CITY OF COVINGTON

CROSS-CONNECTION CONTROL PROGRAM

Original: September 1996
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Prepared by:

Carter & Sloope

CONSULTING ENGINEERS

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Jeffrey W. Cown, Director

Watershed Protection Branch
2 Martin Luther King, Jr. Drive
Suite 1470A, East Tower
Atlanta, Georgia 30334
404-463-1511

February 11, 2025

Ms. Jen Lomas
Carter and Sloope, Inc.
1031 Stonebridge Pkwy.
Watkinsville, Georgia 30677

Re: **Cross Connection Control Plan**
Covington Water System (WSID# 2170001)
Newton County

Dear Ms. Lomas,

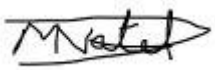
The Georgia Environmental Protection Division (EPD) Drinking Water Permitting and Engineering Unit has reviewed the Cross Connection Control Plan and related documents prepared by Carter and Sloope, Inc.

Based on a though review, the Plan meets Section 391-3-5-.13 of the Georgia Rules for Safe Drinking Water, Part 12.8 Cross Connection of the Georgia Minimum Standards for Public Water System March 2021. Although the plan has been approved, the water system must adhere to the following conditions:

- The Plan must be implemented immediately upon receipt of approval as required by Rule 391-3-5-.13(5) of the Georgia Rules for Safe Drinking Water.
- The Backflow and Cross Connection devices used within the distribution system must conform with the American Water Works Association (AWWA), Manual 14, and the U.S. Environmental Protection Agency (EPA) Cross-Connection Manual.
- The backflow preventers and cross-connections devices must be tested at least once a year, and the water system must maintain records as required by 391-3-5-.13(9) of the Georgia Rules for Safe Drinking Water.

Should you have any questions concerning this letter, please contact Asmita Patel at asmita.patel@dnr.ga.gov or phone: (470) 524-0552.

Sincerely,



Manny Patel
Drinking Water Program Manager

Table of Contents

Section 1 – DEFINITIONS

Backpressure – A condition in which the Owner's system pressure is greater than the supplier's system pressure.

Back siphonage – The flow of water or other liquids, mixtures, or substances into the distribution pipes of a potable water supply system from a source other than its intended source caused by the sudden reduction of pressure in the potable water supply system.

Cross-Connection Pressure Type – An installation where a potable water supply pipe is connected to a closed vessel, or a piping system, that does not contain potable containment water, and which is above atmospheric pressure.

Customer – Any and all persons, including any individual firm or association, and any municipal or private corporation organized or existing under the laws of this or any other state or country having a serving connection to the Public Water Supply.

Double Check Valve Assembly – An assembly of at least two independently acting check valves in separate housings.

Dual Check Valve Assembly – An assembly of at least two independently acting check valves in a single housing.

Inter-connection – Any system of piping or arrangement whereby the Public Water Supply is connected directly with a sewer, drain conduit, pool, storage reservoir, or other device which does or may contain sewage or other waste, or liquid which would be capable of importing contamination to the Public Water Supply.

Isolation – Installation of an appropriate device at the source of a Cross Connection on a premises to prevent backflow or back siphonage.

Non-pressure – See back siphonage

Person – Any and all persons, including any individual firm or association, and any municipal or private corporation organized or existing under the laws of this or any other state or country.

Pollutant – A non-toxic substance that if introduced into the potable water supply would be objectionable but would not create a health hazard.

Pressure – See back pressure.

Public Water Supply – The City of Covington water works system furnish water to the City of Covington being recognized by the Department of Natural Resources/Environmental Protection Division as the Public Water Supply.

Reduced Pressure Backflow Prevention Device – A reduced pressure principal backflow prevention device is a device that consists of two spring-loaded independently acting check valves with an intermediate, or reduced pressure zone draining to the atmosphere by an independently acting relief valve.

Unscheduled Testing – Testing of a backflow prevention device at a time other than the required annual inspection. These inspections will be performed whenever there is a reason to believe a backflow prevention device has failed.

Vacuum Breaker – A general term applied to a back siphonage prevention device that introduces air into the potable water system.

Vacuum Breaker Atmospheric Type – A vacuum breaker designed for use under flow conditions only, not to exceed 24 consecutive hours, and where it will be subject to no static pressure, and no back pressure.

Vacuum Breaker Hose Type – A vacuum breaker designed for hose connection only. It is not approved for continuous pressure, static or flowing.

Vacuum Breaker Pressure Type – A vacuum breaker designed to operate under continuous pressure: static or flowing, but no back pressure.

Section 2 – PURPOSE, RESPONSIBILITIES, and PROCEDURES

2.1 PURPOSE

To prevent the entry of contaminants or pollutants into any area of the potable water supply through the control of cross-connection. Control shall be accomplished by isolating potential sources of contaminants or pollutants on the customer's premises and or protecting the public supply by isolation and containment at the service connection.

