RESOLUTION 2019-05

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE FLORIDA GOVERNMENTAL UTILITY AUTHORITY (FGUA), ESTABLISHING A CROSS-CONNECTION CONTROL POLICY APPLICABLE TO ALL FGUA UTLIITY SYSTEMS

WHEREAS, the Florida Governmental Utility Authority was created by the First Amended and Restated Interlocal Agreement dated as of December 1, 2000 and as restated, amended and supplemented from time to time, pursuant to Section 163.01 (7), Florida Statutes; and

WHEREAS, the amended interlocal agreement gives all of the powers, duties and immunities of cities and counties under Chapters 125, 163 and 166, Fla. Statutes to the Authority to acquire, own, improve, operate and maintain water and wastewater facilities in the State of Florida; and

WHEREAS, the interlocal agreement pursuant to Section 4.01 (E) authorizes the Authority to exercise exclusive jurisdiction, control and supervision over the authority facilities and to make and enforce such rules and regulations for the maintenance, management and operation of authority facilities; and

WHEREAS, the FGUA is responsible for supplying its customers with water that meets federal and State drinking water standards; and

WHEREAS, the FGUA is responsible for the protection of its water distribution system from contamination or pollution due to backflow of contaminants or pollutants through water service connections; and

WHEREAS, Rule 62-555.360, Florida Administrative Code, requires that each community water system shall establish and implement a cross-connection control program utilizing backflow protection at or for service connections in order to protect the community water system from contamination caused by cross-connections on customer's premises.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE FLORIDA GOVERNMENTAL UTILITY AUTHORITY AS FOLLOWS:

FGUA hereby adopts the attached cross connection control policy with all components required by Florida law and rules of the Florida Department of Environmental Protection (DEP) and with other requirements as the Authority shall deem necessary for the protection of the public and the authority facilities including Components I, II, III, IV and V of DEP rules.

Component II in the Cross-Connection Control Program Plan for the Florida Governmental Utility Authority, dated February 21, 2019, shall establish where backflow protection at or for service connections is mandatory.

Component III in the Cross-Connection Control Program Plan for the Florida Governmental Utility Authority, dated February 21, 2019, shall establish requirements regarding ownership, installation, inspection/testing, and maintenance of mandatory backflow protection at or for service connections.

Upon the effective date of this resolution, all prior and conflicting resolutions, or parts of resolutions, establishing a cross-connection control program, or parts of a cross-connection control program, shall be repealed, rescinded, superseded, and replaced by this resolution.

This resolution shall become effective February 21, 2019

PASSED and ADOPTED this 21st **Day of** February **, 2019.**

ATTEST

Geri Franklin

Board Clerk

APPROVED AS TO FORM AND LEGALITY

Edward E. Hollen

FGUA Counsel

Leuluma Thomas

Chair/Vice Chair

Cross-Connection Control Policy

February 21, 2019

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Cross-Connection Control Program Plan
for the Florida Governmental Utility Authority Water Systems

February 21, 2019

Requirement for Program Plan

The Florida Governmental Utility Authority (FGUA), also referred to as "community water system (CWS)" as context requires, has the responsibility to protect itself from contamination caused by cross-connections on customers' premises. A cross-connection is defined in Rule 62-550.200, Florida Administrative Code (F.A.C.), as follows:

> "CROSS-CONNECTION" means any physical arrangement whereby a public water supply is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains or may contain contaminated water, sewage or other waste, or liquid of unknown or unsafe quality which may be capable of imparting contamination to the public water supply as the result of backflow. By-pass arrangements, jumper connections, removable sections, swivel or changeable devices, and other temporary or permanent devices through which or because of which backflow could occur are considered to be cross-connections.

Pursuant to Rule 62-555.360, F.A.C., the FGUA is required to establish and implement a cross-connection control (CCC) program utilizing backflow protection at services connected to FGUA's water systems. The CCC program must include a written plan that contains, as a minimum, the following components:

I. Legal authority for the FGUA's CCC program.
II. The FGUA's policy establishing where backflow protection is mandatory for services connected to FGUA's water systems.
III. The FGUA's policy regarding ownership, installation, inspection/testing, and maintenance of backflow protection that the FGUA is requiring at services connected to FGUA's water systems.
IV. The FGUA's procedures for evaluating customers' premises to establish the category of customer and the backflow protection being required at the service connection(s) from the FGUA to the customer.
V. The FGUA's procedures for maintaining CCC program records.

Note: Throughout this CCC program plan, the term "customer" is used. Customer, as used herein, means the property owner and/or occupant of the premises served by the FGUA. Also, unless otherwise defined, all CCC-related terms used in this CCC program plan have the same definitions as those contained in Rules 62-550.200 and 62-555.360, F.A.C.

Program Plan Components

Rule 62-555.360, F.A.C., requires that written CCC program plans include certain minimum components. The minimum components are listed in Table 62-555.360-1 in Rule 62-555.360. This section includes the required minimum components. Components are numbered the same as they appear in Table 62-555.360-1.

Component I: ***Legal authority for the FGUA's CCC program.***

Pursuant to Section 163.01(7)(g), Florida Statutes, and Section 4.01 of that certain Amended and Restated Interlocal Agreement Related to Establishment of the Florida Governmental Utility Authority, dated as of December 1, 2000, the FGUA has the legal authority to make or pass rules, regulations, and resolutions necessary for governance, maintenance, management, and operation of the FGUA's water systems. Pursuant to this authority, the FGUA has adopted Resolution No. 2019-05, which is included in Appendix A. The resolution adopts this CCC program and references the following FGUA policies:

- The FGUA's policy establishing where backflow protection is mandatory for services connected to FGUA's water systems.
- The FGUA's policy regarding ownership, installation, inspection/testing, and maintenance of backflow protection that the FGUA is requiring at services connected to FGUA's water systesms.

