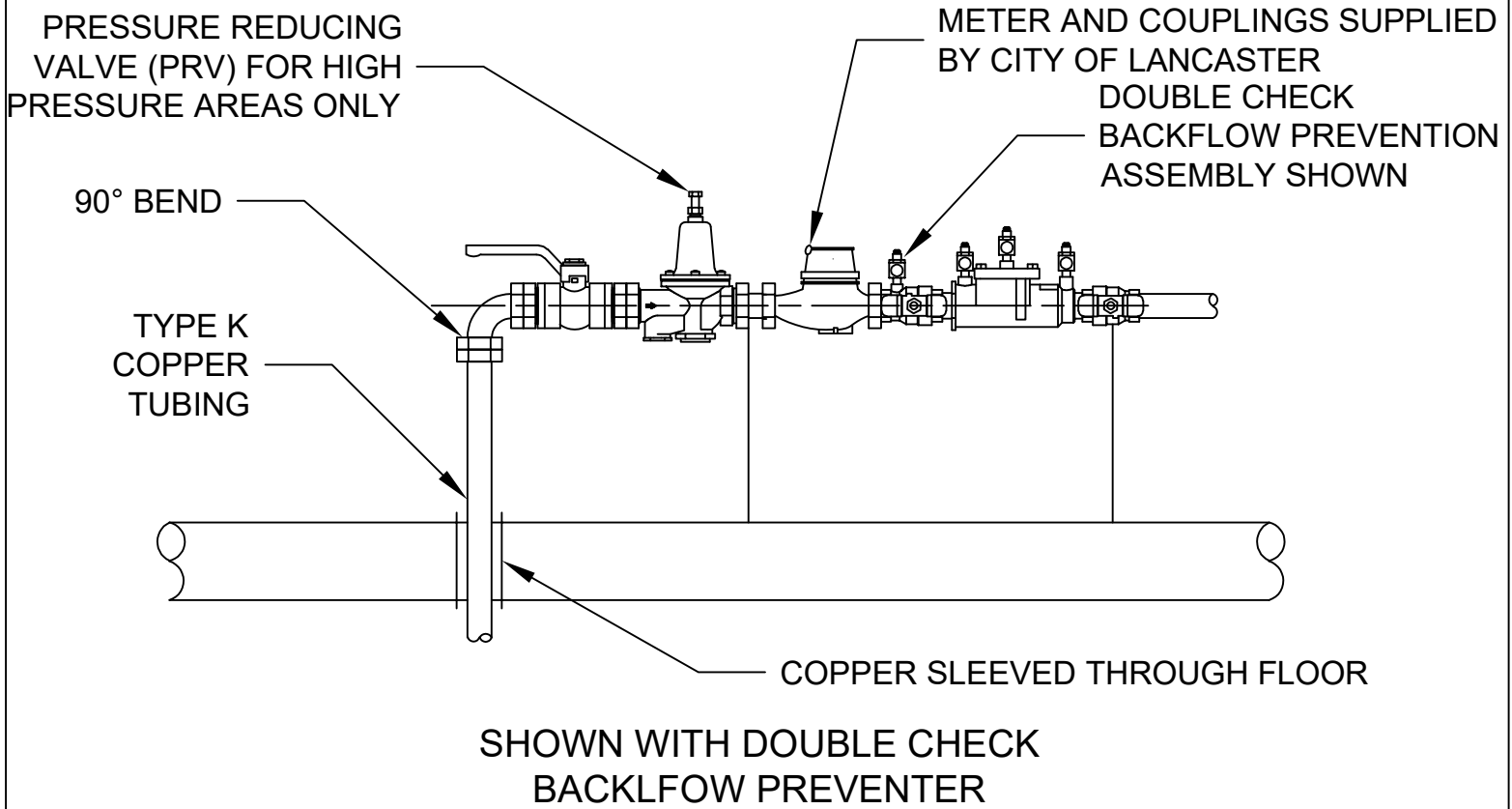
- A. Any notice provided by the Director of Public Works or other City official or employee pursuant to the terms of this chapter shall, except as otherwise provided herein, be provided by any one of the following methods:
- (1) Personal service;
  - (2) Certified mail, return receipt requested;
  - (3) First-class mail and posting the notice upon the property; and
  - (4) Any other method provided by law.
- B. The City of Lancaster will notify the Pennsylvania Department of Environmental Protection in writing within 30 days of the effective date of any amendment or repeal of Ordinance No. 8-2003 adopted by Council on July 22, 2003, and codified in the Code of the City of Lancaster as Article **XI** of Chapter **295** of the Code of the City of Lancaster. This notice shall be provided by the Director of Public Works or other City officials to the Pennsylvania Department of Environmental Protection, Attention: Special Projects Chief, 909 Elmerton Avenue, Harrisburg, PA 17110.