2.2 APPLICABILITY

The provisions of the Cross-Connection Control Program for backflow prevention by isolation and containment are applicable to any customer or system supplied by the public distribution system including irrigation sprinklers, fire protection systems, residential systems, and other service connections.

This document is a supplement to the City of Covington Code of Ordinances Chapter 13.28. The provisions of the International Plumbing Code, current edition, shall apply to all facilities subject to this Cross Connection Control Program.

2.3 RESPONSIBILITIES

2.3.1 The Mayor and City Council of the City of Covington are responsible for establishing regulations regarding the control of cross-connections to the public distribution system.

2.3.2 The City Water Resources Department is responsible for enforcing certain of these regulations in an effort to protect the Public Water Supply system through the prevention of backflow by back pressure and/or back siphonage of contaminants or pollutants. This responsibility begins with ethe production of water and extends throughout the distribution system to the service connection, applying to new construction as well as to existing customers and situations.

2.3.3 The City Building Inspection Department – The Building Inspection Department is responsible for enforcing the City's adopted plumbing code regulations in an effort to prevent backflows on customer's premises from entering the customer's own potable water system. As with the Water Resources Department this responsibility extends to both new and existing customers.

2.3.4 Water Resources Department is responsible for reviewing appeals of decisions made by the cross-connection control manager and implementing the public awareness program.

2.3.5 The Water Customer is responsible for complying with the city regulations including maintenance, testing, and reporting on certain devices. When requested, customers are to allow on-site inspections to verify compliance with the City's Cross Connection Control Program. The customers also have the dual responsibility for protecting the water in their own system from degradation due to conditions originating on their premises and for protecting the quality of water in the public distribution system. The customer is liable for any health hazard due to backflow from unprotected cross connections on their premises. When a backflow preventer is required at the service connection, the customer is responsible for the costs of procurement, installation, testing, and maintenance.

2.3.6 The Cross Connection Control Program Coordinator is responsible for ensuring that all backflow prevention measures outlined in the City's Standard Details included in the Minimum Development Standard are adhered to, and that all aspects of the Cross-Connection Control Program are correctly implemented. The CCCC is also responsible for maintaining electronic records of all aspects of the Cross-Connection Control Program.

2.3.7 It is illegal for any person to introduce any substance into the Public Water System or to have a cross-connection with the Public Water System that has the potential for introducing a contaminant

into same, except for those substances or connections required by the City for treatment of water. As used in this Regulation, "cross-connections with a potential for introducing a contaminant to the Public Water System" shall be those cross-connections that have been determined in accordance with the provisions of this Regulation to create a potential hazard to the Public Water System or that do, in fact, result in the introduction of a contaminant to the Public Water System.

2.3.8 Any person who violates the provisions of this article shall, upon conviction thereof by the recorder, be punished as provided in O.C.G.A. Section 12-5-193 of the Georgia Safe Drinking Water Act of 1977. Further, without limiting the foregoing, after such notice as may be appropriate under the circumstances (considering the opportunity for reasonable notice to the customer owning or using a water supply in violation of this chapter versus the danger of the health and welfare of all other persons connected to the Public Water System), any cross-connection maintained in violation of this article shall be disconnected from the Public Water System at the direction of the City of Covington or authorized representative of EPD. Once a disconnection is made in accordance with this document, same shall not be reconnected to the Public Water System until the offending person's water systems and all interconnections or potential interconnections thereto have been fully inspected and found to be in compliance with this chapter and the rules and regulations promulgated hereunder

2.4 PUBLIC AWARENESS

General methods that the Water Resources Department may use to inform customers of the potential dangers from illegal and improper cross-connection include the following.

2.4.1 Written descriptions of potential cross-connection locations and the need to protect the public water system would be included as special interest articles for newspaper and local publications.

2.4.2 Providing speakers for civic clubs, political bodies and other functions.

2.4.3 Providing information pamphlets to be distributed at schools and other locations.

2.4.4 Displaying cross-connection control information on the government channel of the local cable TV.

2.5 RESOURCES FOR IMPLEMENTATION

2.5.1 New Construction Plan Review

2.5.1.1 Both the Water Resources Department and Building Inspection Department shall review all plans for new construction.

2.5.1.2 Both the Water Resources Department and Building Inspection Department shall advise developers of regulations in advance and determine that appropriate protection measures and devices are proposed. Devices required by either the Water Resources Department or Building Inspection Department will be installed at the developer, builder, or owner’s expense.

2.5.1.3 New construction will be inspected for City plumbing code compliance by the City of Covington Building Inspection Department to determine that individual cross-connections are isolated from the Public Water Supply.

2.5.1.4 The Water Resources Department will inspect all new service connections for cross connection control compliance, determine the degree of hazard to the public supply, and assign the customer to a risk category as described in AWWA Manual M14. The Water Resources Department will refuse service in cases of non-compliance.

2.5.2 Existing System Customers

2.5.2.1 The Cross Connection Control Program Manager or duly authorized representative will identify, by on site inspection, those existing customers or connections to the public supply which represent potential hazards.

