



**Aqua North Carolina  
Cross Connection Control  
Program**

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In the event that the contents of this document or any portion thereof contradicts other local, regional, state, or federal regulations/agencies; Aqua NC will be the deciding agent and the decision will be based on the regulation or combination of regulations that are the most conservative in the protection of the public water system.

## **SECTION I — INTRODUCTION**

### Purpose

- 1.** Aqua North Carolina (Company) has the responsibility to implement and conduct a Cross Connection Control Program (the Program). Legal authority to conduct the Program is based in part on the requirements of the federal Safe Drinking Water Act (SDWA); the North Carolina Department of Environmental Quality (NCDEQ) rules; the North Carolina Public Utilities Commission approved Company Tariffs; and the North Carolina Administrative Code (NCAC).
- 2.** This Cross-Connection Control Program applies to all premises served by the public water systems owned and/or operated by Aqua North Carolina.
- 3.** The purpose of Aqua North Carolina's Cross Connection Control Program is to:
  - a.** Protect the public potable water supply served by Aqua North Carolina from the possibility of contamination or pollution by containing within the consumer's internal distribution system or the consumer's private water system, such contaminants or pollutants that could backflow or back siphon into the public water system.
  - b.** Promote the elimination or control of cross-connections, actual or potential, between the consumer's internal potable water system and non-potable water systems, plumbing fixtures, and industrial piping systems.
  - c.** Provide a continuing cross-connection control program that will systematically and effectively prevent the contamination or pollution of the potable water distribution system.
  - d.** To educate consumers of their legal duty and responsibility to their internal plumbing system in such a manner as to not create a potential threat of contamination to the public water supply system.
  - e.** To take reasonable efforts to protect the Company's public water system against actual or potential backflow by containing within a consumer's premise, any pollution or contamination that has entered or may enter, the consumer's water system through an undiscovered or uncontrolled cross-connection on said premise.
  - f.** Ensure compliance with relevant Federal, State, and local regulations regarding cross connection control.

### Policy

- 1.** Aqua North Carolina's responsibility for water quality begins at the source and includes all the public water distribution systems and ends at the user's service connection. If, in judgment of the Company, an approved backflow prevention device is necessary at the water service connection to any consumer's premise for the safety of the public water system, the Company shall give notice to the consumer to install an approved backflow device at each service connection to his premise. The consumer shall immediately install such approved device or devices at his own expense, and failure, refusal or inability on the part of the consumer to install such device or devices immediately shall constitute

grounds for discontinuing water service to the premise until such device or devices have been installed.

2. It is prohibited for any person, firm, or corporation at any time to make or maintain or cause to be made or maintained, temporarily or permanently, for any period of time, any cross-connection between plumbing pipes or water fixtures being served with water by Aqua North Carolina and any other source of water supply. It is also unlawful to maintain any sanitary fixture or other appurtenances or fixtures, which by reason of their construction may cause or allow backflow of water or other substances into the public water supply system and/or the service of water pipes or fixtures of any consumer of Aqua North Carolina.
3. This Cross-Connection Control Program is not designed to relieve any consumer from the independent responsibility of preventing contamination of the Company's water distribution system or to suggest that the Company should be responsible for abatement of cross-connections which may exist within the consumer's premise.
4. Aqua North Carolina has no responsibility over water systems on private property and takes no legal responsibilities for their safe operation.
5. In the event of accidental contamination or pollution of the Company's public water system, the consumer, if is so aware, shall *immediately notify* the Company so that the appropriate measures may be taken to contain and isolate the contaminate and/or pollutant. The liability for all costs related to a contamination incident rests solely with the consumer.
6. The responsibility for and all costs required to comply with the Company's Cross Connection Control Program rests solely with the consumer.
7. The use of the approved backflow prevention device at the water service connection does not in any way affect or eliminates the need for individual fixture devices or air-gaps as required by the North Carolina Building Code.

## SECTION II - DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of this Cross-Connection Control Program:

Air-Gap Separation (AG) means a physical break between a supply pipe and a receiving vessel. The air-gap shall be at least double the diameter of the supply pipe measured vertically above the flood rim of the receiving vessel, in no case less than one inch.

Approved Backflow Prevention Assembly (Device) means any testable assembly that is approved by one of the following: the Research Foundation for Cross Connection Control of the University of Southern California (USC), American Water Works Association (AWWA), American Society of Sanitary Engineering (ASSE), or American National Standards Institute (ANSI), or certified by the National Sanitation Foundation (NSF) to be in compliance with industry specifications, and the Company.

