

RESOLUTION NO. 2016-06

A RESOLUTION OF THE TOWN OF LAKE HAMILTON WATER SYSTEM ESTABLISHING A
CROSS-CONNECTION CONTROL PROGRAM

WHEREAS, a community water system is responsible for supplying its customers with water that meets federal and State drinking water standards;

WHEREAS, a community water system 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 TOWN OF LAKE HAMILTON WATER SYSTEM:

Component II in the Cross-Connection Control Program Plan for the Town of Lake Hamilton Water System, dated July 5, 2016, shall establish where backflow protection at or for service connections is mandatory.

Component III in the Cross-Connection Control Program Plan for the Town of Lake Hamilton Water System, dated July 5, 2016, shall establish requirements regarding ownership, installation, inspection/testing, and maintenance of mandatory backflow protection at or for service connections.

Component IV in the Cross-Connection Control Program Plan for the Town of Lake Hamilton Water System, dated July 5, 2016, shall establish the CWS's procedures for evaluating customers' premises to establish the category of customer and the backflow protection being required at or for the service connection(s) from the CWS to the customer.

Component V in the Cross-Connection Control Program Plan for the Town of Lake Hamilton Water System, dated July 5, 2016, shall establish the CWS's procedures for maintaining CCC program records.

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resolutions, establishing a cross-connection control program, or parts of a cross-connection control program, shall be repealed, rescinded, superseded, and replaced by this resolution.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 July 5, 2016.

Resolution 2016-06
Cross Connection Control

PASSED AND ADOPTED by the Town of Lake Hamilton on the 5th day of July, 2016.
Town of Lake Hamilton Water System

TOWN OF LAKE HAMILTON, FLORIDA


Marlene M. Wagner, Mayor

Attest with Seal:


Sara K. Irvine, Town Clerk

Approved as to Form:


Heather R. Christman, Town Attorney

Cross-Connection Control Program Plan for the Town of Lake Hamilton

6-8-2016

Requirement for Program Plan

The Town of Lake Hamilton Water System, 6530977, hereinafter referred to as the “community water system (CWS),” 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 CWS is required to establish and implement a cross-connection control (CCC) program utilizing backflow protection at or for service connections from the CWS. The CCC program must include a written plan that contains, as a minimum, the following components:

- I. Legal authority for the CWS’s CCC program.
- II. The CWS’s policy establishing where backflow protection at or for service connections from the CWS is mandatory.
- III. The CWS’s policy regarding ownership, installation, inspection/testing, and maintenance of backflow protection that the CWS is requiring at or for service connections from the CWS and associated fee’s.
- IV. The CWS’s procedures for evaluating customers’ premises to establish the category of customer and the backflow protection being required at or for the service connection(s) from the CWS to the customer.
- V. The CWS’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 CWS (i.e., whoever interfaces with the CWS regarding water service). 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 CWS's CCC program (i.e., an ordinance, a bylaw or resolution, or water service rules and regulations).*

The CWS has adopted Resolution No. 2016-B which is included in Appendix A. The resolution authorizes the CWS to establish and implement a CCC program and references the following CWS policies:

- The CWS's policy establishing where backflow protection at or for service connections from the CWS is mandatory.
- The CWS's policy regarding ownership, installation, inspection/testing, and maintenance of backflow protection that the CWS is requiring at or for service connections from the CWS and associated fees owed by the customer.

Component II: *The CWS's policy establishing where backflow protection at or for service connections from the CWS is mandatory.*

This policy applies to all new or existing customers. The CWS requires all businesses, connected to the water service system, to have (RP's) regardless of the nature of the business. All residential meters are installed with a (DuC). Residential homes with unique circumstances may require an RP.

The following minimum backflow protection shall be provided at or for service connections from the CWS to the following categories of customers:

| Category of Customer | Minimum Backflow Protection ¹ to Be Provided at or for the Service Connection from the CWS to the Customer |
|---|---|
| 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 |
| 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 ³ |
| Dye plant | RP |

| Category of Customer | Minimum Backflow Protection ¹ to Be Provided at or for the Service Connection from the CWS to the Customer |
|---|---|
| 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 |
| Premises where there is an auxiliary or reclaimed water system ^{4,5} | RP |
| Premises where there is a cooling tower | RP |
| Premises where there is an irrigation system that is using potable water and that... <ul style="list-style-type: none"> I. Is connected directly to the CWS's distribution system via a dedicated irrigation service connection II. Is connected internally to the customer's plumbing system | RP |