2.5.2.2 Customers will be identified and a priority ranking of high, medium, or low hazard assigned. Hazard levels will be assigned with respect to the likelihood and consequence of backflow on the site as described in AWWA Manual M14.

2.5.2.3 Letters will be mailed by the Cross Connection Control Manager to identified potential cross-connection customers defining cross-connections and indicating the City intends to restrict such connections by requiring the installation of backflow prevention devices. The City will provide assistance to the owner by providing a listing of persons or companies approved by the Water Resources Department to install and test back flow prevention devices. Customers may appeal their classification to the Water Resources Department.

2.5.2.4 The City will discontinue service in cases of non-compliance.

2.5.2.5 When any property with an affixed building, structure, facility, etc is bought, sold, or otherwise changes ownership, and has an existing or proposed water service connection(s), the owner(s), buyer(s) or interested party(ies) shall be responsible to have the aforementioned property brought into compliance with all backflow prevention regulations herein prior to the execution of the sale of the property.

2.5.3 Management and Record Keeping

2.5.3.1 The Water Resources Department has a designated Cross-Connection Control Program Manager. The program manager will perform site inspections, record keeping, and the sending out of various notifications to customers.

2.5.3.2 The City has established a Water Resources Department to review disputed risk classifications, review regulations and implement the public awareness program.

2.5.3.3 The City has invested in a computer system for the purpose of maintaining maintenance records and managing the Cross-Connection Control Program.

2.5.3.4 The City will track the location of high-risk customers and the valves necessary to isolate them on a water system map.

2.6 EMERGENCY NOTIFICATION PROCEDURES

City of Covington personnel shall use the following notification procedures in the event of a backflow incident.

2.6.1 Notification of City of Covington Personnel in the following order:

1. City Manager
2. Utility Director
3. Cross-Connection Control Manger

2.6.2 EPD Notification:

Notify the Environmental Protection Division. The EPD Emergency Response Program Phone Number is 1-800-241-4113. The current EPD Emergency Response Manager is John Maddox (770/387-4936.)

2.6.3 City of Covington Additional Services Notification:

2.6.3.1 Health Department Personnel:

Health Department Personnel will be notified and requested to respond in the event of an emergency, so that they may assist with the identification and treatment of the contamination.

2.6.3.2 Building Inspectors:

Building Inspectors will be notified and requested to assist in the locating of contamination sources.

2.6.4 Water Treatment Plant Personnel Notification:

Water Treatment Plant Personnel shall be notified as to type of emergency so that they may assist in the location, identification, and correction of any cross-connection which may affect the supply system. Laboratory personnel from the plant will be required to take samples of the contaminated water for analysis.

2.6.5 Public Notification:

If an incident or emergency warrants, water customers in the immediate area of the contamination shall be contacted at their residence in person. The following person(s) are authorized to release statements to the public or news media and shall be in charge of handling the emergency in the order listed below.

- Covington City Manager
- Water Resources Department Manager
- Public Relations Officer

2.6.6 Adjoining Water Systems:

Adjoining water systems shall be notified as to the type of emergency so that they may assist in the location, identification, and correction of any cross-connection which may affect their system.

2.7 EMERGENCY IMPLEMENTATION PROCEDURES

2.7.1 Initial Response

The first City personnel on the scene of the suspected backflow incident shall obtain the following information for transmission to the Cross-Connection Control Manager.

1. Location, time, date of incident
2. Name of person(s) or company and phone number
3. Type of material involved, if known
4. Physical description of contamination. Color of water, odor, taste?
5. Is any City, County, or Water Resources Department personnel on the scene of the incident, (Fire, Police, Pollution Control, etc.)

2.7.2 Mobilization

2.7.2.1 During normal working hours, all radio transmissions shall cease except for necessary emergency use. Base stations shall be notified by the Water Resources Director or his designated agent(s).

2.7.2.2 Service crew or crews shall be dispatched to the scene.

2.7.2.3 Service crews shall locate, operate and turn off customer water service at the meter for all customers in the immediate contaminated area.

2.7.2.4 Service crews shall be prepared to close all necessary valves to isolate a section of the distribution system when instructed to do so. If the distribution system is contaminated, the contamination shall be contained in the smallest area possible.

2.7.2.5 Service crews shall go door to door in the contaminated area warning customers that the water supply may be contaminated. Customers that are not home or do not respond shall have their water turned off at the service connection and a note left on their door explaining that their water may be contaminated and has been turned off.

2.7.2.6 A laboratory technician shall be dispatched to the backflow site. The laboratory technician shall collect the necessary samples after the customer's meters and fire service valves have been turned off and make provision for further testing if there is a significant change in chlorine residual. Samples will be sent to the stee lab for identification of the contaminant.

2.7.3 Remedy

After the contaminant and the source of contamination are identified, the following isolation procedures are to be followed:

2.7.3.1 Disconnect cross-connection.

2.7.3.2 Turn off water at the service connection of customer responsible for the backflow emergency.

2.7.3.3 Turn off all drinking fountains in the building (if applicable.) Emergency workers will sometimes forget and drink from contaminated fountains if they are not turned off.