Auxiliary Supply means any water supply on or available to the premise other than the Company's public water supply.

AWWA Standard means an official standard developed and approved by the American Water Works Association (AWWA).

Backflow means the undesirable reversal of the normal flow of water or mixtures of water and other liquids, gases, or other substances into the distribution system of the public water supply due to backpressure and/or back siphonage.

Back-siphonage: Backflow resulting from a negative or reduced pressure in the water distribution supply.

Booster Pump means any device which is intended to increase the in-line water pressure.

Chemigation: Utilizing underground sprinkler systems to apply herbicides and pesticides.

Company in the context of this document, means 'Aqua North Carolina' as a company or an authorized agent or individual of Aqua North Carolina as a representative of the Company.

Containment: The term "containment" means that protection of the public water system is maintained by the application of a proper backflow prevention assembly on the line supplying water to a premise or building so that any contamination is contained within the premise and does not enter the pipelines of the Company's public water system.

Contamination: The term "contamination" means an impairment of the quality of potable water by sewage, industrial fluids, waste liquids, compounds or other materials to a degree which creates an actual or potential hazard to the public health through poisoning or through the spread of disease.

Cross-Connection means any arrangement whereby backflow can occur. The term "cross-connection" means any actual connection between a public water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome, and potable. By-pass arrangements, jumper connections, removable sections, swivel or changeover assemblies, or other assemblies

through which backflow could occur, shall be considered to be cross-connections. The term "direct cross-connection" shall mean a cross-connection that is subject to both back-siphonage and backpressure. The term "indirect cross-connection" shall mean a cross-connection that is subject to back-siphon only.

Consumer/Customer means the owner or person in control of any premises (billing account) supplied by or in any manner connected to a public water system.

Consumer's water system means any water system, located on the consumer's premises, supplied by or in any manner connected to a public water system. A household plumbing system is considered to be a consumer's water system.

Double Check Valve Assembly (DCV): The term "double check valve assembly" means an assembly of two independently operating approved check valves with tightly closing resilient seated shutoff valves at each end of the assembly and properly located test cocks.

Hazard, Degree of: The term "degree of hazard" can be categorized as:

Low Hazard	= Pollution Hazard (aesthetically objectionable)
High Hazard	= System Hazard (may cause damage to the system piping)
High Hazard	= Health Hazard (is a threat to the health of the water user)
Severe High Hazard	= Severe Health Hazard (presents a threat of death)

Hazardous Substance means a contaminant to the public water supply.

Health Hazard means 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 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 significant morbidity or death.

Interchangeable Connection means an arrangement or device that will allow alternate but not simultaneous use of two sources of water.

Internal Protection means the appropriate type or method of backflow prevention within the consumer's potable water system at the point of use, commensurate with the degree of hazard.

Non-potable Water means water not safe for drinking, personal, or culinary use.

Non-residential consumers: Refers to all consumers except for residential consumers.

Person means the state, any political subdivision, public or private corporation, individual, partnership, or other legal entity.

Pollution or Pollution hazard means an impairment of the quality of the water to a degree that does not create a hazard to the public health but does adversely and unreasonably affect the aesthetic qualities of such waters for domestic use.

Potable Water means water which is satisfactory for drinking, culinary, and domestic purposes and meets the requirements of the SDWA and NCDEQ.

Premise means any and all areas on a water user's property which are served or have the potential to be served by the public water system.

Pressure Vacuum Breaker means an assembly consisting of a spring-loaded check valve which closes tightly when the pressure in the assembly drops below one (1) PSI or when zero flow occurs, plus an air relief valve that opens to break a siphon when the pressure in the assembly drops to one (1) PSI.

Primacy Agency means the State Agency(ies) having authority or jurisdiction over cross connection control.

Process Fluids means any fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form of concentration such as would constitute a health, pollution, or system hazard if introduced into the public or a potable consumer's water system. This includes, but is not limited to:

- a) polluted or contaminated waters;
- b) process waters;
- c) used waters originating from the public water system which may have deteriorated in sanitary quality;
- d) cooling waters;
- e) contaminated natural waters taken from wells, lakes, streams, or irrigation systems;
- f) chemicals in solution or suspension;
- g) oils, gases, acids, alkalis, and other liquid and gaseous fluids used in industrial or other processes, or for firefighting purposes.