Component II: ***The FGUA's policy establishing where backflow protection is mandatory for services connected to FGUA's water systems.***

This policy applies to all new or existing customers. The following minimum backflow protection shall be provided at services connected to FGUA's water systems for the following categories of customers:

Category of Customer	**Minimum Backflow Protection[1] to Be Provided at Services Connected to FGUA's Water Systems**
Beverage processing plant, including any brewery	RP
Cannery, packing house, rendering plant, or any facility where fruit, vegetable, or animal matter is processed, excluding any premises where there is only a restaurant or food service facility	RP
Car wash	RP

Category of Customer	Minimum Backflow Protection[1] to Be Provided at Services Connected to FGUA's Water Systems
Chemical plant or facility using water in the manufacturing, processing, compounding, or treatment of chemicals, including any facility where a chemical that does not meet the requirements in paragraph 62-555.320(3)(a), F.A.C., is used as an additive to the water	RP
Dairy, creamery, ice cream plant, cold-storage plant, or ice manufacturing plant	RP
Dye plant	RP
Film laboratory or processing facility or film manufacturing plant, excluding any small, noncommercial darkroom facility	RP
Hospital; medical research center; sanitarium; autopsy facility; medical, dental, or veterinary clinic where surgery is performed; or plasma center	RP
Laboratory, excluding any laboratory at an elementary, middle, or high school	RP
Laundry (commercial), excluding any self-service laundry or Laundromat	RP
Marine repair facility, marine cargo handling facility, or boat moorage	RP
Metal manufacturing, cleaning, processing, or fabricating facility using water in any of its operations or processes, including any aircraft or automotive manufacturing plant	RP
Mortuary	RP
Premises where oil or gas is produced, developed, processed, blended, stored, refined, or transmitted in a pipeline or where oil or gas tanks are repaired or tested, excluding any premises where there is only a fuel dispensing facility	RP

Category of Customer	Minimum Backflow Protection[1] to Be Provided at Services Connected to FGUA's Water Systems
Premises where there is an auxiliary or reclaimed water system[2,3]	A. At or for a residential service connection[4]: DuC[5] B. At or for a non-residential service connection[4]: RP[6,7]
Premises where there is a cooling tower	RP
Premises where there is an irrigation system that is using potable water and that… I. Is connected directly to the FGUA's distribution system via a dedicated irrigation service connection II. Is connected internally to the customer's plumbing system	I. At or for a residential or non-residential dedicated irrigation service connection[4]: PVB if backpressure cannot develop in the downstream piping[8]; or RP if backpressure could develop in the downstream piping[8] II. None[9]
Premises where there is a wet-pipe sprinkler, or wet standpipe, fire protection system that is using potable water and that… I. Is connected directly to the FGUA's distribution system via a dedicated fire service connection[10] II. Is connected internally to the customer's plumbing system	I.A. At or for a residential dedicated fire service connection[4]: DC if the fire protection system contains no chemical additives and is not connected to an auxiliary water system[2]; or RP if the fire protection system contains chemical additives or is connected to an auxiliary water system[2,11] I.B. At or for a non-residential dedicated fire service connection[4]: DC/DCDA if the fire protection system contains no chemical additives and is not connected to an auxiliary water system[2]; or RP/RPDA if the fire protection system contains chemical additives or is connected to an auxiliary water system[2,11] II. None[9]

Category of Customer	Minimum Backflow Protection[1] to Be Provided at Services Connected to FGUA's Water Systems
Radioactive material processing or handling facility or nuclear reactor	RP
Paper products plant using a wet process	RP
Plating facility, including any aircraft or automotive manufacturing plant	RP
Restricted-access facility	RP
Steam boiler plant	RP
Tall building – i.e., a building with five or more floors at or above ground level	DC if the customer has no potable water distribution lines connected to the suction side of a booster pump; or RP if the customer has one or more potable water distribution lines connected to the suction side of a booster pump
Wastewater treatment plant or wastewater pumping station	RP
Customer supplied with potable water via a temporary or permanent service connection from a CWS fire hydrant	RP

[1] Means of backflow protection, listed in an increasing level of protection according to the degree of hazard, include the following: a dual check device (DuC); a double check valve assembly (DC) or double check detector assembly (DCDA); a pressure vacuum breaker assembly (PVB); a reduced-pressure principle assembly (RP) or reduced-pressure principle detector assembly (RPDA); and an air gap. A PVB may not be used if backpressure could develop in the downstream piping.

"Low hazard" or "non-health hazard" and "high hazard" or "health hazard" are defined in American Water Works Association Manual of Water Supply Practices—M14, Third Edition, *Recommended Practice for Backflow Prevention and Cross-Connection Control* as follows:

- "Non-health hazard or low hazard" means a cross-connection or potential cross-connection involving any substance that generally would not be a health hazard but would constitute a nuisance or be aesthetically objectionable if introduced into the potable water supply.

- "Health hazard or high hazard" a cross-connection or potential cross-connection involving any substance that could, if introduced into the potable water supply, cause death or illness, spread disease, or have a high probability of causing such effects.

[2] For the purpose of this table, "auxiliary water system" means a pressurized system of piping and appurtenances using auxiliary water, which is water other than the potable water being supplied by the FGUA and which includes water from any natural source such as a well, pond, lake, spring, stream, river, etc., includes reclaimed water, and includes other used water or industrial fluids described in American Water Works Association Manual of Water Supply Practices—M14, Third Edition, *Recommended Practice for Backflow Prevention and Cross-Connection Control*; however, "auxiliary water system" specifically excludes any water recirculation or treatment system for a swimming pool, hot tub, or spa. (Note that reclaimed water is a specific type of auxiliary water and a reclaimed water system is a specific type of auxiliary water system.)

[3] The Department of Environmental Protection shall allow an exception to the requirement for backflow protection at or for a residential or non-residential service connection from a CWS to premises where there is an auxiliary or reclaimed water system if all of the following conditions are met:

- The CWS is distributing water only to land owned by the owner of the CWS.
- The owner of the CWS is also the owner of the entire auxiliary or reclaimed water system up to the points of auxiliary or reclaimed water use.
- The CWS conducts at least biennial inspections of the CWS and the entire auxiliary or reclaimed water system to detect and eliminate any cross-connections between the two systems.