2.7.3.4 Flush distribution system until lab tests show the contaminant to be at a safe level for human consumption.

2.7.3.5 Once the water in the distribution system is shown to be safe, restore service to customers previously disconnected. Provide information sheet to affected customers informing them of the procedures for flushing the lines within their residence.

2.7.3.6 Inform customer that was the source of the backflow that water service will not be restored until the cross-connection that caused the contamination is eliminated and the backflow protection device has been tested and certified by a person or company approved by the Cross Connection Control Program Coordinator.

SECTION 3-SELECTION, APPROVAL AND INSTALLATION OF DEVICES

3.1 SELECTION

Vacuum breakers and backflow preventers shall be selected based on the level of risk that each customer represents. The level of risk (high, medium or low) will be determined by the degree of hazard and the type of cross-connection on each premise in accordance with AWWA Manual M14. The degree of hazard shall be determined by whether the impurities involved are contaminants or pollutants and by the type of cross-connection whether it is non-pressure or pressure (see Definitions Section).

3.1.1 High risk customers shall be required to install an approved reduced pressure zone backflow preventer and have the device tested for proper operation immediately after installation and annually thereafter.

3.1.2 Medium risk customers shall be required to install an approved double check backflow preventer and have the device tested for proper operation immediately after installation and annually thereafter.

3.1.3 Low risk customers shall be required to install an approval dual check backflow preventer.

3.1.4 As a minimum requirement, all commercial services will be required to install a Double Check Valve Assembly, unless otherwise determined by the CCCC.

NOTE: 2006 International Plumbing Code Section 608.16.5 requires that "potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer."

3.1.5 Each device shall have a brass identification tag, securely attached with corrosion-resistant mechanical fasteners, and/or be embossed to notate the manufacturer's name, serial number, model number, size, and maximum working pressure and temperature.

3.1.6 Explanation of Devices

The purpose of certain checking devices used, or likely to be used, is outlined below to call attention to those that are approved for use as backflow-prevention devices and those that are not.

3.1.6.1 Directional Check - to provide directional flow only. NOT an approved backflow prevention device.

3.1.6.2 Alarm Check - to signal an alarm, to summon the fire department, etc., when a sprinkler head flows water. NOT an approved backflow prevention device.

3.1.6.3 Single Detector Check - to detect unauthorized use of water for other than fire service, to detect leaks in fire protection systems, and with by-pass check, to provide flow. NOT an approved backflow-prevention device.

3.1.6.4 Double Check Valve (DCV) - to prevent backflow of polluted water into a potable water supply system and to provide directional flow. Approved for use with full-service master or fire meters on a Combination service connection only.

3.1.6.5 Double Detector Check (DDC) - to prevent backflow of polluted water from a fire protection system into a potable water supply system, to detect unauthorized use of water, to

detect leaks in the fire protection system, and to provide directional flow. Approved for use on a dedicated service connection.

3.1.6.6 Reduced Pressure Principal Assembly (RP) - to prevent backflow of contaminated water into a potable water supply system and to provide directional flow. Approved for use on a Combination service connection.

3.1.6.7 Reduced Pressure Detector Check (RPDC) - to prevent backflow of contaminated water from a fire protection system into a potable a potable water supply system, to detect unauthorized use of water, to detect leaks in the fire protection system and to provide directional flow. Approved for use on a dedicated service connection.

3.1.7 Single Detector Checks

Single detector checks that are used on non-hazardous fire protection systems Class 1, 2, or 3 may not be considered as a component part of a DDC backflow preventer. Specifically, the addition of a second single check to one of these devices shall NOT be substituted for a Double Detector Check (DDC) assembly that is approved for backflow-prevention.

3.1.8 Approved DDC And RPDC

It is the intent that the approved Double Detector Check (DDC) backflow preventer be in lieu of, not in addition to, the two checking devices already required in the supply to Class 1and 2; or the double check valve BFP already required on Class 3 non-hazardous systems, and that the approved Reduced Pressure Detector Check (RPDC) be in lieu of the RP already required on hazardous systems. The only additional checking device intended is a ¾-inch Double Check Valve (DCV) or, Reduced Pressure Principal Assembly (RP) in the ¾-inch copper bypass line, in conjunction with the bronze detector meter.

3.1.9 Shut-Off Valves

The two shut-off valves required for periodic testing of the backflow-prevention device shall be OS&Y, FDA approved fused epoxy coated inside and out, with resilient seats and the inlet valve shall include an approved test cock on the upstream side. All components shall be listed for fire protection service by Underwriters Laboratories and Factory Mutual.

3.2 APPROVAL OF DEVICES

All vacuum breakers and backflow preventers shall be approved by the Cross-Connection Control Manager in accordance with the applicable standards of the City of Covington Water & Sewer System Standards and Specifications, American Society of Sanitary Engineering (ASSE), the American National Standards Institute (ANSI), the American Water Works Association (AWWA), International Plumbing Code, Georgia State Plumbing Code and the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (USC FCCCHR), current editions. A listing of approved devices shall be made available to customers upon request.