Public Water Supply or System means any publicly or privately-owned water system operated as a public utility under applicable local authority to supply water for domestic purposes.

Qualified Backflow Assembly Installer is a plumber licensed by the State of North Carolina or a plumber working under the direct supervision of a licensed plumber, who meets all applicable State requirements.

Qualified Backflow Assembly Tester must be certified by NCDEQ

Residential Consumer: Refers to a one, two or three family dwelling used solely for residential purposes.

Reduced Pressure Principle Backflow Prevention Assembly (RP) means an assembly consisting of two independently operating approved check valves together with a hydraulically operating, mechanically independent, pressure differential relief valve located between the check valves and at the same time below the first check valve. The assembly shall include properly located test cocks for the testing of the check and relief valves and tightly closing resilient seated shut-off valves at each end of the assembly.

Service Connection refers to the point of connection of a user's piping to the public water supplier's facilities.

Supplier of Water means the owner or operator of a public water system.

System Hazard means a condition posing an actual or potential threat of damage to the physical properties of the public water systems or a potable consumer's water system.

Used Water means any water supplied by the Company through its public water supply to a consumer's water system after the water has passed through the service connection and is no longer under the control of the Company.

Water Customer/Consumer means any person obtaining water from the Company's public water system owned or operated by the Company.

## SECTION III — BACKFLOW PROTECTION REQUIREMENTS

### General Provisions

1. An unprotected cross-connection to the public water supply is prohibited.
2. If, in the judgment of the Company the integrity of the public water system is or can be endangered by backflow from an actual or a potential cross connection within the plumbing system of a water consumer, the Company may order the installation of an approved backflow prevention method or device at the water service connection to the premise.
3. No water service connection shall be installed or maintained to any premise where actual or potential cross connections to the public potable or consumer's water system may exist unless such actual or potential cross-connections are abated or controlled to the satisfaction of the Company.
4. No connection shall be installed or maintained a connection between the public water system or consumer's water system and an auxiliary water system unless the auxiliary water system, the method of connection, and the use of such auxiliary water system has been approved by the Company and NCDEQ. An approved backflow prevention device shall be installed at any point of connection that is approved between a public water system or a consumer's water system.
5. This Cross-Connection Control Program is designed for contaminant protection of the Company's water distribution system. When a backflow device is required, the water consumer shall install, and tested prior to service being initiated or continued, at the consumer's expense, an approved backflow prevention assembly within 5' of the meter, on the consumer's side of the meter, as practicable and before any water line branching occurs, with the exception of underground sprinkler systems where the assembly may be installed on the branch line serving the sprinkler system when notified by the Company. The installation of the backflow assembly, when required, shall be a condition for continued service for existing consumers and before a new service will be granted. The installation of all backflow prevention assemblies required by this program must be performed by a Qualified Backflow Assembly Installer.
6. This Cross-Connection Control Program applies to all consumers of the Company.
7. As a general policy, the Company will not require testable backflow protection on residential consumers' water services. The Company may require testable backflow protection on residential consumers when any of the following conditions exist:
  - a. the premise has an auxiliary water supply;
  - b. the premise has an underground sprinkler system;
  - c. the premise has a private fire protection system that contains antifreeze, fire retardant or other chemicals and/or has a connection whereby water can be pumped into the system from any storage device and/or other source; or