[4] For the purpose of this table, "residential service connection" means any service connection, including any dedicated irrigation or fire service connection, that is two inches or less in diameter and that supplies water to a building, or premises, containing only dwelling units; and "non-residential service connection" means any other service connection.

[5] A DuC may be provided only if there is no known cross-connection between the plumbing system and the auxiliary or reclaimed water system on the customer's premises. Upon discovery of any cross-connection between the plumbing system and any reclaimed water system on the customer's premises, the FGUA shall ensure that the cross-connection is eliminated. Upon discovery of any cross-connection between the plumbing system and any auxiliary water system other than a reclaimed water system on the customer's premises, the FGUA shall ensure that the cross-connection is eliminated or shall ensure that the backflow protection provided at or for the service connection is equal to that required at or for a non-residential service connection.

[6] A reclaimed water system using reclaimed water regulated under Part III of Chapter 62-610, F.A.C., is a low hazard unless the reclaimed water is stored with surface water in a pond that is part of a stormwater management system, in which case the system is a high hazard; an auxiliary water system using well water is a low hazard unless determined otherwise by the FGUA; an auxiliary water system using industrial fluids or used water other than reclaimed water is a high hazard unless determined otherwise by the FGUA; an auxiliary or reclaimed water system using reclaimed water

not regulated under Part III of Chapter 62-610, F.A.C., or surface water is a high hazard.

[7] Upon discovery of any cross-connection between the plumbing system and any reclaimed water system on the customer's premises, the FGUA shall ensure that the cross-connection is eliminated.

[8] A DC may be provided if both of the following conditions are met:

- The dedicated irrigation service connection initially was constructed before 5-5-14.
- No chemicals are fed into the irrigation system.

[9] The FGUA may rely on the internal backflow protection required under the *Florida Building Code* or the predecessor State plumbing code. The FGUA may, but is not required to, ensure that such internal backflow protection is inspected/tested and maintained the same as backflow protection provided at services connected to FGUA's water systems.

[10] The Department of Environmental Protection shall allow an exception to the requirement for backflow protection at or for a residential or non-residential dedicated fire service connection from a CWS to a wet-pipe sprinkler, or wet standpipe, fire protection system if both of the following conditions are met:

- The fire protection system was installed and last altered before 5-5-14.
- The fire protection system contains no chemical additives and is not connected to an auxiliary water system as defined in Footnote 2.

[11] Upon discovery of any cross-connection between the fire protection system and any reclaimed water system on the customer's premises, the FGUA shall ensure that the cross-connection is eliminated.

Component III: ***The FGUA's policy regarding ownership, installation, inspection/testing, and maintenance of backflow protection that the FGUA is requiring at services connected to FGUA's water systems.***

The customer shall own, and shall be responsible for installation, inspection/testing, and maintenance of, any backflow protection required at services connected to FGUA's water systems. Exceptions are provided for dual check devices (DuCs) as described further in this Policy.

Residential Customer with Available Reclaimed Water Service

A. Utilizing reclaimed water plays an important role in water resource, wastewater and ecosystem management in Florida. When reclaimed water is used, it eases the demand on traditional, often limited sources of water. By recycling or reusing water, communities can still grow while minimizing or even reducing their impact on the water resources around them. Using reclaimed water also reduces discharges to surface waters, recharges ground water and postpones costly capital investments in the development of new, more costly water sources and supplies.

The FGUA promotes the use of reclaimed water as required by the water management districts and receives benefit in the form of reduced capital costs for wastewater disposal, and reduced burden for source water supply under its water use permits. As such where reclaimed water is available and utilized by residential customers the FGUA shall own, and shall be responsible for installation and maintenance of, any DuC required at a service connected to FGUA's water system; however, the customer shall be responsible for installation and maintenance of the thermal expansion control that is necessary, and required under the *Florida Building Code*, where a DuC is installed at a service connection to a customer using storage water heating equipment. At least 60 days before the FGUA installs a DuC at the service connection to a customer, the FGUA will notify the customer in writing and advise the customer to install thermal expansion control if the customer's plumbing system includes storage water heating equipment but does not include thermal expansion control. Thermal expansion devices are available free of charge at the local FGUA office for use by the customer. (A notice/letter is included in Appendix C.)

Residential Customer with No Available Reclaimed Water Service

A. The customer shall own, and shall be responsible for installation, inspection/testing, and maintenance of, any backflow protection required at a service connected to FGUA's water system.

   Depending on the degree of hazard, the customer may elect to have a DuC installed. If the customer elects to install a DuC the FGUA shall install and maintain the device at the rate per the published FGUA fee schedule. The customer shall be responsible for installation and maintenance of the thermal expansion control that is necessary, and required under the *Florida Building Code*, where a DuC is installed at a service connection to a customer using storage water heating equipment. If the customer does not elect to have the FGUA install a DuC, an approved backflow prevention device shall be required to be installed and maintained by the customer at the customers expense. (A notice/letter is included in Appendix C.)

Backflow Prevention Device Installation Schedule

A. The following table shows the schedule that the FGUA will follow for installation of backflow protection required at or for services connected to FGUA's water systems.

Type of Service Connection	Schedule
New service connection to a customer in a category listed in Component II.	Before water service is initiated.
Existing—i.e., previously constructed—service connection to a premises where there is a reclaimed water system.	Before reclaimed water service is initiated.

Type of Service Connection	Schedule
Existing—i.e., previously constructed—service connection where the FGUA will install a dual check device (DuC).	After the customer receives written notification from the FGUA advising the customer to install thermal expansion control if the customer's plumbing system includes storage water heating equipment but does not include thermal expansion control. (A notice/letter is included in Appendix C)
Existing—i.e., previously constructed—service connection where the FGUA discovers an auxiliary water supply.	If the service connection is to a premises where there is an auxiliary water system, the FGUA shall deliver written notification within 30 days after the FGUA discovers the auxiliary water system. The customer shall install an approved backflow device within 30 days.
Existing—i.e., previously constructed—service connection to a customer in any category listed in Component II except premises where there is a reclaimed water system or service connections where the FGUA will install a DuC.	Within 60 days after the FGUA notifies the customer in writing to install backflow protection at or for the service connection. (A notice/letter is included in Appendix C.)