3.3 INSTALLATION OF DEVICES

3.3.1 Vacuum breakers and backflow preventers equipped with atmospheric vents, or with relief openings, shall be so installed and so located as to prevent any vent or any relief opening from being submerged. They shall be installed in the position as recommended by the manufacturer and shall be protected from freezing. Pipelines shall be thoroughly flushed prior to installation of the device to ensure that no dirt or debris is delivered to the assembly. All devices shall be installed where they may

be easily accessed for testing and maintenance with adequate clearance to facilitate disassembly, repairs, testing and or maintenance. Protection from freezing shall be provided for all devices.

3.3.2 Location of all backflow prevention devices shall be in an area that provides a safe working environment for the testing and maintenance. The area shall be readily accessible, dry and free from dirt, extreme cold, heat, and/or electrical hazards.

3.3.3 Installation of all backflow prevention devices shall be in accordance with the following procedures: Georgia State Plumbing Code, USC FCCCHR Manual of Cross Connection Control (Current Edition), and AWWA Manual 14 (Current Edition). Containment installations shall be made by a duly licensed plumber, mechanical and/or utility contractor and as approved by the City of Covington.

3.3.4 When a dual or double check valve backflow preventer is used in the containment concept, it shall be installed at or as close to the service connection as practical, in an approved meter box, covered vault or insulated enclosure. All devices shall be downstream of water meters.

3.3.5 When a reduced pressure principal backflow preventer is used in the containment concept, it shall be above ground in a structure that is protected from freezing. Existing RP's that are located inside buildings are still under the City of Covington jurisdiction and subject to periodic inspections and testing by authorized representatives.

3.3.6 When an existing backflow preventer is inside a structure, it shall be unlawful to tap into such service pipe between the backflow preventer and the service connection. Any branch connection(s) on an existing service pipe shall be permanently disconnected or equipped with a backflow preventer(s) commensurate with the degree(s) of hazard.

3.3.7 Facilities required to have a continuous uninterrupted water supply shall install backflow prevention devices in parallel for testing and maintenance purposes. In no case shall a bypass arrangement be installed unless it is equipped with an approved backflow prevention device.

3.3.8 All devices shall be installed in the position as recommended by the Manufacturer, and as prescribed in the following:

3.3.8.1 Backflow Preventer Dual Check Valve (DuCV) *Low Risk Category* – This device shall not be buried in earth but may be installed below ground in a meter box. A positive shut-off valve shall be installed near the inlet side of the device and unions shall be provided on each and to provide for removal.

3.3.8.2 Backflow Preventer, Double Check Valve (DCV) *Medium Risk Category* – This assembly shall not be buried in the earth but models with top and\or side access to both checks may be installed below ground as provided above. When below ground, minimum depth 6" to top of the device and maximum depth 18" to top of the device, a flange or swivel coupling nut shall be on the inlet and outlet sides of the checking device and all assembly bolts on bronze DCV's so installed shall be resistant to electrolysis. A full port valve in sizes through 2 inch, and 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 ball valve test cocks and a fourth test cock shall be provided on the upstream side of the inlet shut-off valve. Sizes through 2 inch shall be provided with test cocks in the vertical position. All test cocks to be provided with plastic or brass, plugs or caps. No intervening connection(s) shall be between the shut-off valves and the backflow preventer. All DCV's shall have 4" to 6" of gravel under the device as well as 4" to 6" of clearance from the top of the gravel to the bottom of the device. Any and all openings or cracks shall be filled with insulating foam.

3.3.8.3 Backflow Preventer, Reduced Pressure Zone (RPZ) *High Risk Category* – This device shall not be installed below ground unless approved by CCCPC. Where relief valve discharge could cause water damage, it shall be piped via an air gap, or a funnel at the vent/relief port, to a floor drain or other approved location. Resilient-sub valves shall be near the inlet and outlet sides of the device, and three approved test cocks provided on the device. A fourth test cock shall be proved on the upstream side of the inlet shut-off valve. A bronze strainer with 20-mest stainless steel screen shall be included between the inlet shut-off valve and the device. No intervening branch connection(s) shall be between the shut-offs and the backflow preventer.

When the reduced pressure zone device is installed in a line subject to periodic no-flow conditions, and supply pressure subject to fluctuations, an auxiliary directional check with soft disc, capable of functioning in any position the BFP might be installed in, shall be proved between the inlet shut-off valve and the BFP head to lock the supply pressure in, and prevent discharge through the vent/relief port. Make-up lines to chilled water systems and hydronic heat 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 RPZ device, 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 case, the auxiliary directional check would not be required.

3.3.8.4 Vacuum Breaker Atmospheric (AVB) - This device shall be installed at least six (6) inches above the highest outlet or the overflow level on the non-potable system. It shall be installed downstream of the fast shut-off valve.