- d. the premise has a reported history of cross connections being established or reestablished.
8. All non-residential commercial, industrial, and public authority facilities shall be evaluated for cross connection control and the need to have a testable backflow protection installed for containment.
9. Wherever backflow protection is determined to be required on a water supply line entering a water consumer's premise, all such water supply lines from the Company's mains entering such premise, shall be protected by an approved backflow prevention assembly.
10. Temporary unauthorized connections to the public water supply are prohibited and shall be reported to the Company immediately, unless authorized by the Company in writing. If a temporary connection is permitted the proper metering and backflow prevention assembly, as approved by the Company, will be required.
11. An approved backflow prevention device shall be installed on each service line to a consumer's water system serving, but not limited to, the following types of facilities:
  - a. Premises having an animal care or boarding facility
  - b. Premises having a beauty salon
  - c. Premises having a hospital, mortuaries, medical clinics, nursing homes, or dental office
  - d. Premises having a Laboratory (X-ray)
  - e. Premises having piers, docks, or a waterfront facility
  - f. Premises having a sewage treatment plant, sewage pump station, or stormwater pumping station
  - g. Premises having a food or beverage processing facility
  - h. Premises having a chemical plant
  - i. Premises having a metal plating industry
  - j. Premises having a petroleum processing or storage plant
  - k. Premises having radioactive material processing plant or reactor
  - l. Premises having a car wash facility
  - m. Premise having an auxiliary water system unless such auxiliary water system is accepted as an additional water source by the Company and the water source is approved by the NCDEQ.
  - n. Premises, because of security requirements or other prohibitions or restrictions make it impossible or impractical to conduct a complete Cross Connection Control Survey
  - o. Premises where any substance is handled in such a fashion as to create an actual or potential hazard to the public water supply system. This shall include systems having sources or auxiliary systems containing process fluids or waters originating from the public water system which is no longer under the control of the Water Company
  - p. Premises having internal cross-connections that, in the judgment of the Company, are not correctable or intricate plumbing arrangements which make it impractical or impossible to conduct a complete cross-connection survey
  - q. Premises determined by the Company to potentially be a severe health, health system or pollutant hazard to the Company's water distribution

system

### Type of Protection Required

1. The type of protection required by the Company shall depend upon the degree of cross-connection hazard which may exist as follows:
  - a. An approved air gap separation or an approved reduced pressure principle backflow prevention device shall be installed where the public water supply system may be contaminated with substances that are dangerous to the public health and could cause a severe health hazard.
  - b. An approved air gap separation or an approved reduced pressure principle backflow prevention device shall be installed where the public water supply system may be contaminated with substances that could cause a health or system hazard.
  - c. An approved air gap separation or an approved reduced pressure principle backflow prevention device or double check valve assembly shall be installed where the public water supply system may be polluted with substances that would be objectionable but not dangerous to health or may cause a pollution hazard.
2. The water consumer may choose a higher level of backflow protection than required by the Company.
3. The degree of hazard will be determined through the Cross-Connection Control Survey process, or the new customer review process. Situations will be considered on a case by case basis and the appropriate backflow protection shall be determined by the Company.

### Fire Protection Systems

1. Fire protection systems shall have a Post-Indicator-Valve (PIV) which can isolate the fire protection system from the Company's water system.
2. If the fire protection system has a fire department connection, the fire department connection shall be installed so as to prevent the water pumped into the fire department connection from being discharged into the Company's water system.
3. Fire protection systems shall be equipped, as a minimum, with a double check valve assembly equipped with a side leak detection meter.
4. All fire protection systems connected to the Company's water supply shall be protected using a RP unit when any of the following conditions exist:
  - a. The fire protection system contains antifreeze, fire retardant, or other chemicals;  
or
  - b. There is a connection whereby water can be pumped into the fire protection system from any other source or an auxiliary water system is used as a secondary source of water for a fire protection system provided:

- i.** At premises where the auxiliary water system may be contaminated with substances that could cause a system, health or severe health hazard, a public water system or a consumer's water system shall be protected against backflow by installation of an approved reduced pressure principal backflow device or an approved reduced pressure detector assembly;
- ii.** At all other premises, a public water system or a consumer's water system shall be protected against backflow by installation of an approved reduced pressure assembly, or an approved reduced pressure detector assembly, or an approved double check valve assembly.
- iii.** A public water system or a consumer's water system shall be the primary source of water for the fire protection system;
- iv.** The fire protection system shall be normally filled with water from a public water system or a consumer's water system;
- v.** The water in the fire protection system shall be used for fire protection only; with no other use of water from the fire protection system downstream from the approved backflow prevention device.

## SECTION IV - BACKFLOW PREVENTION ASSEMBLIES

### Backflow Prevention Assemblies

1. Only backflow prevention assemblies which are approved by one of the following entities shall be used: the Research Foundation for Cross Connection Control of the University of Southern California (USC), American Water Works Association (AWWA), American Society of Sanitary Engineering (ASSE), or American National Standards Institute (ANSI), or certified by the National Sanitation Foundation (NSF) to be in compliance with industry specifications and shall be of a model or construction approved by the Company.