Backflow Prevention Device Conformance Requirements/Standards

A. All new backflow protection required at services connected to the FGUA's water systems shall conform to, or comply with, the following standards:

- New dual check devices (DuCs) shall conform to the latest edition of American Society of Sanitary Engineering (ASSE) Standard 1024 or Canadian Standards Association (CSA) Standard B64.6 or B64.6.1.
- New double check valve assemblies shall conform to the latest edition of ASSE Standard 1015, American Water Works Association (AWWA) Standard C510, or CSA Standard B64.5.
- New double check detector assemblies shall conform to the latest edition of ASSE Standard 1048.
- New pressure vacuum breaker assemblies shall conform to the latest edition of ASSE Standard 1020 or CSA Standard B64.1.2.
- New reduced-pressure principle assemblies shall conform to the latest edition of ASSE Standard 1013, AWWA Standard C511, or CSA Standard B64.4.
- New reduced-pressure principle detector assemblies shall conform to the latest edition of ASSE Standard 1047.
- New air gaps shall comply with the latest edition of American Society of Mechanical Engineers Standard A112.1.2.

Additionally, all new customer-owned backflow preventers required at dedicated fire service connections that are connected to FGUA's water systems shall be listed by a nationally recognized testing laboratory, such as Underwriters Laboratories, Inc., or Factory Mutual, Inc., pursuant to Chapter 633, Florida Statutes.

New DuCs required at services connected to FGUA's water systems will be installed immediately downstream of the water meter and in the meter box. All other backflow protection required at services connected to FGUA's water systems shall be installed downstream from, and within five feet after, the FGUA's water meter box or the customer's property line unless a deviation is approved by the FGUA. The FGUA will consider, and may approve, on a case-by-case basis deviations requested and justified in writing; but in no case shall there be any outlet, tee, tap, or connection of any type to or from the water piping between the water meter, or property line, and the required backflow protection.

All new backflow protection required at services connected FGUA's water systems shall be installed in accordance with the manufacturer's instructions and the installation criteria in American Water Works Association Manual of Water Supply Practices—M14, Third Edition, *Recommended Practice for Backflow Prevention and Cross-Connection Control.* Installation criteria in the third edition of M14 are reproduced in Appendix B. Additionally, all new customer-owned backflow preventers required at dedicated fire service connections that are connected to FGUA's water system shall be installed in accordance with applicable National Fire Protection Association standards adopted in Chapter 69A-3, Florida Administrative Code, and all other new customer-owned backflow protection required at services connected to FGUA's water systems shall be installed in accordance with the latest edition of the *Florida Building Code.*

Inspection/Testing Frequency and Standards

A. All air gaps (AGs) required at services connected to FGUA's water system shall be inspected at least annually. Persons inspecting AGs required at services connected to FGUA's water systems shall be a certified or registered plumbing contractor or shall be a backflow preventer tester holding a current certification from one of the following organizations or schools:

   - The American Backflow Prevention Association;
   - The American Society of Sanitary Engineering;
   - The American Water Works Association;
   - The Florida Water and Pollution Control Operators Association;
   - The University of Florida Center for Training, Research, and Education for Environmental Occupations; or

B. All backflow preventer assemblies (i.e., double check valve assemblies and double check detector assemblies; pressure vacuum breaker assemblies; and reduced-pressure principle

assemblies and reduced-pressure principle detector assemblies) required at non-residential services connected to FGUA's water systems shall be tested after installation or repair and at least annually thereafter and shall be repaired if they fail to meet performance standards.

All backflow preventer assemblies required at residential services connected to FGUA's water systems shall be tested after installation or repair and at least biennially (once every two years) thereafter and shall be repaired if they fail to meet performance standards. Residential service connections are service connections, including dedicated irrigation or fire service connections, that are two inches or less in diameter and that supply water to a building, or premises, containing only dwelling units; all other service connections are non-residential service connections.

Persons testing backflow preventer assemblies required at or for dedicated fire service connections from the FGUA shall be a certified Fire Protection System Contractor I or II pursuant to Chapter 633, Florida Statutes. Persons testing backflow preventer assemblies required at or for all other service connections from the FGUA shall be a certified or registered plumbing contractor or shall be a backflow preventer tester holding a current certification from one of the following organizations or schools:

- The American Backflow Prevention Association;
- The American Society of Sanitary Engineering;
- The American Water Works Association;
- The Florida Water and Pollution Control Operators Association;
- The University of Florida Center for Training, Research, and Education for Environmental Occupations; or

Backflow preventer assemblies required at services connected to FGUA's water systems shall be tested using the procedures in one of the following standards or manuals:

- The latest edition of American Society of Sanitary Engineering Standards 5013, 5015, 5020, 5047, and 5048;
- The latest edition of Canadian Standards Association Standard B64.10.1;
- The latest edition of *Backflow Prevention: Theory & Practice* by the University of Florida Center for Training, Research, and Education for Environmental Occupations;
- The latest edition of the *Manual of Cross-Connection Control* by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research Center.

Testing equipment used to test backflow preventer assemblies required at services connected to FGUA's water systems shall be verified/calibrated at least annually in accordance with the equipment manufacturer's recommendations.

C. All dual check devices (DuCs) required at services connected to FGUA's water systems shall be refurbished or replaced at least once every 5 years or at a lesser frequency if the FGUA determines and documents that the lesser frequency is appropriate based on data

from spot-testing DuCs at service connections or based on data from backflow sensing meters at service connections.

Component IV: ***The FGUA's procedures for evaluating customers' premises to establish the category of customer and the backflow protection being required at services connected to FGUA's water systems.***

A. The FGUA will evaluate the customer's premises at a newly proposed or constructed service connection before the FGUA approves or begins supplying water to the service connection.