3.3.8.5 Vacuum Breaker Pressure Type (PVB) - This device shall be installed at least twelve (12) inches above the highest outlet or the overflow level on the non-potable system. It may be installed upstream of the last shut-off valve.

3.3.8.6 Vacuum Breaker Hose Type (HVB) - This device shall be installed directly on the hose hydrant, if not an integral pan of the valve. It may not be subjected to continuous pressure, static or flowing and/or to freezing temperatures, unless it is a model that drains automatically.

3.3.8.7 Backflow Preventer with Intermediate Atmospheric Vent - This device shall not be installed below ground. Where relief valve discharge could cause water damage, it shall be piped via an air gap, or a funnel, at the vent/relief port to a floor drain or other approved location. A resilient shut-off valve shall be near the inlet and outlet sides of the device. A bronze strainer with 20-mesh. stainless s- l screen shall be included between the inlet shut-off valve and the device.

3.3.8.8 Thermal Expansion - Where a backflow prevention device, check valve or other device is installed on a water supply system utilizing storage water heating equipment such that thermal expansion causes increase in pressure, a device for controlling pressure shall be installed, pursuant to Section 607.3.2 of the 2006 International Plumbing Code.

3.3.9 Emergency Installation

3.3.9.1 Should the City find it necessary or otherwise be compelled to install any needed backflow preventer(s) in order to protect the Public Water System in accordance with this Document, the property owner shall be responsible and liable for all cost incurred by the City in carrying out the installation.

3.3.9.2 The City shall bill the affected owner for all costs associated with the installation. Should the associated costs not be paid within the time specified by the City, the City shall have a lien on the property affected in order to recover all costs associated with the installation, including all

administrative and legal cost. Said lien shall remain in place on the property affected until said arrearage is satisfied.

3.4 TEST, MAINTENANCE, REPAIRS AND INSPECTIONS

3.4.1 Tests, Maintenance and Repairs

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

3.4.1.2 The customer shall be responsible for the cost of testing, maintenance, and repair of all backflow-prevention devices downstream of the service-connection within the premises and on his own private system.

3.4.1.3 The customer is responsible for back siphoned material or contamination and\or pollution through backflow and, if contamination or pollution of the City of Covington's public potable 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 damages (to the City of Covington and other water customers) resulting from the contamination in addition to clean-up costs required for the public potable water supply system.

3.4.1.4 Tests, maintenance, and repair on BFP devices are to be made in accordance with the following schedule or more frequently where inspections indicate a need or are specified in the manufacturer's instructions.

A. FIXED AIR GAP SEPERATIONS - shall be inspected at the time of installation and at least annually thereafter.
B. PRESSURE VACUUM BREAKERS - shall be inspected and tested at the time of installation and at least annually thereafter.
C. DUAL CHECK VALVES - shall be inspected and spot tested as determined by the City of Covington.
D. DOUBLE CHECK VALVES - shall be inspected and tested at time of installation and at least annually thereafter.
E. REDUCED PRESSURE PRINCIPAL ASSEMBLY BACKFLOW PREVENTERS - shall be inspected and tested at time of installation and at least annually thereafter.

3.4.1.5 Test procedures for all backflow-prevention devices shall be as outlined in the UNIVERSITY OF SOUTHERN CALIFORNIA, FCCCHR; MANUAL OF CROSS-CONNECTION CONTROL.

3.4.1.6 Testing and repairs shall be performed by a specialist who is certified and trained to understand the design and intended operation of the devices being tested and holds a current certification for Backflow Prevention Assembly Testing issued by the Georgia Association of Water Professionals.

3.4.1.7 A test and maintenance record for each RP, DCV, and PVB device used for cross connection prevention shall be maintained by the consumer. Following each test or repair, a report shall be sent to the Cross-Connection Control Program Coordinator and must include the following:

- Date of installation and location of device.
- Manufacturer's name, model, and serial number.
- Date and time of each test or visual inspection.
- Name of authorized person performing test with license number.

- Test results.
- Description of repairs or service required.
- Date repairs completed.

3.4.1.8 All backflow-prevention devices and test data shall be subject to periodic inspection by a representative of the City. If a device is found to be inoperative or malfunctioning, the customer will be given a reasonable time to complete corrections required by the representative or the CCCC. Excluding cases involving actual or imminent system contamination, the time allotted for corrections will be determined by potential hazard posed to the public potable water system.

The CCCC, or authorized representative, shall have the right, at all reasonable times, upon reasonable notice and presentation of proper identification, to enter upon any premises connected to the City's Public Water System for the purposes of installing, inspecting, testing and/or repairing of any backflow preventer(s), enforcing this Document or any associated rule of the City, or regulating water service for the purposes of cross-connection control and/or backflow prevention in any manner necessary to accomplish the stated purposes of this Regulation. If any water user, whether customer or owner, should refuse to allow entrance upon any premises for the purposes stated herein, the Public Works Director may direct the CCCC to shut off water service to such premises until the requested access if granted.

