COUNTY AGENDA REQUEST

Department:	Water System	Presenter(s):	Tony Parrott
Meeting Date:	August 25, 2011	Type of Request:	Consent

Wording for the Agenda:

Approval of the Water Committee's recommendation to approve modification of the Water System's Backflow Containment Policy.

Background/History/Details:

The Water System is required to follow the guidelines of the Department of Natural Resources Backflow Program. (Part of DNR's Safe Drinking Water Program). The County's current policy was approved by DNR, but needs an amendment giving the Water System authorization to test and/or repair a backflow device that is not tested and/or repaired by the property owner.

The current policy needs to be amended to give the Water System authority, in the event a water customer with a backflow device does not test and/or repair it, to have a certified backflow tester perform a test and, if needed, repair the backflow device; and allowing the Water System to then charge the cost of the test/repair to the customer's water bill. If the water bill is not paid, the water will be disconnected for non-payment.

Once the Board has approved this change, the amended Backflow Containment Policy will then be sent to the Department of Natural Resources for its approval.

What action are you seeking from the Board of Commissioners?

Approval of the changes to the current Backflow by Containment Policy.

If this item requires funding, please describe:

N/A

Has this request been considered within the past two years?	No	If so, when?	
Is Audio-Visual Equipment Required for this Request?	Yes	Backup Provided with Request?	Yes

STAFF USE ONLY

Approved by Finance	Not Applicable	Reviewed by Legal	Yes
Approved by Purchasing	Not Applicable	County Clerk's Approval	Yes
Administrator's Approval	Yes		

Staff Notes:

Backflow by Containment

Fayette County Water System
P. O. Box 190
245 McDonough Road
Fayetteville, Georgia 30214

June 14, 2007
Updated
August 8, 2011

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CHAPTER 1

Introduction

The intent of this Cross-Connection Control Program is to recognize that all customer's water systems have connections to apparatus, vessels, etc., that could have impurities in varying degrees and, if not properly controlled and contained, could contaminate or pollute both the customers' water system and the public potable water supply system. It is also the intent to apply the principle that the type of protection could be determined by whether the impurities are hazardous contaminants or nonhazardous pollutants and should uphold the Safe Drinking Water Act.

The purpose of this Program is to assist customers in protecting their potable water systems against backflow, and against any contamination or pollution that may occur due to back-pressure or back-siphonage, by installing cross-connection control at each actual or potential cross-connection within the customer's premises. This is referred to as "primary protection." The second purpose is to protect the Fayette County Water System's potable water supply system against actual or potential backflow by containment within a customer's premises any contamination or pollution that has entered or may enter into the consumer's potable water system through undiscovered or uncontrolled cross-connection on the customer's premises. This is referred to as "secondary protection." The third purpose is to eliminate uncontrolled cross-connections to any nonpotable water system, as well as any insolated interconnections to any potable water system that is not a part of the public potable water supply system, by isolation using the appropriate backflow preventer to control, contain, and isolate such system(s) from the Water System's potable water supply system.

The Director of the Water System, shall be authorized through Code and Ordinance adopted by the Fayette County Board of Commissioners, to be primarily responsible for preventing the contamination or pollution to the potable water supply system by instituting a program of **Backflow Prevention By Containment.** Such responsibility begins at the point of origin of the Water System's potable water supply, including all the distribution system, and terminates at the service connection to the customer's water system. The backflow preventer (BFP) required at the service connection will be at a minimum a dual check valve (DuC). In addition, the Director of the Water System shall exercise reasonable vigilance to ensure the customer's adherence to the Policy and Procedures as stated and outlined in the adopted Code and Ordinance.

CHAPTER 2

LEGAL AUTHORITY

GEORGIA RULES FOR SAFE DRINKING WATER
CROSS CONNECTIONS

391-3-5-.13 Cross-Connections.

(1) No person shall construct, maintain or operate a physical arrangement whereby a public water system is or may be connected directly or indirectly with a nonpotable water system or non-permitted water system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains or may contain contaminated water, liquid, gasses, sewage or other waste of unknown or unsafe quality, which may be capable of imparting contamination to the public water system as the results of backflow, bypass arrangements, jumper connections, removable sections, swivel or changeover devices, or other temporary, permanent or potential connections through which or because of which back-flow or back-siphonage could or would occur.