### Backflow Prevention Assembly Installation

1. Installation will be in accordance with all applicable plumbing codes. The assembly should be located within 5' of the meter, on the consumer's side, and before any branching occurs, with the exception of underground sprinkler systems where the assembly may be installed on the branch line serving the sprinkler system. The consumer must not remove the meter. The assembly must be installed by a Qualified Backflow Assembly Installer. In addition, any backflow device required by these regulations shall be installed at a location and in a manner approved by the Company.
2. Backflow prevention assemblies shall be located in an area that provides a safe environment for testing and maintenance. The area should be easily accessible, dry, and free from dirt/debris, extreme cold, heat, and electrical hazards.
3. When Double Check Valve Assemblies are installed in pits or vaults, the pit or vault shall be of watertight construction, be so located and constructed as to prevent flooding and shall be maintained free from standing water by means of either a sump pump or a suitable drain. The sump and/or drain must be sized to accept the full flow of the device during testing and/or failure of testing. Such sump pump or drain shall not be connected to sanitary sewer nor permit flooding of the pit or vault by reverse flow from its point of discharge. An access ladder and adequate natural or artificial lighting shall be provided to permit maintenance, inspection and testing of the backflow prevention device.
4. If an uninterrupted supply of water is required to a facility, backflow assemblies shall be installed in parallel to allow for testing and maintenance.
5. Backflow prevention devices should be sized hydraulically taking into account both the volume requirements of the service and the pressure drop through the assembly. A pressure loss through the backflow prevention assembly will be experienced by the consumer. The pressure reduction varies with the size and type of assembly installed. The consumer will be responsible for providing any increase in pressure required as a result of the pressure loss through the backflow prevention assembly while not creating a negative impact on the Company's public water system. The company shall determine the definition of negative impact.
7. Installation of a backflow prevention assembly will create a "closed" piping system within the premise being served. This "closing" of the system can cause periodic high pressure if the system includes a water heating device. The result may be an unacceptable high-pressure condition known as Thermal Expansion which is a

potential hazard. Pressure buildups as a result of heating or other means will not be alleviated through the backflow assembly. Consumers are responsible for insuring that temperature/pressure relief valves are installed on their plumbing systems and that they are maintained in good working condition.

8. The need for replacement of existing backflow prevention assemblies that do not meet all of the above installation requirements will be determined by the Company on a case by case basis.
9. Reduced pressure principle backflow prevention devices shall be installed above ground level or floor level, whichever is higher.

#### Backflow Prevention Assembly Testing and Maintenance

1. The owner(s) of any premise on which, or an account in which, a backflow prevention assembly is installed, shall be responsible for having the assemblies tested by a Qualified Backflow Assembly Tester. A backflow prevention assembly shall be tested after installation, relocation or repair, and once every twelve months, thereafter, unless more frequent testing is required by applicable state/local regulations. The Company may require a more frequent testing schedule if determined to be necessary. No assembly shall be placed in service unless it is functioning as required and an assembly shall be serviced, overhauled, or replaced whenever it is defective.
2. The Company will notify affected consumers by mail when testing of an assembly is needed and also supply the affected consumer with the necessary form that shall be completed each time an assembly is tested, relocated, or repaired.
3. It shall be the duty of the consumer at any premise on which backflow prevention devices required by these regulations are installed to have inspections, test, and overhauls made in accordance with the following schedule, or more often where inspections indicate a need
4. Air gap separations shall be inspected at the time of installation and at least every twelve months thereafter;
5. Double check valve assemblies shall be inspected and tested for tightness at the time of installation and at least ever twelve months thereafter.
6. Reduced pressure principle backflow prevention devices shall be inspected and tested for tightness at the time of installation and at least every twelve months thereafter.

7. Inspections, tests, and overhauls of backflow prevention devices shall be made at the expense of the water consumer and shall be performed by a person approved by the Company as qualified to inspect, test and overhaul backflow prevention devices.
8. Whenever backflow prevention devices required by these regulations are found to be defective, they shall be repaired, overhauled or replaced at the expense of the consumer without delay.
9. The water consumer shall maintain a complete record of each backflow prevention device from purchase to retirement. This record shall include all tests, inspections, repairs and overhauls. Records of inspections, tests, repairs and overhaul shall be submitted to the Company.
10. Backflow prevention devices shall not be bypassed, made inoperable, removed or otherwise made ineffective without specific written authorization by the Company.