**§ 295-87 Violations and penalties.**

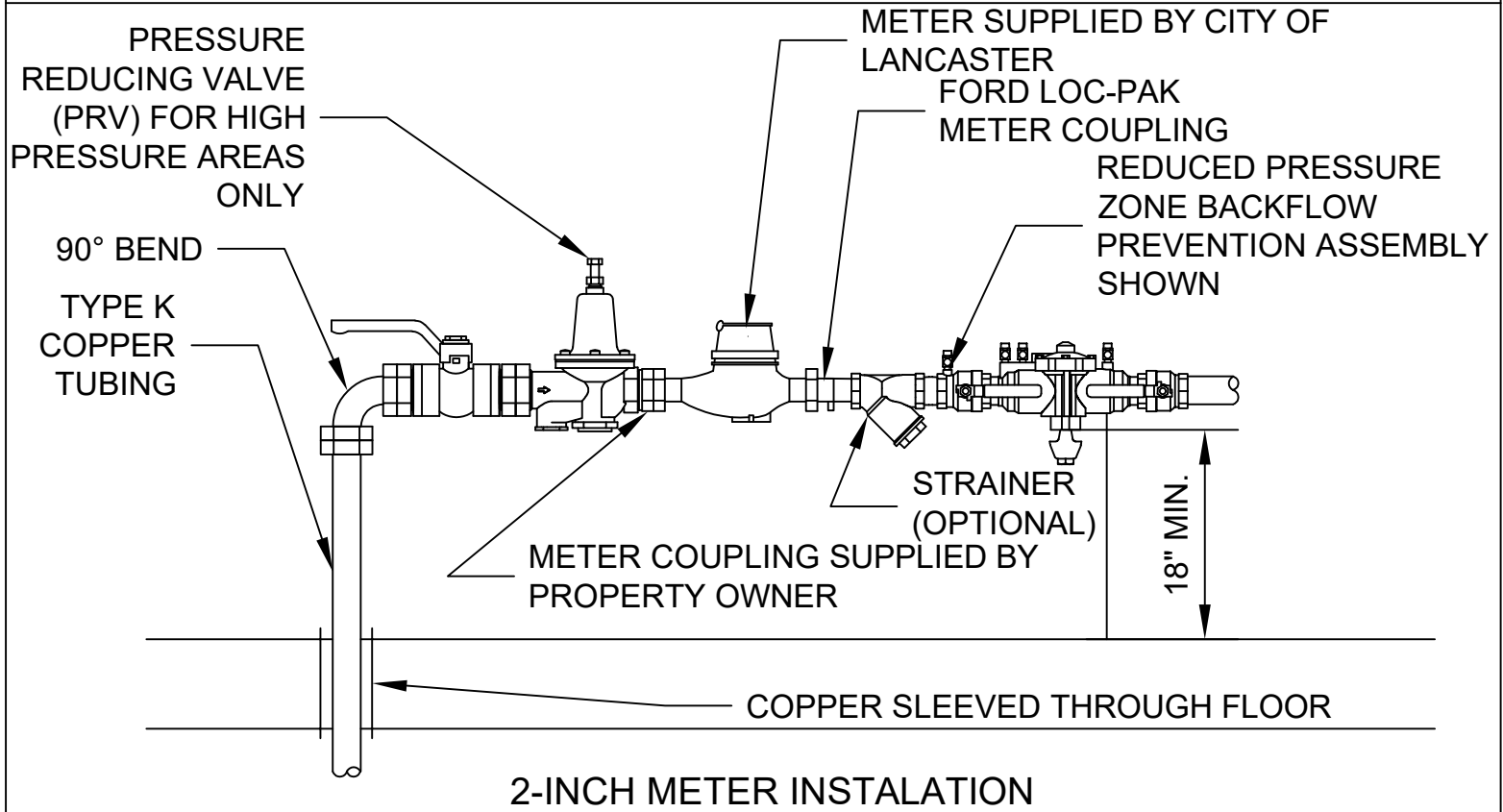
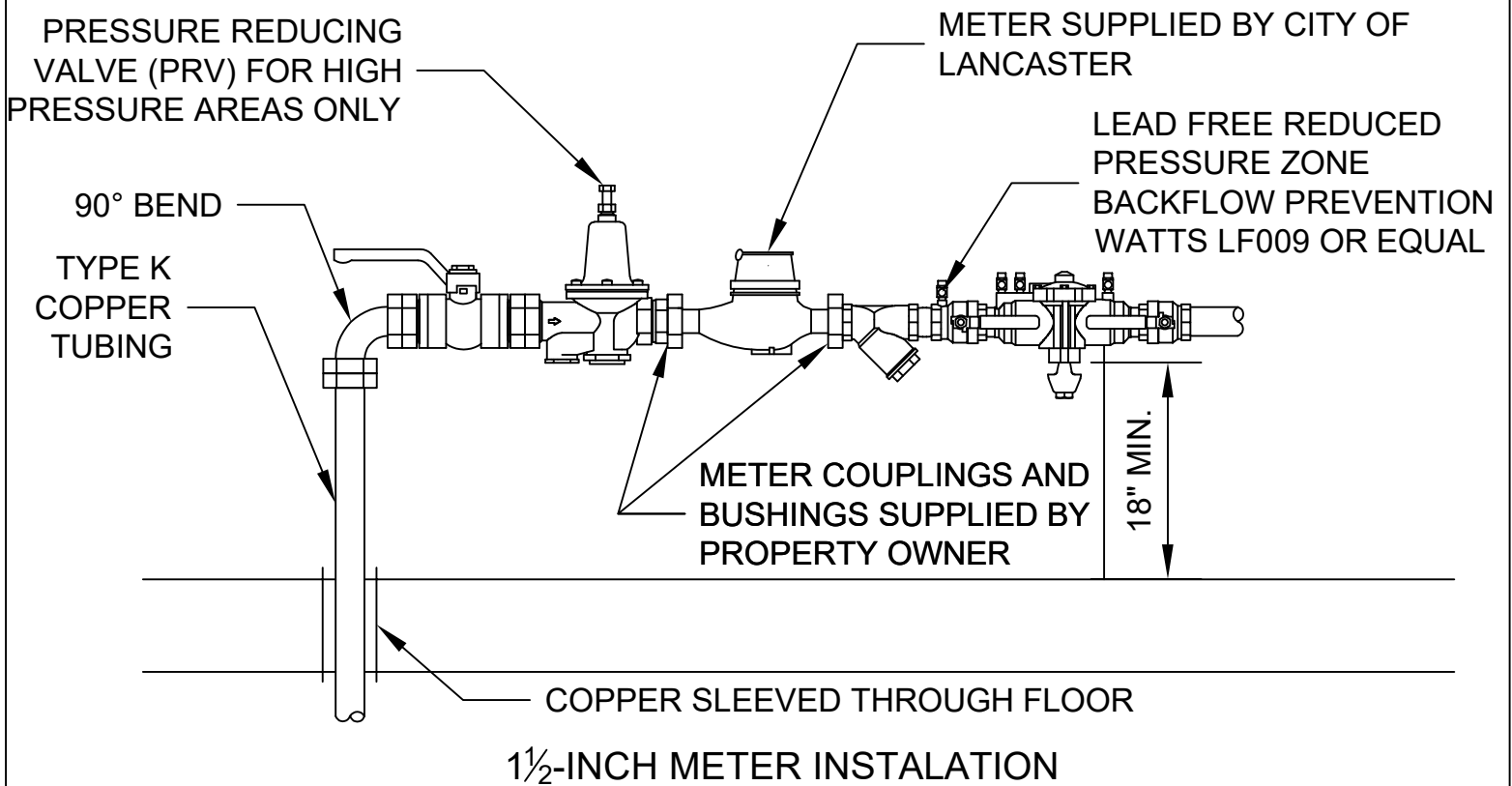
Any person, group, association or organization who violates any provision of this article, is guilty of a summary offense and shall pay a fine not less than \$100 nor in excess of \$1,000. In addition to any penalty provided hereunder, the City may seek injunctive relief to prevent the violation of this article.