(2) A supplier of water or any person having possession or control of facilities which may cause the contamination of a public water system has the responsibility to prevent water from unapproved sources or any contaminants from entering the public water system by such physical arrangements cited in paragraph (1) of this Section.

(3) Any person connecting to and purchasing water from a public water system and reselling it to others is considered a supplier of the water so purchased as well as a consumer, and is also responsible for the quality of such water.

(4) A supplier shall, when requested by the Division, develop a control program for the elimination and prevention of all cross-connections. A written plan for the program shall be submitted to the Division for review and approval within two (2) years or less in accordance with a written request by the Division. When the plan is approved, the owner shall implement the program immediately.

(5) The procedures for back-flow and back-siphonage prevention and cross-connection control shall conform to those recommended by the American Water Works Association, Manual 14, and the U.S. Environmental Protection Agency Cross-Connection Manual.

(6) The supplier shall require that all backflow prevention assemblies installed pursuant to this section be field tested following installation, repair, or relocation and at least annually thereafter.

(7) After October 1, 2004, all required field testing shall be performed by persons who are certified in the testing of backflow prevention assemblies by the Georgia Statewide Backflow Prevention Assembly Certification Program, as approved by the Division, the American Backflow Prevention Association (ABPA), the American Society of Sanitary Engineers (ASSE) or the University of Florida TREEO Center.

(8) Gauges used in the testing of backflow prevention assemblies shall be tested for accuracy annually in accordance with the University of Southern California Manual of Cross-Connection Control or American Water Works Association Manual 14. Public water systems shall require testers to include test gauge serial numbers on “Test and Maintenance” report forms and ensure testers have gauges tested for accuracy.
(9) Each water supplier shall maintain records of the following for a minimum of three years:
(a) Most current hazard assessment, conducted pursuant to Section 608 of the Georgia State Minimum Standard Plumbing Code (International Plumbing Code);
(b) Locations and types of backflow protection and associated hazards;
(c) Results of all backflow prevention assembly field testing and air gap inspections; and
(d) Repairs made to, or replacement or relocation of, backflow protection.
(10) Summaries of the information in section (9)(a) - (d) shall be available to the Division on request for a minimum of three years.
(11) The supplier shall ensure that backflow prevention assemblies that fail the field test are repaired or replaced within 30 days.
(12) The supplier shall ensure that bypass piping installed around any approved backflow preventer is equipped with a backflow preventer providing an equivalent level of protection.
(13) Reduced pressure principal backflow prevention assemblies shall not be installed in any location subject to possible flooding. This includes pits and/ or vaults which are not provided with a gravity drain to the ground’s surface that is capable of exceeding the discharge rate of the relief valve.
(14) Each supplier shall notify the Division of any known incident of backflow into the public water system as soon as possible but no later than the end of the next business day upon discovery of the incident. If requested to do so by the Division, the supplier shall submit a written report of the incident describing the nature and severity of the backflow, the actions taken by the water supplier in response to the incident, and the action plan intended to prevent such incidents in the future.
(15) The supplier of water shall deny or discontinue water service to a commercial consumer if a required backflow prevention device is not installed or properly maintained. Water service shall not be restored to such premises until the deficiencies have been corrected or eliminated to the satisfaction of the supplier and the Division. Residential connections shall be maintained in accordance with the Georgia State Minimum Standard Plumbing Code (International Plumbing Code)

Authority Ga. L. 1977, p. 351, et seq., O.C.G.A. Sec. 12-5-170 et seq., as amended. **Administrative History.** Original Rule entitled "Storage Tanks and Distribution System" was filed on September 6, 1973; effective September 26, 1973. **Amended:** Rule repealed and a new Rule entitled "Cross Connections" adopted. Filed July 5, 1977; effective July 26, 1977, as specified by Rule 391-3-5-.47. **Amended:** Filed July 15, 1983; effective August 4, 1983. **Amended:** F. Dec. 4, 1990; eff. Dec. 24, 1990. **Amended:** F. Dec. 21, 2004; eff. Jan. 10, 2005.