#### Backflow Prevention Assembly Relocation, Repair or Replacement

1. Written approval must be obtained from the Company before a backflow prevention assembly is relocated or permanently removed.
2. Relocation: An assembly may be relocated following confirmation by the Company that the relocation will continue to provide the required protection and satisfy installation requirements. Removal and reinstallation of the assembly must be done by a Qualified Backflow Assembly Installer. A test is required following the relocation of the assembly.
3. Repair/Replacement: An assembly may be removed for repair or replacement, provided the service line is shut off and water use is discontinued until the repair/replacement is completed and the assembly is tested and found to be operating correctly. Alternatively, the service connection may be equipped with other temporary backflow protection, approved by the Company, if continuous service is required. Repair or replacement of the assembly must be done by a Qualified Backflow Assembly Installer. All replacement assemblies shall be of a model or construction approved by the Company and must be commensurate with the degree of hazard present. A test is required following the repair or replacement of the assembly.

## SECTION V - ADMINISTRATIVE PROCEDURES

### New Customers

1. All new customers applying for service taps, including residential, will be evaluated at the time of service application for the type of backflow assembly required to be installed. The Company reserves the right to inspect the customer's plumbing before service is rendered. Compliance with this requirement will be a condition of water service. Customers determined to need a backflow prevention assembly will be informed by letter of the type of assembly to install. Installation of backflow prevention assemblies shall be in accordance with this manual and all State and local plumbing codes.

### Cross Connection Control Survey (Survey)

1. A Cross Connection Control Survey (Survey) of non-residential consumers will be conducted on a periodic basis, not to exceed ten (10) years or each time there is a change in the water consumer occupying a non-residential premise. The Survey of nonresidential customers will be repeated every ten (10) years except for those customers who have devices installed that are tested annually as required by law and test reports on those devices are received by Aqua North Carolina and kept current.
2. The Aqua North Carolina Cross Connection Control Survey Questionnaire form will be mailed every ten (10) years to non-residential consumers. A notice letter will be sent to non-residential consumers with the Cross-Connection Control Survey form attached.
3. The Cross-Connection Control Survey will be used to determine the following:
  - a. If the consumer meets the requirements for the installation of a backflow prevention device
  - b. The need for an upgrade in the level of backflow prevention at the facility
  - c. The need for a follow-up inspection of the facility
  - d. The need for the existing backflow prevention assembly to be entered into the TOKAY data management system.
4. Based upon the results of the Survey one or more of the Consumer Notification Letters may be sent to the premise/facility.
5. Upon request by the Company, or its authorized representative, the consumer shall furnish information on water use practices within his premise.

6. It shall be the responsibility of the water consumer to conduct periodic surveys of water use practices on his premise to determine whether there are actual or potential cross connections in his water system through which contaminants or pollutants could backflow into the consumers water system or the Company's public water system.

#### Cross Connection Control Survey Follow-Up

1. Consumers who fail to respond to the initial Survey letter and questionnaire within 60 days will be mailed a follow-up letter allowing them an additional 45 days to complete the questionnaire. Consumers who have not responded after the additional 45 days will be mailed a third and final request to complete the Survey questionnaire within 30 days or be considered to be in need of an RP assembly on their incoming service line(s). If they still do not respond and move to comply, their water service may be disconnected. Termination procedures shall be conducted in accordance with all applicable consumer service rules and regulations for such actions.
2. Those consumers who respond to the Survey and are determined from the information provided by the consumer not to need a backflow prevention device will have their account so annotated.
3. Those consumers who respond to the Cross-Connection Control Survey and indicate there are backflow prevention devices installed on their plumbing systems that are required to be tested, such as RP or DC, will be notified by letter of the requirement for testing once every twelve months by a Qualified Backflow Assembly Tester. The consumer will also be informed that a copy of the test must be sent to the Company for its files.
4. Consumers who respond to the Survey and based on the information provided by the consumer, appear to be in need of backflow prevention devices on their service lines, will be mailed a letter requiring the consumer to have a qualified backflow assembly installer inspect their systems and install if required, a backflow assembly.

#### Consumer Notification - Assembly Installation

1. The Company will notify the water consumer by mail of the need to install a backflow assembly. The consumer will be given 60 days from the date of the letter to install the assembly, unless applicable regulations require a different time frame.
2. If the water consumer does not install the backflow assembly within the required amount of time a second notice will be sent, to each water consumer who does not install the required assembly(s).
3. If no action is taken within 30 days after the due date a third and final notice will be sent requesting compliance and informing the water consumer of the Company's intent to discontinue service if no action is taken within 15 days.
4. Termination procedures shall be conducted in accordance with all applicable consumer service rules and regulations for such actions, to include installation, testing, and reconnection fee where applicable.