APPENDIX B

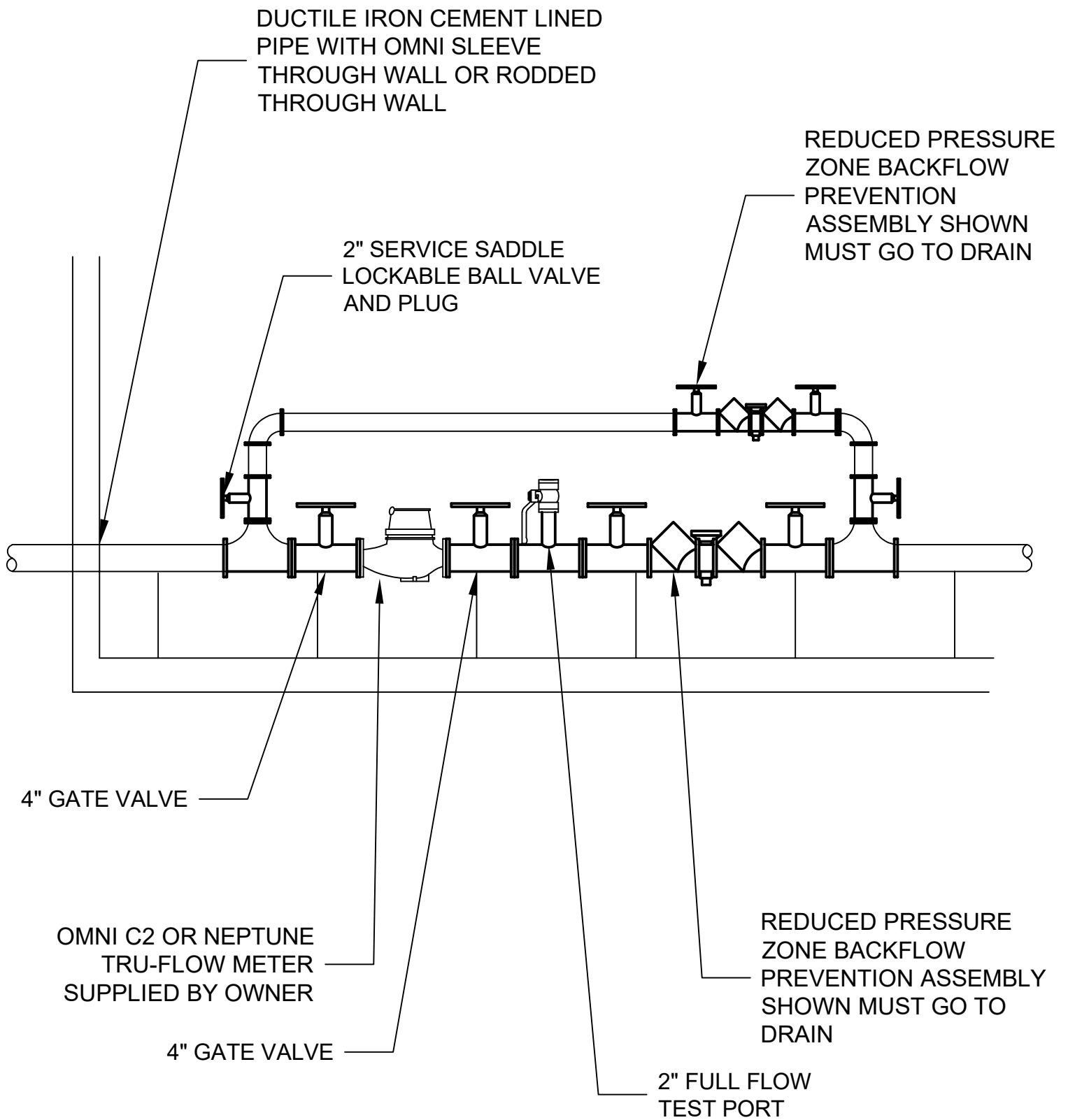
DRAWINGS AND ILLUSTRATIONS (On Next Sheet)