FAYETTE COUNTY CODE
ARTICLE V. CROSS-CONNECTION CONTROL

Sec. 19-86. Definitions.

The following definitions and terms shall apply in the interpretation and enforcement of this article:

Auxiliary intake. Any piping connection or other device whereby water may be secured from a source other than that normally used.

By-pass. Any system of piping or other arrangement whereby the water may be diverted around any part or portion of a water purification plant.

Cross connection. Any physical connection whereby the public water supply is connected with any other water supply system, whether public or private, either inside or outside of any building or buildings in such a manner that a flow of water into the public water supply is possible either through the manipulation of valves or because of ineffective check or back-pressure valves, or because of any other arrangement.

Inter-connection. Any system of piping or other 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 liquid which would be capable of imparting contamination to the public water supply.

Persons. Any and all persons, natural or artificial, 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.

Public water supply. The waterworks system furnishing water to Fayette County for general use and which is recognized as the public water supply by the Georgia Department of Natural Resources/Environmental Protection Division.
(Ord. No. 2005-03, § 1, 1-13-05)

Sec. 19-87. Compliance.

The Fayette County Water System shall comply with Chapter 391-3-5-.13 of the Georgia Rules for Safe Drinking Water and U.S. Environmental Protection Agency Cross Connection Manual which pertain to cross connections, and establish an effective, ongoing program to control these undesirable water uses.
(Ord. No. 2005-03, § 1, 1-13-05)

Sec. 19-88. [Actions prohibited.]

It shall be unlawful for any person to cause a cross connection, auxiliary intake, by-pass, or inter-connection to be made; or to allow a cross connection auxiliary intake, by-pass, or inter-connection to exist for any purpose whatsoever.
(Ord. No. 2005-03, § 1, 1-13-05)

Sec. 19-89. [Separate sources of water.]

Any person whose premises are supplied with water from the public water supply, and who also has on the same premises a separate source of water supply or stores water in an uncovered or unsanitary storage reservoir from which the water stored is circulated through a piping system, shall file a statement of the non-existence of unapproved or unauthorized cross connections, auxiliary intakes, by-passes, or inter-connections with the Director of the Fayette County Water System. Such statement shall also contain an agreement that no cross connection, auxiliary intake, by-pass, or inter-connection will ever be permitted upon the premises.
(Ord. No. 2005-03, § 1, 1-13-05)

Sec. 19-90. [Protective devices.]

The Director of the Fayette County Water System or his designated representative, shall require the use of an approved protective device on the service line serving all premises to assure that any contamination

that may originate in the customer's premises is contained therein. The protective device shall be a backflow preventer approved by the Director of the Fayette County Water System as to manufacture, model, and size. The method of installation of all backflow protective devices shall be approved by the Director of the Fayette County Water System prior to installation and shall comply with the criteria set forth by the Director of the Fayette County Water System. The installation shall be at the expense of the owner or occupant of the premises.

The Fayette County Water System shall have the right to inspect and test the device or devices on an annual basis or whenever deemed necessary by the Director of the Fayette County Water System or his designated representative. Water service shall not be disrupted to test the device without the knowledge of the occupant of the premises.

Where the use of water is critical to the continuance of normal operations or protection of life, property, or equipment, duplicate units shall be provided to avoid the necessity of discontinuing water service to test or repair the protective device or devices. Where only one (1) unit is installed and the continuance of service is critical, the Director of the Fayette County Water System shall notify, in writing, the occupant of the premises of plans to discontinue water service and shall arrange for a mutually acceptable time to test and/or repair the device. These repairs shall be made by qualified personnel, acceptable to the Fayette County Water System.

(Ord. No. 2005-03, § 1, 1-13-05)

Sec. 19-91. [Authority for entry].

The Director of the Fayette County Water System or authorized representative is hereby authorized to enter, at any reasonable time, any property served by a connection to the Fayette County Water System for the purpose of inspecting the piping system or systems thereof for cross connections, auxiliary intakes, by-passes, or inter-connection. On request, the owner, lessee, or occupant of any property so served shall furnish to the inspecting party, any and all pertinent information regarding the piping system or systems on such property. The refusal of such information or refusal of access, when requested, shall be deemed evidence of the presence of cross connections.