B. The FGUA will evaluate the customer's premises at an existing—i.e., previously constructed—service connection whenever any of the following events occur:
   - Whenever the customer connects to a reclaimed water distribution system. The FGUA will ensure that reclaimed water service is not turned on until appropriate backflow protection is provided at the potable water service connection.
   - Whenever a customer initiates service at the premises. This applies to existing premises that are changing ownership or type of business or activating service at the premises. Evaluation may be waived if the premises has already been evaluated within the previous 3-year period.
   - Whenever an auxiliary water system is discovered on the customer's premises.
   - Whenever a prohibited or inappropriately protected cross-connection is discovered on the customer's premises.
   - Whenever the FGUA becomes aware that a customer's premises is altered in a manner that could change the backflow protection required at or for a service connection to the customer.

C. To evaluate the customer's premises at the service connection between the FGUA and customer, one of the following evaluation methods will be utilized.

   1) The FGUA will review construction plans during the development review process and require the appropriate backflow protection be installed as part of the new construction process.
   2) The FGUA will conduct an on-site inspection of the premises and fill out the "water use questionnaire" prior to supplying water to the premises.

Component V: ***The FGUA's procedures for maintaining CCC program records.***

A. The FGUA will establish and maintain, in either electronic or paper format, a current inventory of all backflow protection required at services connected to FGUA's water systems. The inventory will include the following for each service connection where backflow protection is required:

   - The service connection number or other identification number used by the FGUA;

- The service connection address;
- The service connection category (i.e., non-residential or residential) and subcategory (standard, dedicated irrigation, or dedicated fire);
- The location of the backflow protection at/for the service connection;
- The type of hazard (i.e., the category of customer);
- The date when backflow protection was initially installed at or for the service connection;
- The type of current backflow protection (i.e., air gap, reduced-pressure principle assembly, reduced-pressure principle detector assembly, pressure vacuum breaker assembly, double check valve assembly, double check detector assembly, or dual check device);
- If the type of current backflow protection is a backflow preventer assembly, the size, manufacturer, model, serial number, and date installed; and
- If the type of backflow protection is a DuC, the size, manufacturer, model, date installed, and if any DuC is refurbished (instead of replaced), the date refurbished.

B. The FGUA will establish and maintain, in either electronic or paper format, records of the installation, inspection/testing, and repair of all backflow protection required at services connected to FGUA's water systems.

   The inventory described in Component V.A. will include the date when backflow protection was initially installed at or for any service connection where backflow protection is required. Also, the inventory described in Component V.A. will include the date when any current backflow preventer assembly or any current dual check device (DuC) was installed. Furthermore, if any DuC is refurbished (instead of replaced), the inventory described in Component V.A. will include the date the DuC was refurbished.

   Records of the inspection of air gaps (AGs) required at services connected to FGUA's water systems will be maintained by keeping either an electronic or paper copy of AG inspection reports. (An AG inspection report form is included in Appendix C.) Records of the testing and repair of backflow preventer assemblies required at services connected to FGUA's water systems will be maintained by keeping either an electronic or paper copy of backflow preventer assembly testing and repair reports. (A backflow preventer assembly testing and repair report form is included in Appendix C.) All AG inspection reports and all backflow preventer assembly testing and repair reports will be kept for not less than 10 years.

C. The FGUA will prepare and submit CCC program annual reports for its water systems that serve a population of 10,000 or more. Each annual report will be prepared using the latest version of Form 62-555.900 (13), Cross-Connection Control Program Annual Report. Each annual report will be submitted to the appropriate Department of Environmental Protection district office or Approved County Health Department within three months after the end of the calendar year covered by the report.

Program Administration Documents

Appendix C contains forms and notices/letters used to administer the CCC program.

The FGUA will notify in writing each customer who owns an air gap (AG) or backflow preventer assembly required at a service connection and will request that the customer have the AG inspected or backflow preventer assembly tested. Notices/letters will be delivered at least 30 days before the due date of the inspection or test. Notices/letters will specify that the inspection or test report must be returned to the FGUA within 60 days after the date of the notice/letter.

If a customer fails to have their device tested after due notification, the FGUA may test the device at the rate per the published FGUA fee schedule. If a device tested by the FGUA fails, the FGUA shall notify the customer in writing of the need to repair or replace the device. Failure by a customer to repair or replace a device after due notification may result in termination of water service to the property.

Appendix A
(Insert Adopted Resolution)

Appendix B

Installation Criteria for a Dual Check Device (DuC)

- A DuC must be installed in the orientation as it was approved by the testing agency.
- A DuC must not be subjected to conditions that would exceed its maximum working water pressure and temperature rating. The increased pressure that can happen from creation of a closed system also must be evaluated because excessive pressure can damage the device or other plumbing components.
- A DuC should be sized hydraulically, taking into account both volume requirements and pressure loss through the device.
- A pipeline should be thoroughly flushed before a DuC is installed to ensure that no dirt or debris is delivered into the device because dirt or debris might adversely affect the DuC's working abilities.
- A DuC shall be installed where it can be inspected or replaced as necessary.

Installation Criteria for a Double Check Valve Assembly (DC) or Double Check Detector Assembly (DCDA)

- A DC or DCDA must be installed in the orientation as it was approved by the testing agency with no field modifications allowed.
- A DC or DCDA must not be subjected to conditions that would exceed its maximum working water pressure and temperature rating. The increased pressure that can happen from the creation of a closed system also must be evaluated to prevent damage to the assembly or other plumbing-system components.
- A DC or DCDA shall be sized hydraulically, taking into account both volume requirements and pressure loss through the assembly.
- A DC or DCDA should not be installed in a pit or below grade when possible. If the DC or DCDA must be installed in a vault, adequate space for testing and maintenance must be provided. If the DC or DCDA must be installed below grade, the test cocks shall be sealed or plugged so water or debris cannot collect in the test cock.
- A pipeline should be thoroughly flushed before a DC or DCDA is installed to ensure that no dirt or debris is delivered to the assembly because dirt or debris might adversely affect the assembly's working abilities.
- A DC or DCDA shall be installed a minimum of 12 inches above the surrounding grade and floodplain. The installation shall not be installed where platforms, ladders, or lifts are required for access. If an assembly must be installed higher than 5 feet above grade, a permanent platform shall be installed around the assembly to provide access for workers.
- A DC or DCDA shall be installed where it can be easily field-tested and repaired as necessary. The assembly shall have minimum 12" clearance around it to facilitate testing, disassembly, and assembly of the DC or DCDA.
- If a DC or DCDA must be subjected to environmental conditions that could freeze or heat the assembly beyond working temperatures, some means of protection should be installed to provide the correct temperature environment in and around the assembly.