| Category of Customer | Minimum Backflow Protection ¹ to Be Provided at or for the Service Connection from the CWS to the Customer |
|--|--|
| <p>Premises where there is a wet-pipe sprinkler, or wet standpipe, fire protection system that is using potable water and that...</p> <p>I. Is connected directly to the CWS's distribution system via a dedicated fire service connection¹²</p> <p>II. Is connected internally to the customer's plumbing system</p> | <p>I.A. At or for a residential dedicated fire service connection⁶: DuC if the fire protection system contains no chemical additives and is not connected to an auxiliary water system⁴; or RP/RPDA if the fire protection system contains chemical additives or is connected to an auxiliary water system^{4,13}</p> <p>I.B. At or for a non-residential dedicated fire service connection⁶: DC/DCDA if the fire protection system contains no chemical additives and is not connected to an auxiliary water system⁴; or RP/RPDA if the fire protection system contains chemical additives or is connected to an auxiliary water system^{4,13}</p> <p>II. Residential None¹¹</p> |
| 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 | RP |
| 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 | Varies ¹⁴ |

¹ Means of backflow protection, listed in an increasing level of protection, 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.

⁴ 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 CWS 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.)

⁵ The Department of Environmental Protection shall allow an exception to the requirement for backflow

Component III: The CWS's policy regarding ownership, installation, inspection/testing, and maintenance of backflow protection that the CWS is requiring at or for service connections from the CWS.

- A. The CWS will own and be responsible for the installation, inspection/testing, and maintenance of all backflow protection required at or for service connections from the CWS except customer-owned backflow preventer assemblies required at or for dedicated fire service connections from the CWS (customer-owned backflow preventer assemblies required at or for dedicated fire service connections from the CWS shall be tested by a certified Fire Protection System Contractor I or II pursuant to Chapter 633, Florida Statutes). There will be a backflow installation fee and an annual maintenance fee that will be added to the water bill based on current pricing from USABlueBook. This pricing will be periodically updated.

The following table shows the current pricing that will be in place through 2016-2017

Size of RP installation cost Annual Test and Repair

| Size of RP Backflow Prevention Device | Installation Cost for a new RP including parts and labor | Annual Testing and Repair (annual maintenance fee) |
|---------------------------------------|--|--|
| ¾" | \$465.00 | \$45 |
| 1" | \$500.00 | \$45 |
| 1 ¼" | \$800.00 | \$65 |
| 1 ½" | \$840.00 | \$65 |
| 2" | \$999.00 | \$65 |

The following table shows the schedule that the CWS will follow for installation of backflow

service connections from the CWS 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 or for service connections from the CWS will be installed immediately downstream of the water meter and in the meter box. All other backflow protection required at or for service connections from the CWS shall be installed downstream from, and within five feet after, the CWS's water meter box or the customer's property line unless a deviation is approved by the CWS. The CWS 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 or for service connections from the CWS 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.

- C. All air gaps (AGs) required at or for service connections from the CWS shall be inspected at least annually. CWS personnel will inspect AGs required at or for service connections from the CWS and will 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
 - Any other organization or school approved in writing by the CWS.
- D. 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 or for non-residential service connections from the CWS 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 or for residential service connections from the CWS 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.

will know when building permits are being applied for or issued.

- C. To evaluate the customer's premises at a service connection from the CWS, the CWS will use "a water use questionnaire" and, if necessary, will also review construction plans or conduct an on-site inspection. ("Water use questionnaire" forms are included in Appendix C.) Where the submittal of the questionnaire doesn't inspire confidence and trust by the CWS and a follow-up request for on-site inspection doesn't receive permission to enter premises we may require the most protective assembly. Where entry to all portions of the customer's premises is not available, the CWS will consider the customer to be a restricted-access facility, for which an RP is required at the service connection.

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

- A. The CWS will maintain, in either electronic or paper format, a current inventory of all backflow protection required at or for service connections from the CWS. 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 CWS;
- 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 isolated (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 [DuC]);
- 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 CWS will maintain, in either electronic or paper format, records of the installation, inspection/testing, and repair of all backflow protection required at or for service connections from the CWS.

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.

Appendix A

Appendix B

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 adequate 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 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 adequate 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.