3.4.1.9 If the corrective measures have not been taken in the allotted time, termination of water service will be recommended. If the Public Works Director concurs, the consumer will receive a certified letter of intent to terminate service. Termination procedures will be initiated (10) ten days after receipt. If the customer completes the corrections prior to the deadline, termination procedures will be halted.

SECTION 4 – CROSS-CONNECTION CONTROL PROCEDURES FOR FIRE PROTECTION SYSTEMS

4.1 CLASSIFICATION

For the purpose of Backflow-Prevention by containment, if the service-connection to premises, from the City's potable water supply/system is intended to be used for fire protection service, it shall be classified and/or defined as follows.

4.1.1 **DEDICATED Service Connection** - one that is designated to supply potable water for fire protection service only.

4.1.2 **COMBINATION Service Connection** - one that is designated to supply potable water for both domestic use and fire protection service.

Note: All existing private fire protection systems (new systems) not metered shall have a detector check installed. New private fire protection systems shall be metered as defined in the City's Development Regulations. This is in addition to any other cross-connection control device(s) required.

4.2 GEORGIA STATE FIRE CODE CLASSIFICATION

To further associate the sources of water that may be used for fire protection and classes of fire protection systems, the following Georgia State Fire Code Classes shall also apply for Backflow Prevention by containment:

4.2.1 Class I - Directly supplied from public water mains only; no pump, tanks, or reservoir; no physical connection from other water supplies; no antifreeze or additives of any kind; all sprinkler drains discharging to atmosphere, dry wells, or other safe outlets.

4.2.2 Class 2 - Directly supplied from public mains – same as Class 1 except that booster pumps may be installed in supply lines.

4.2.3 Class 3 - Directly supplied from public mains – same as Class 1 plus one or more of the following: elevated storage tanks or pressure tanks; fire pumps taking suction from above-ground covered reservoir or tanks. All storage facilities shall be filled from the potable water supply and maintained in a potable condition.

4.2.4 Class 4 - Directly supplied from public mains, similar to Classes 1 and 2, and with an auxiliary water supply on or available to the premises; or an auxiliary water supply located within approximately 1700 feet of the pumper connection.

4.2.5 Class 5 - Directly supplied from public mains and interconnected with auxiliary supplies such as: pumps taking suction from reservoirs exposed to contamination, or rivers and ponds; driven wells; mills or other industrial water systems; or where antifreeze or additives are used.

4.2.6 Class 6 - Directly supplied from public water mains only, with or without gravity storage or pump suction tanks, and/or interconnected with industrial systems.

4.3 IDENTIFICATION OF SYSTEMS

The following terminology and definitions for types of fire protection systems shall also be applicable.

4.3.1 Sprinkler System - includes express riser pipes that convey water to the lateral that supply sprinkler heads.

4.3.2 Standpipe System - includes bulk riser pipes equipped with hose connections, usually at each floor and roof, for exclusive use by the fire department; plus laterals on each floor of certain facilities

that supply water to hose cabinets for use by the occupants to control incipient fires until the fire department arrives.

4.3.3 Combined System - includes bulk and express riser pipes that supply both sprinkler and standpipe systems.

4.4 FIRE SYSTEMS SHALL BE FUTHER CLASSIFIED AS:

4.4.1 Non-hazardous - containing impurities Class 3 and lower.

4.4.2 Hazardous - containing impurities Class 4 and higher.

4.5 FIRE PROTECTION SYSTEMS ISOLATION

Fire protection systems as defined by the State Fire Code shall be isolated from the City of Covington potable water supply system by backflow-prevention devices as indicated and that has approvals as required under Section 500.2 of this procedure and classified or listed by the Underwriters Laboratories and Factory Mutual Insurance, as follows.

4.5.1 Class 1,2, and 3 Sprinkler Systems, and Non-Hazardous Standpipe or Combined System shall be isolated from the potable water system by the installation of a double check backflow- preventer for pipe size through 2" and a double detector check backflow preventer for pipe size 3" and above.

4.5.2 Class 4, 5, and 6 Sprinkler Systems, and Hazardous Standpipe or Combined Systems shall be isolated from the potable water system by the installation of reduce pressure principal assembly for pipe size through 2" and a reduced pressure principal assembly detector check for pipe size 3" and above.

4.5.3 Class System with Combination Hazards shall be contained from the public water mains by procedures applicable to the component that requires the higher degree of protection.