Installation Criteria for a Pressure Vacuum Breaker Assembly (PVB)

- A PVB must be installed in the orientation as it was approved by the testing agency.
- A PVB must not be subjected to conditions that would exceed its maximum working water pressure and temperature rating. The increased pressure that can happen from the creation of a closed system also must be evaluated because a PVB cannot be exposed to backpressure.
- A PVB shall not be installed where it is subjected to backpressure.
- A PVB should be sized hydraulically, taking into account both volume requirements and pressure loss through the assembly.
- A pipeline should be thoroughly flushed before a PVB is installed to ensure that no dirt or debris is delivered into the assembly because dirt or debris might affect the PVB's working abilities.
- A PVB must not be installed in a pit or below grade where the air inlet could become submerged in water or where fumes could be present at the air inlet because this installation might allow water or fumes to enter the assembly.
- A PVB shall be installed a minimum of 12 inches above the highest point of use and any downstream piping supplied from the assembly. The installation should not be installed where platforms, ladders, or lifts are required for access. If an assembly must be installed higher than 5 feet above grade, a permanent platform should be installed around the assembly to provide access for workers.
- A PVB shall be installed where it can be easily field-tested and repaired as necessary. The assembly shall have adequate clearance around it to facilitate disassembly, repairs, testing, and other maintenance.
- A PVB may periodically discharge water from the air inlet. The effect of this discharge on the area around the assembly must be evaluated.
- If a PVB must be subjected to environmental conditions that could freeze or heat the assembly beyond its working temperatures, some means of protection should be installed to provide the correct temperature environment in and around the assembly.

Installation Criteria for a Reduced-Pressure Principle Assembly (RP) or Reduced-Pressure Principle Detector Assembly (RPDA)

- An RP or RPDA must be installed in the orientation as it was approved by the testing agency.
- An RP or RPDA must not be subjected to conditions that would exceed its maximum working water pressure and temperature rating. The increased pressure that can occur because of the creation of a closed system also must be evaluated because excessive backpressure can damage the assembly or other plumbing components.
- An RP or RPDA should be sized hydraulically, taking into account both volume requirements and pressure loss through the assembly.
- A pipeline should be thoroughly flushed before an RP or RPDA is installed to ensure that no dirt or debris is delivered into the assembly because dirt or debris might adversely affect the assembly's working abilities.
- An RP or RPDA must not be installed in a pit or below grade where the relief valve could become submerged in water or where fumes could be present at the relief-valve discharge because this installation might allow water or fumes to enter the assembly.
- An RP or RPDA shall be installed a minimum of 12 inches above the relief-valve discharge-port opening and the surrounding grade and floodplain. The installation should not be installed where platforms, ladders, or lifts are required for access. If an assembly is installed higher than 5 feet above grade, a permanent platform should be installed around the assembly to provide access for workers.
- An RP or RPDA shall be installed where it can be easily tested and repaired as necessary. The assembly shall have minimum 12" clearance around it to facilitate disassembly, repairs, testing, and other maintenance.
- An RP or RPDA might periodically discharge water from the relief valve. The effect of this discharge from the relief valve around the assembly must be evaluated. If the RP or RPDA discharge is piped to a drain, an air-gap separation must be installed between the relief-valve discharge opening and the drain line leading to the drain.
- If an RP or RPDA must be subjected to environmental conditions that could freeze or heat the assembly beyond its working temperatures, some means of protection should be installed to provide the correct temperature environment in and around the assembly.

Air Gap Installation Criteria and Description

- An air gap is a piping arrangement that provides an unobstructed vertical distance through free atmosphere between the lowest point of a water supply outlet and the overflow rim of an open, non-pressurized receiving vessel into which the outlet discharges.
- These vertical separations must be at least twice the effective opening (inside diameter) of the water supply outlet but never less than 1 inch.
- In locations where the outlet discharges within three times the inside diameter of the pipe from a single wall or other obstruction, the air gap must be increased to three times the effective opening but never less than 1.5 inches.
- In locations where the outlet discharges within four times the inside diameter of the pipe from two intersecting walls, the air gap must be increased to four times the effective opening but never less than 2 inches.
- Air gaps should not be approved for locations where there is potential for the atmosphere around the air gap to be contaminated nor should the inlet pipe be in contact with a contaminated surface or material.

Appendix C

"Water Use Questionnaire" for Non-Residential Service Connections

Public Water System (PWS) No. _____ PWS Name _____
Customer's Name/Address: _____

_____

Customer's Phone No: _____
Service Connection Number(s): _____
Service Connection Address: _____

Description of Customer's Business or Premises at Service Connection Address: _____

_____

_____

Is your business or premises in one or more of the following categories (check all that apply)?

Beverage processing plant, including any brewery	
Cannery, packing house, rendering plant, or any facility where fruit, vegetable, or animal matter is processed, excluding any premises where there is only a restaurant or food service facility	
Chemical plant or facility using water in the manufacturing, processing, compounding, or treatment of chemicals, including any facility where a chemical that does not meet the requirements in Rule 62-555.320(3)(a), F.A.C., is used as an additive to the water	
Dairy, creamery, ice cream plant, cold-storage plant, or ice manufacturing plant	
Dye plant	
Film laboratory or processing facility or film manufacturing plant, excluding any small, noncommercial darkroom facility	
Hospital; medical research facility; sanitarium; autopsy facility; medical, dental, or veterinary clinic where surgery is performed; or plasma center	
Laboratory, excluding any laboratory at an elementary, middle, or high school	
Laundry (commercial), excluding any self-service laundry or Laundromat	
Marine repair facility, marine cargo handling facility, or boat moorage	
Metal manufacturing, cleaning, processing, or fabricating facility using water in any of its operations or processes, including any aircraft or automotive manufacturing plant	
Mortuary	
Premises where oil or gas is produced, developed, processed, blended, stored, refined, or transmitted in a pipeline or where oil or gas tanks are repaired or tested, excluding any premises where there is only a fuel dispensing facility	
Premises where there is an auxiliary or reclaimed water system	
Premises where there is a cooling tower	
Premises where there is an irrigation system that is using potable water and that is connected directly to the PWS's distribution system via a dedicated irrigation service connection	
Premises where there is a wet-pipe sprinkler, or wet standpipe, fire protection system that is using potable water and that is connected directly to the PWS's distribution system via a dedicated fire service connection	
Radioactive material processing or handling facility or nuclear reactor	
Paper products plant using a wet process	
Plating facility, including any aircraft or automotive manufacturing plant	
Restricted-access facility	
Steam boiler plant	
Tall building—i.e., a building with five or more floors at or above ground level	
Wastewater treatment plant or wastewater pumping station	