(Ord. No. 2005-03, § 1, 1-13-05)

Sec. 19-92. [Violations.]

Any person who now has cross connections, auxiliary intakes, by-passes, or inter-connections in violation of the provisions of this article shall be allowed a reasonable time within which to comply with the provisions of this article. After a thorough investigation of existing conditions and an appraisal of the time required to complete the work, the amount of time shall be designated by the Director of the Fayette County Water System.

(Ord. No. 2005-03, § 1, 1-13-05)

Sec. 19-93. [Disconnection.]

There is a likelihood that protective measures will be subverted, altered or otherwise disconnected where the use of the water supplied to a premise by the Fayette County Water System is such that:

(1) It is impractical to provide an effective air-gap separation;

(2) The owner and/or occupant of the premises cannot or is not willing to demonstrate to the official in charge of the system, or his designated representative, that the water use and protective features of the plumbing are such as to pose no threat to the safety or potability of the water supply;

(3) The nature and mode of operation within the premises cause a need for frequent alterations to the plumbing.

(Ord. No. 2005-03, § 1, 1-13-05)

Sec. 19-94. [Potable water supply.]

The potable water supply made available on the properties served by the public water supply shall be protected from possible contamination as specified herein. Any water outlet which could be used for potable

or domestic purposes and which is not supplied by the potable system must be labeled in a conspicuous manner such as:

Water Unsafe for Drinking

The minimum acceptable sign shall have black letters, each letter being one (1) inch high and located on a red background.

(Ord. No. 2005-03, § 1, 1-13-05)

Sec. 19-95. [Penalty.]

Any person who neglects or refuses to comply with any of the provisions of this article shall be deemed guilty of a misdemeanor and, upon conviction therefor, shall be fined not less than ten dollars ($10.00) nor more than one hundred dollars ($100.00), and each day of continued violation after conviction shall constitute a separate offense. In addition to the foregoing fines and penalties, the Director of the Fayette County Water System shall discontinue the public water supply to any premises upon which there is found to be a cross connection, auxiliary intake, by-pass, or inter-connection, and service shall not be restored until such cross connection, auxiliary intake, by-pass, or inter-connection has been discontinued.

(Ord. No. 2005-03, § 1, 1-13-05)

CHAPTER 3

PROGRAM IMPLEMENTATION

The Fayette County Water System originally depended on the Public Health Department and the Building Departments of Fayette County, Tyrone, and Peachtree City to make sure that the plumbing in a structure complied with the Georgia Plumbing Code which prohibits cross-connections. In order to comply with the Georgia Rules for Safe Drinking Water, Chapter 391-3-5-13 Cross-connections, the Fayette County Water System implemented a plan to install, test and maintain double check backflow preventers on all large volume users and all customers with a potentially hazardous process. This plan will focus on cross-connection by containment. The Water System expanded this program to include a minimum of a dual check backflow preventer on every new residential service.

Starting October 1, 2006, we will start notifying customers that the annual testing becomes their responsibility. The Water System's current backflow program is to test the backflow devices on the 3-inch and larger services annually. The backflow program now includes all testable non-residential backflow devices.

We will notify each customer 90 days ahead of the annual test date. We will provide information on how to access the State site which has the list of the certified testers and send a form for each assembly that they are required to test. If the device is not tested or the results not received by the end of the 90 days; a certified letter will be sent to the billing address requesting a response and a schedule for testing/repair within 30 days.

The program will be the responsibility of the Water System's Inventory Clerk. ~~This position is backflow tester certified~~. The files will be maintained at 444 Dividend Drive in accordance with 391-3-5-.13 Cross-Connection.

Assemblies that do not pass the test are required to be repaired within 30 days. The Water System can discontinue service to customers with assemblies that do not pass and that are not repaired.

Any device not tested or not repaired as of the schedule listed above; will be tested and/or repaired by a certified tester under contract with the Water System and the customer will have the charge added to their water bill and will be subject to the same policies. Failure to pay the water bill will result in the water service being interrupted. The notice about the testing and/or repair shall be sent certified to the billing address.

Future services will have a backflow assembly on the bypass, if a bypass is installed.