SECTION 5 – POLICIES AND PROCEDURES

5.1 CROSS-CONNECTION CONTROL PROGRAM RULES

1. No water service connections shall be installed or maintained unless the Public Water Supply is protected against actual or potential contamination or pollution.
2. All backflow prevention devices shall be maintained in proper working order. It shall be the duty of the Cross-Connection Control Program Manager, or duly authorized representative, to perform inspections of all properties served by the Public Water Supply where cross-connections are deemed possible. The frequency of inspections and re-inspections shall be based on the potential health hazards involved and shall be established by the Cross Connection Control Program Manager and the *City* of Covington Water Resources Department.
3. The Cross-Connection Control Program Manager, or authorized representative, shall have the right to enter, upon receiving permission, at a reasonable hour, with prior notification, any property served by the Public Water Supply for the purpose of inspecting the piping system thereof for cross-connections. Upon request the owner or occupant of any property so served shall furnish to the Cross-Connection Control Program Manager, or authorized representative, any pertinent information, regarding the piping system, processes, chemicals used or stored on sit and any biological or radiation hazards. Refusal to allow inspection of the piping or to provide requested pertinent information shall result in the assumption that high risk cross-connections and hazardous substances exist on the premises. The customer's service shall be categorized as high risk.
4. The City shall require the use of a reduced pressure zone backflow prevention device on the service line of customers categorized as high risk.
5. The City shall require the use of a double check valve backflow prevention device on the service line of customers categorized as medium risk.
6. The City shall require the use of a dual check valve backflow prevention device on the service line of customers categorized as low risk.
7. The City shall require new and existing high and medium risk customers to install backflow prevention devices on their service lines. Only new construction low risk customers shall be required to install backflow prevention devices on their service lines. Existing low risk customers shall have backflow prevention devices-installed when work is done to the service connection such as replacement of a meter or meter box.
8. All expenses involved in the purchase, installation. maintenance and testing of backflow prevention devices shall be borne by the owner or occupant of the property.
9. Backflow prevention devices shall be approved by the Cross-Connection Control Manager and the City of Covington Water Resources Department as to manufacturer, model, size and method of installation. The method of installation of backflow prevention devices shall be approved by the Cross-Connection Control Manager prior to installation and shall comply with the criteria set forth by the City of Covington development regulations and the Cross-Connection Control Program.
10. All backflow prevention devices shall be maintained in proper working order at the expense of the owner or occupant. The Cross-Connection Control Program Manager, or duly authorized representative, shall have the right to inspect and test all backflow prevention devices for proper operation whenever deemed necessary. Unscheduled testing shall not disrupt water service without prior notification to the occupant or owner of the property. Where no duplicate backflow

prevention device exists and water service is critical to the continuance of normal operation or protection of life, property or equipment, the Cross-Connection Control Program Manager shall notify, in writing, the occupant of the premises of plans to discontinue water service to test the backflow prevention device.

11. The Water Resources Department, as authorized by the Mayor and City Council, is primarily responsible for preventing the contamination or pollution of the Public Water Supply by instituting a program of "Backflow Prevention by Containment". Such responsibility begins at the point of origin of the Public Water Supply and includes all of the distribution system and terminates at the service-connection for the Consumers water system.
12. The Building Inspection Department as authorized by the Mayor and City Council is primarily responsible for preventing the contamination or pollution of the Public Water Supply by enforcing the City plumbing code. Such responsibility begins at the service-connection for the Consumer's water system and includes all the distribution system within the premise.
13. The owner or occupant of property served by the Public Water Supply shall upon request, on a annual basis, have all backflow prevention devices tested for proper operation and a copy of the test results furnish to the Cross-Connection Control Program Manager. Annual testing and inspection of backflow prevention devices must be performed by a person pre-approved by the Cress-Connection Control Program Manager. All expenses involved in the testing and repairs of the devices shall be borne by the owner or occupant of the property. The Cross-Connection Control Manager shall notify the owner or occupant in writing as to the date of the required testing and a deadline by which a copy of the testing results must be submitted to the CCCC.
14. That the owner or occupant of property served by the Public Water Supply where a backflow prevention device requiring annual testing is installed shall pay a monthly fee of $2.00 to cover the cost of program administration, maintaining records, and mailing notifications.
15. Any person who now has a cross-connection in violation of this policy shall be allowed a reasonable time within which to comply with the provisions of this policy. After an investigation of existing conditions and an appraisal of the time required to complete the work involved, the Cross-Connection Control Program Manager shall set a required completion date for the installation of an appropriate backflow prevention device.
16. Whenever any person neglects or refuses to comply with any of the provisions of the rules and policy described herein, the Cross-Connection Control Program Manager shall discontinue the Public Water Supply service connection and service shall not be restored until the cross-connection, auxiliary intake, interconnection, or by-pass has been discontinued.
17. Connections to the Public Water Supply for the purpose of filling mobile tanks or containers shall be protected by an air gap or reduced pressure zone backflow prevention device regardless of the hazard represented.
18. Temporary construction and miscellaneous other connections to the Public Water Supply through fire hydrants shall be protected by air gaps or reduced pressure zone backflow prevention devices. Temporary connections made by the fire department shall be exempt from this rule.
19. The owner or occupant of the property served by the Public Water Supply shall be responsible for providing protection against the hazards of Thermal Expansion in a closed domestic/residential heated water system.

20. Multiple Dwellings serviced by one water meter shall be evaluated as to type of backflow devices and as to the degree of hazard to prevent the entry of contaminants or pollutants into any area of the potable water supply.