Customer Representative's Signature: _____ Date: _____
Customer Representative's Printed Name: _____

"Water Use Questionnaire" for Residential Service Connections

Public Water System No. _____
Public Water System Name _____
Customer's Name/Address: _____

_____

Customer's Phone No: _____
Service Connection Number(s): _____
Service Connection Address: _____

Does your premises have one or more of the following (check all that apply)?

An auxiliary or reclaimed water system*	
An irrigation system that is using potable water and that is connected directly to the PWS's distribution system via a separate, dedicated irrigation service connection	
A wet-pipe sprinkler, or wet standpipe, fire protection system that is using potable water and that is connected directly to the PWS's distribution system via a separate, dedicated fire service connection	

* "Auxiliary water system" means a pressurized system of piping and appurtenances using auxiliary water, which is water other than the potable water being supplied by the public water system and which includes water from any natural source such as a well, pond, lake, spring, stream, river, etc., and includes reclaimed water; however, "auxiliary water system" specifically excludes any water recirculation or treatment system for a swimming pool, hot tub, or spa. (Note that reclaimed water is a specific type of auxiliary water and a reclaimed water system is a specific type of auxiliary water system.)

Customer's Signature: _____ Date: _____
Customer's Printed Name: _____

Air Gap Inspection Report

Public Water System (PWS) No.: _____
PWS Name: _____
Customer's Name/Address: _____

_____
Service Connection No.: _____
Service Connection Address: _____
Service Connection Category: non-residential ☐ residential ☐
Service Connection Subcategory: standard ☐ irrigation ☐ fire ☐
Location of Air Gap at/for Service Connection: _____

Comments:

I certify that the air gap at/for the above identified service connection complies with the requirements of the above identified PWS and has not been bypassed or otherwise been made ineffective.
Inspector's Signature: _____ Date: _____
Inspector's Printed Name: _____
Inspector's Qualification:* _____

* The inspector's plumbing contractor certification or registration number or the inspector's backflow preventer tester certification organization and number.

Backflow Preventer Assembly (BPA) Testing and Repair Report

Public Water System (PWS): No. _____ Name: _____
Customer Name/Address: _____
Service Connection (SC): No.: _____ Address: _____
SC: Category: non-residential ☐ residential ☐ Subcategory: standard ☐ irrigation ☐ fire ☐
Location of BPA at/for SC: _____
BPA: Type: DC ☐ DCDA ☐ PVB ☐ RP ☐ RPDA ☐ Size: _____
BPA: Manufacturer: _____ Model: _____ Serial No. _____
Detector Assembly Water Meter Reading: Before Test: _____ After Test: _____

	Reduced-Pressure Principle Assembly			
	Double Check Valve Assembly			
	Check Valve #1	**Check Valve #2**	**Relief Valve**	**PVB**
Initial Test Pass ☐ Fail ☐	Closed Tight ☐ _____ PSID Leaked ☐	Closed Tight ☐ _____ PSID Leaked ☐	Opened at _____ PSID Did Not Open ☐	**Air Inlet:** Opened at _____ PSID Did Not Open ☐ **Check Valve:** Held at _____ PSID Leaked ☐
Repair	☐ Cleaned ☐ Replaced following:	☐ Cleaned ☐ Replaced following:	☐ Cleaned ☐ Replaced following:	☐ Cleaned ☐ Replaced following:
Final Test Pass ☐ Fail ☐	Closed Tight ☐ _____ PSID	Closed Tight ☐ _____ PSID	Opened at _____ PSID	**Air Inlet:** Opened at _____ PSID **Check Valve:** Held at _____ PSID
Comments:				

Initial Test

I certify that I used testing procedures meeting the requirements of the above identified PWS.
Tester's Signature: _____ Date: _____
Tester's Printed Name: _____
Tester's Qualification:* _____
Tester's Gauge: Manufacturer: _____ Model: _____
Serial No.: _____ Date of Last Verification/Calibration: _____

Repair

Repairer's Signature: _____ Date: _____
Repairer's Printed Name: _____

Final Test

I certify that I used testing procedures meeting the requirements of the above identified PWS.
Tester's Signature: _____ Date _____
Tester's Printed Name: _____
Tester's Qualification:*: _____
Tester's Gauge: Manufacturer: _____ Model: _____
Serial No.: _____ Date of Last Verification/Calibration: _____

* For any assembly at a dedicated fire service connection, the tester's Fire Protection System Contractor I or II certification number; for any other assembly, the tester's plumbing contractor certification or registration number or the tester's backflow preventer tester certification organization and number.

Notice/Letter To A Customer Advising the Customer to Install Thermal Expansion Control if the Customer's Plumbing System Incudes Storage Water Heating Equipment but Does Not Include Thermal Expansion Control

[Insert date]

[Insert Customer Name]
[Insert Customer Street Address]
[Insert Customer City, State, and Zip Code]

RE: [Insert service connection number]
[Insert service connection address]

Dear [Insert Customer Name]:

As required by Rule 62-555.360, Florida Administrative Code, the Florida Governmental Utility Authority has established, and is implementing, a cross-connection control (CCC) program utilizing backflow protection at or for service connections from the water system in order to protect the water system from contamination caused by cross-connections on customers' premises. Under our CCC program, we will install a backflow preventer in the meter box at the above referenced service connection since you have a reclaimed water service connection at your property, or since you have an auxiliary water supply at your property that has been determined to be a low degree of potential health hazard to the public water system.