The Fayette County Water System has taken steps to train personnel in implementing a cross-connection control plan. The supervisor of the distribution crew will handle the inspection and testing of the initial installation of the backflow devices. The Inventory Clerk will review inspections of potential hazards and maintain the records showing the testing of backflow devices.

A list, that includes all large water customers, will be maintained on each customer who has a backflow preventer or who has a high priority to have one installed. Included in this file will be the dates of facility inspections and testing of backflow prevention devices. These files will be kept in the Distribution Shop at 444 Dividend Drive, Peachtree City, Georgia.

CHAPTER 4

EMERGENCY PLAN

The Fayette County Water System serves the Industrial Park in Peachtree City, which has our highest potential for backflow contamination. Our emergency plan deals specifically with this area and the remainder of the Water System in general.

The personnel on duty after 5:00 p.m. are the plant operators on each shift. It is the shift leader's responsibility to contact the Water System Director or Assistant Director and the Distribution Supervisor in the event of an emergency. After notifying Water System personnel, he will be responsible to turn off the valves necessary to isolate the Industrial Park from the remaining system.

The Water System Director or Assistant Director, and the Distribution Supervisor will call in a crew to locate the source of contamination and to turn off the water to the facility. The valves to the adjoining buildings will also be cut off to limit the spread of contamination.

The Environmental Protection Division of the Department of Natural Resources, the Peachtree City Fire and Police Departments will be notified of the problem and a building to building notification will be given. Samples will be collected and taken either to Analytical Services or the State laboratory as directed by the Environmental Protection Division personnel. The public will be notified by Water System personnel, Police and Sheriff Officers door-to-door. The Industrial Park has two 10-inch water lines running north and south with the elevated tanks on the north end. In order to flush the area, the fire hydrants on the south end can be opened and the entire area flushed with potable water and chlorinated. After this has been done, each building can be tested and flushed separately as needed.

The procedure in other areas will be as follows:

1. Notify the Director and Supervisors.
2. Plant Operators to begin valving off sections affected.
3. Director or Supervisors to call in additional employees and dispatch to the area.
4. Sheriff's office or local Police Department notified.
5. Turn off individual residences and notify customers.
6. Collect samples and take to laboratory.
7. Flush system and chlorinate.
8. Flush individual services as needed.

In all instances, the water service to the customer who caused the problem will remain off until cross-connection has been corrected.

A copy of the waterline asbuilts, showing valves and backflow preventers, are on file at the distribution shop and the business office.

EMERGENCY NUMBERS

Public Health Office - Rick Fehr	770-460-5730 ext 5147
Fayette County Building Official	770-460-5730 ext 5131
Peachtree City Building Inspector	770-487-7657
Tyrone Town Manager	770-487-4038
Fayette County Fire and Emergency Services	911
Peachtree City Fire	911
Fayette County Sheriff	770-461-6353
Tyrone Police	911
Peachtree City Police	911
Fayetteville Police	911
Marshal's Office	770-460-5730 ext 5156
EPD Drinking Water Program	404-656-2750 or 404-6556-4807
Drinking Water Program Fax	404-651-9590
EPD Emergency (after hours)	404-656-4863 or 1-800-241-4113

CHAPTER 5

PUBLIC AWARENESS

The Fayette County Health Department has had published in the County newspapers' articles on backflow prevention. The Water System requires new customers who were previously on a well to disconnect the well from the dwelling served by County Water. The customers are notified of the potential for thermal expansion in their system when water service is applied for. The Water System will make an effort to notify all customers about backflow hazards, backflow prevention, and thermal expansion in "Closed Systems" through newspaper articles and customer mailouts.

CHAPTER 6

RESOURCES

1. Recommended Practice for Backflow Prevention and Cross-Connection Control, AWWA M14, American Water Works Association. Second Edition 1990.

2. Cross-Connection Control Manual, 1989 U. S. Environmental Protection Agency.

3. Cross-Connection Prevention Booklet, 1984 American Society of Sanitary Engineering.

4. Principle No. 5 (Backflow Prevention) and Section: 1105; The Georgia State Plumbing Code.

CHAPTER 7

Potential Sources of Contamination

The Water System maintains a list that includes all customers with water service greater than a 2-inch residential meter and the status of the backflow protection at the service. The Fayette County Water System has installed dual check valves on all residential services since 1987.