CITY OF LANCASTER LANCASTER, PENNSYLVANIA BUREAU OF ENGINEERING	5/8" THRU 1" WATER METER INSTALLATION	1/30/17	REVISED	BMP
		DATE	DESCRIPTION	BY
SCALE: NO SCALE		CITY OF LANCASTER		



CITY OF LANCASTER LANCASTER, PENNSYLVANIA BUREAU OF ENGINEERING	1 1/2-INCH AND 2-INCH WATER METER INSTALLATION			
		1/30/17	REVISED	BMP
		DATE	DESCRIPTION	BY
SCALE: NO SCALE		CITY OF LANCASTER		



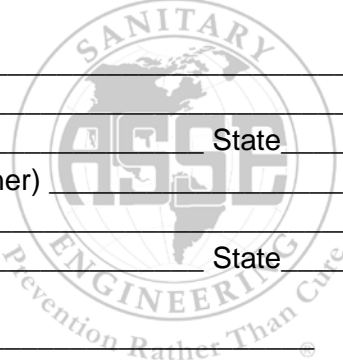
CITY OF LANCASTER LANCASTER, PENNSYLVANIA BUREAU OF ENGINEERING	4-INCH DOMESTIC WATER METER INSTALLATION			
		1/30/17	REVISED	BMP
		DATE	DESCRIPTION	BY
SCALE: NO SCALE		CITY OF LANCASTER		

APPENDIX C

ASSE Backflow Testing Form (On Next Sheet)

# ASSE International

## Reduced Pressure Principle Backflow Preventer (RP) ASSE Standard #1013 Field Test Report



Owner of Property \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Occupant of Property (if different from owner) \_\_\_\_\_  
 Occupant Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Manufacturer of Assembly: \_\_\_\_\_ Model #: \_\_\_\_\_  
 Size of Assembly: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 Location of Assembly and Equipment or System Application: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Test Equipment:  
 Manufacturer: \_\_\_\_\_ Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 Calibration Date: \_\_\_\_\_

Date test was performed: \_\_\_\_\_ Time test was performed: \_\_\_\_\_ Static Line Pressure: \_\_\_\_\_

	Check Valve #2	Shutoff valve #2	Check Valve #1	Pressure Differential Relief Valve
<b>Initial Test</b>	Leaking ( ) Closed Tight ( )	Leaking ( ) Closed Tight ( )	Leaking ( ) Closed Tight ( ) Pressure Drop Across Check Valve #1 ___ psid	Opened at ___ psid
<b>Describe parts and repairs when needed</b>				
<b>Final Test</b>	Leaking ( ) Closed Tight ( )	Leaking ( ) Closed Tight ( )	Leaking ( ) Closed Tight ( ) Pressure Drop Across Check Valve #1 ___ psid	Opened at ___ psid

Certified Tester (print) \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Phone #: \_\_\_\_\_  
 License #: \_\_\_\_\_ Certification # \_\_\_\_\_

**Assembly Final  
Test Performance**

Pass   
 Fail

**Signature** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Comments or Recommendations (continue to other side, if needed):** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## APPENDIX D

### REFERENCES

1. Cross-Connection Control Manual, U.S. Environmental Protection Agency, 2003.
2. Pennsylvania Safe Drinking Water Act, Act 109.
3. Public Water Supply Manual Part VII. Cross-Connection Control, Department of Environmental Resources, Commonwealth of Pennsylvania, October 1, 1997.
4. Backflow Prevention and Cross-Connection Control, Manual M14, American Water Works Association, 2015.
5. Manual of Cross-Connection Control, 10th Edition, Foundation for Cross Connection Control and Hydraulic Research, University of Southern California, 2009.
6. Cross-Connection Control and Backflow Prevention Device Inspection Training Manual, New England Water Works Association, 1994.
7. Cross-Connection Control Manual, 7<sup>th</sup> Edition, City of Philadelphia, Pennsylvania, Water Department, 2017.