This letter is to advise you that you might need to have thermal expansion control installed in the plumbing system connected to the above referenced service connection. When water is heated, it expands and requires more volume; this is called thermal expansion. A backflow preventer installed at a service connection will stop heated water in the customer's plumbing system from expanding back into the public water system; the backflow preventer creates what is called a closed plumbing system at the customer's premises. Thermal expansion in a closed plumbing system will cause an increase in pressure in the system. The increased pressure usually causes the temperature and pressure relief (T&P) valve on a water heater tank to open and discharge water from the water heater tank. A T&P valve is not intended to be used for routine thermal expansion control, and if a T&P valve fails, the water heater tank might explode.

The current *Florida Building Code* requires that thermal expansion control shall be installed in closed plumbing systems using a water heater tank. **If your plumbing system includes a water heater tank but does not include thermal expansion control, you are advised to have thermal expansion control installed in your plumbing system within 60 days of the date of**

this letter. We recommend you consult with a certified or registered plumbing contractor to determine the best solution for your specific needs.

If you have any questions, please contact me at [insert phone number] or [insert e-mail address].

Sincerely,

FLORIDA GOVERNMENTAL UTILITY AUTHORITY

[Insert name and title]

Notice/Letter to a Customer Requesting Installation of a Backflow Preventer at or for a Service Connection

[Insert date]

[Insert Customer Name]
[Insert Customer Street Address]
[Insert Customer City, State, and Zip Code]

RE: [Insert service connection number]
[Insert service connection address]
[Insert service connection category and subcategory]

Dear [Insert Customer Name]:

As required by Rule 62-555.360, Florida Administrative Code, the Florida Governmental Utility Authority has established, and is implementing, a cross-connection control (CCC) program utilizing backflow protection at or for service connections from the water system in order to protect the water system from contamination caused by cross-connections on customers' premises. Under our CCC program, we have evaluated the above referenced service connection and the premises served by the connection, and we have determined backflow protection is required at or for the connection because [insert "it is a dedicated irrigation service connection", "it is a dedicated fire service connection", "it serves premises in the following category: ..." or "it is connected to an auxiliary water system representing a high degree of potential health hazard to the public water system]. Please be advised that failure on your part to install or satisfactorily repair your backflow prevention device could result in termination of water service to your property.

This letter is to request you have a [insert the minimum type of backflow preventer required] installed at or for the above referenced water service connection within 60 days after the date of this letter. The backflow preventer must be installed in accordance with the requirements in our CCC Program Plan, which you can view at the following webpage: [Insert FGUA website address]. An appropriately certified fire protection system contractor must install backflow protection at or for a fire service connection. We recommend you consult with a certified or registered plumbing contractor regarding installation of other backflow protection.

The new backflow preventer must be tested immediately after it is installed. The testing must be conducted by an appropriately certified fire protection system contractor if the new backflow preventer is installed at or for a fire service connection; otherwise, the testing must be conducted by a certified or registered plumbing contractor or by a backflow preventer tester holding a current certification from one of the organizations/schools listed in Component III.D. of the Florida Governmental Utility Authority's CCC program plan. For your convenience, we are enclosing a list of fire protection system contractors, certified or registered plumbing contractors, and certified backflow preventer testers who are pre-approved to test assemblies that protect our water system.

The enclosed Backflow Preventer Assembly Testing and Repair Report form must be completed by the backflow preventer tester and returned to us at the letterhead address within 60 days after the date of this letter. Please be advised that failure on your part to install, test, or satisfactorily repair your backflow prevention device could result in termination of water service to your property.

If you have any questions, please contact me at [insert phone number] or [insert e-mail address].

Sincerely,

FLORIDA GOVERNMENTAL UTILITY AUTHORITY

[Insert name and title]

Enclosures: Pre-Approved Backflow Preventer Tester List
Backflow Preventer Assembly Testing and Repair Report Form

Notice/Letter to a Customer Requesting Testing of a Backflow Preventer Assembly at or for a Service Connection

[Insert date]

[Insert Customer Name]
[Insert Customer Street Address]
[Insert Customer City, State, and Zip Code]

RE: [Insert service connection number]
[Insert service connection address]

Dear [Insert Customer Name]:

As required by Rule 62-555.360, Florida Administrative Code, the Florida Governmental Utility Authority has established, and is implementing, a cross-connection control (CCC) program utilizing backflow protection at or for service connections from the water system in order to protect the water system from contamination caused by cross-connections on customers' premises. Under our CCC program, a customer-owned backflow preventer assembly has been installed at or for the above referenced water service connection, and [insert "annual" or "biennial"] testing of the assembly is required to ensure that it is functioning properly.

This letter is to request you now arrange for the [insert "annual" or "biennial"] testing of the customer-owned backflow preventer assembly that is installed at or for the above referenced water service connection and that is described on the enclosed Backflow Preventer Assembly Testing and Repair Report form. The testing must be conducted by a certified Fire Protection System Contractor I or II if the enclosed report form indicates that the assembly is at a fire service connection; otherwise, the testing must be conducted by a certified or registered plumbing contractor or by a backflow preventer tester holding a current certification from one of the organizations/schools listed in Component III.D. of the Florida Governmental Utility Authority's CCC program plan. For your convenience, we are enclosing a list of fire protection system contractors, certified or registered plumbing contractors, and certified backflow preventer testers who are pre-approved to test assemblies that protect our water system.

If the testing discloses the assembly is not functioning properly, please have the necessary repairs made and have the assembly retested. **The enclosed testing and repair report form must be completed by the backflow preventer tester(s), and by the backflow preventer repairer if repairs are made and returned to us at the letterhead address within 60 days after the date of this letter.**

If you have any questions, please contact me at [insert phone number] or [insert e-mail address].

Sincerely,

FLORIDA GOVERNMENTAL UTILITY AUTHORITY

[Insert name and title]

Enclosures: Backflow Preventer Assembly Testing and Repair Report Form
Pre-Approved Backflow Preventer Tester List