### Consumer Notification — Annual Testing and Maintenance

1. The Company will send letters at least 30 days in advance of the annual due date to notify each affected water consumer when it is time for the backflow prevention assembly installed on their service connection to be tested. The consumer will be required to have the assembly tested by the annual due date unless applicable regulations require a different time frame.
2. A second notice will be sent to each water consumer that does not complete the required backflow prevention assembly test within 30 days of the date prescribed in the first notice.
3. If no action is taken within 60 days after the due date a third and final notice will be sent requesting compliance and informing the water consumer of the Company's intent to discontinue service if no action is taken within 30 days.
4. Termination procedures shall be conducted in accordance with all applicable consumer service rules and regulations for such actions.

### Consumer Notification - Assembly Failure

1. If the Company receives a backflow assembly test result indicating the assembly failed the annual test a letter will be sent to the water consumer requiring the assembly to be repaired or replaced and tested. The consumer will be given 60 days to have the assembly repaired, replaced, and retested, unless applicable regulations require a different time frame.
2. A second notice will be sent to each water consumer that does not complete the required assembly repair and assembly test within 30 days of the date prescribed in the first notice.
3. If no action is taken within 30 days after the due date a third and final notice will be sent requesting compliance and informing the water consumer of the Company's intent to discontinue service if no action is taken within 15 days.
4. Termination procedures shall be conducted in accordance with all applicable consumer service rules and regulations for such actions, to include testing, installation of devices, and reconnection fee where applicable.

### Consumer Notification - Upgrade of Backflow Prevention Assembly

1. If a water consumer's backflow prevention assembly is determined by the Company to be insufficient for the level of protection required, the Company will send a notice to the water consumer requesting the assembly be replaced with an approved backflow prevention assembly of a type specified by the Company. The consumer will be given 60 days to replace and test the assembly, unless applicable regulations require a different time frame.

2. A second notice will be sent to each water consumer that does not complete the required assembly replacement and test within 30 days of the date prescribed in the first notice.
3. If no action is taken within 30 days after the due date a third and final notice will be sent requesting compliance and informing the water consumer of the Company's intent to discontinue service if no action is taken within 15 days.
4. Termination procedures shall be conducted in accordance with all applicable consumer/customer service rules and regulations for such actions.

#### Dispute Resolution

1. If a consumer disagrees with the Company's requirements to install a backflow prevention device, the consumer has the option, at their expense, to have their plumbing system inspected by a Qualified Backflow Assembly Tester. In order to have the Company withdraw the requirements to install a backflow prevention device, the Qualified Backflow Assembly Tester must provide the Company a signed letter stating the consumer's plumbing system is in compliance and does not possess an actual or potential cross-connection that may allow or cause contamination to the public water supply. The Company will review this additional information but reserves the right to make the final decision to protect its water supply.

## **SECTION VI - WATER SERVICE TERMINATION**

### General

1. When the Company encounters a water consumer connection that represents a clear and immediate hazard to the public water supply, and the hazard cannot be immediately abated, the Company shall immediately institute the procedures for discontinuing the water service. The Company will notify the water consumer of the reasons for discontinuing the water service and the corrective action to be taken by the water consumer before the service can be restored. This will be done in accordance with all applicable consumer service rules and regulations.

### Basis for Termination

1. Conditions that create a basis for water service termination shall include, but are not limited to, the following items:
  - a. Refusal to install a required backflow prevention assembly,
  - b. Refusal to test a backflow prevention assembly,
  - c. Refusal to repair a faulty backflow prevention assembly,
  - d. Refusal to replace a faulty backflow prevention assembly,
  - e. Direct or indirect connection between the public water system and a sewer line,
  - f. Unprotected direct or indirect connection between the public water system, and a system or equipment containing contaminants,
  - g. Unprotected direct or indirect connection between the public water system and an auxiliary water system, or
  - h. A situation that presents an immediate health hazard to the public water system.

### Water Service Termination Procedures

1. Termination procedures will be conducted in accordance with all the applicable consumer/customer service rules and regulations for such actions.