

RULES AND REGULATIONS TO PROVIDE AN EFFECTIVE MEANS FOR PROTECTING THE PUBLIC WATER SYSTEM FROM CONTAMINATION DUE TO BACKFLOW OF CONTAMINATES THROUGH THE WATER SERVICE CONNECTION INTO THE PUBLIC WATER SYSTEM OF NORTHEAST WATER SYSTEM, FULTON COUNTY, OHIO

Section 1 Purpose

The purpose of this document is to establish and enforce cross-connection control rules and regulations as follows:

1. To protect the county's public water supply from contamination or pollution by isolating within the consumer's water system contaminants or pollutants which could backflow through the service connection into the county's public water system.
2. To promote the elimination or control of existing cross-connections, actual or potential, between the county's and consumer's potable water system and non-potable water systems, plumbing fixtures and sources or systems containing process fluids.
3. To provide the maintenance of a continuing program of cross-connection control which will systematically and effectively prevent the contamination or pollution of the county's and consumer's potable water systems.

Section 2 Application

The rules and regulations, as part of this document, shall apply to all premises serviced by the public water system of the Northeast Water System.

Section 3 Rules & Regulations

Fulton County shall be responsible for the protection of its public water system from contamination due to backflow or contaminants through the water service connection. If, in the judgment of the Superintendent, an approved backflow prevention device is necessary at the water service connection to any consumer's premises for the safety of the county's water system, the Superintendent or his/her authorized representative shall give notice to the consumer to install such approved backflow prevention device at each service connection to his/her premises. The consumer shall immediately install such approved device or devices at his/her own expense, and failure, refusal or inability on the part of the consumer to install such device or devices immediately shall constitute grounds for discontinuing water service to the premises until such device or devices have been installed.

Section 4 Definitions

(A) "Air gap separation" means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the flood level rim of the receptacle.

(B) "Approved" means that a backflow prevention device or method has been accepted by the county or the director as suitable for the proposed use.

(C) "Auxiliary water system" means any water system on or available to the premises other than the county's public water system. These auxiliary water systems shall include used water or water from a source other than the public water system, such as wells, cisterns or open reservoirs that are equipped with pumps or other prime movers, including gravity.

(D) "Backflow" means the flow of water or other liquids, mixtures, or substances into the distributing pipes of the county's potable water supply from any source other than the intended source of the county's potable water supply.

- (E) "Backflow prevention device" means any device, method, or type of construction intended to prevent backflow into the county's potable water system.
- (F) "Booster pump" means any device that is intended to increase the in-line water pressure.
- (G) "Consumer" means the owner or person in control of any premises supplied by or in any manner connected to the county's public water system.
- (H) "Consumer's water system" means any water system, located on the consumer's premises, supplied by or in any manner connected to the county's public water system. A household plumbing system is considered to be a consumer's water system.
- (I) "Cross-connection" means any arrangement whereby backflow can occur.
- (J) "Degree of hazard" is a term derived from an evaluation of the potential risk to health and welfare.
- (K) "Director" means the director of environmental protection or his/her duly authorized representative.
- (L) "Double check valve assembly" means an assembly composed of two single, independently acting, check valves including tightly closing shutoff valves located at each end of the assembly and suitable connections for testing the water tightness of each check valve.
- (M) "Double check-detector check valve assembly" means a specially designed assembly composed of a line-size approved double check valve assembly with a specific bypass water meter and a meter-sized approved double check valve assembly. The meter shall register accurately for only very low rates of flow and shall show a registration for all rates of flow.
- (N) "Health hazard" means any condition, device, or practice in a water system or its operation that creates, or may create, a danger to the health of users.
- (O) "Human consumption" means the ingestion or absorption of water or water vapor as the result of drinking, cooking, dishwashing, hand washing, bathing, showering, or oral hygiene.
- (P) "Interchangeable connection" means an arrangement or device that will allow alternate but not simultaneous use of two sources of water and includes an approved reduced pressure principle backflow prevention assembly or an approved reduced pressure principle-detector assembly on the county's public water system side of the connection.
- (Q) "Person" means the state, any political subdivision, public or private corporation, individual, partnership, or other legal entity.
- (R) "Pollutional hazard" means a condition through which an aesthetically objectionable or degrading material, which is not dangerous to the public water system or health of users, may enter the county's public water system or portion of a consumer's water system.
- (S) "Potable water" means water intended for human consumption.
- (T) "Premises" means any building, structure, dwelling or area containing plumbing or piping supplied from the county's public water system.
- (U) "Process fluids" means any fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a pollutional, system, health or

severe health hazard if introduced into the county's public water system or portion of a consumer's water system. This includes, but is not limited to:

- (1) Polluted or contaminated waters;
- (2) Process waters;
- (3) Used waters originating from the a public water system which may have deteriorated in sanitary quality;
- (4) Cooling waters;
- (5) Contaminated natural waters taken from wells, lakes, streams, or irrigation systems;
- (6) Chemicals in solution or suspension;
- (7) Oils, gases, acids, alkalis, and other liquid and gaseous fluids used in industrial or other processes, or for fire fighting purposes.

(V) "Public water system" has the same meaning as in rule 3745-81-01 of the Administrative Code.

(W) "Reduced pressure principle backflow prevention assembly" means a device containing a minimum of two independently acting check valves together with an automatically operated pressure differential relief valve located between the two check valves. During normal flow and at the cessation of normal flow, the pressure between these two checks shall be less than the supply pressure. In case of leakage of either check valve, the differential relief valve, by discharging to the atmosphere, shall operate to maintain the pressure between the check valves at less than the supply pressure. The unit must include tightly closing shutoff valves located at each end of the device, and each device shall be fitted with properly located test cocks.

(X) "Reduced pressure principle-detector assembly" means a specially designed assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a specific bypass water meter and a meter sized approved reduced pressure principle backflow prevention assembly. The meter shall register accurately for only very low rates of flow and shall show a registration for all rates of flows.

(Y) "Service connection" means the terminal end of a service line from the county's public water system. If a meter is installed at the end of the service, then the service connection means the downstream end of the meter.

(Z) "Severe health hazard" means a health hazard to users that could reasonably be expected to result in significant morbidity or death.

(AA) "Supplier of water" means the owner or operator of the Northeast Water System.

(BB) "System hazard" means a condition posing an actual or potential threat of damage to the physical properties of the county's public water system or a consumer's water system.

(CC) "Used water" means any water supplied by a supplier of water from a public water system to a consumer's water system after it has passed through the service connection and is no longer under the control of the supplier.

(DD) "County" means the Northeast Water System.

(EE) "Superintendent" means the Northeast Water System certified operator in responsible charge or his/her duly authorized representative.

(FF) "Water system" means a system for the provision of piped water or process fluids, and includes any collection, treatment, storage or distribution facilities used primarily in connection with such system.

Section 5 Cross-connections Prohibited

(A) No person shall install or maintain a water service connection to any premises where actual or potential cross-connections to the county's public water system or a consumer's water system may exist unless such actual or potential cross-connections are abated or controlled to the satisfaction of the county.

(B) No person shall establish or permit to be established or maintain or permit to be maintained any connection whereby a private, auxiliary or emergency water supply other than the regular public water supply of the county may enter the supply or distributing system of the municipality, unless such private, auxiliary or emergency water supply and the method of connection and use of such supply shall have been approved by the county and the director.

Section 6 Backflow Device; Notice; Installation

If, in the judgment of the Superintendent, an approved backflow prevention device is necessary for the safety of the county's public water system, the Superintendent shall give notice to the water consumer to install such an approved device immediately. The water consumer shall, at his/her own expense, install such an approved device at a location and in a manner approved by the Superintendent and shall have inspections and tests made of such approved devices as required by the Superintendent.

Section 7 Surveys & Investigations

(A) It shall be the duty of the Superintendent to cause surveys and investigations to be made of industrial and other properties serviced by the county's public water supply where actual or potential hazards to the county's public water supply may exist. Such surveys and investigations shall be made a matter of public record and shall be repeated as often as the Superintendent shall deem necessary.

(B) The Superintendent shall conduct or cause to be conducted periodic surveys and investigations of water use practices within a consumer's premises to determine whether there are actual or potential cross-connections to the consumer's water system through which contaminants or pollutants could backflow into the county's public water system.

(C) The supplier of water, or his/her authorized representative, shall have the right to enter premises served by the county's public water system at all reasonable times for the purpose of making surveys and investigations of water use practices within the premises.

(D) On request by the Superintendent, the consumer shall furnish the supplier, or his/her authorized representative, information on water use practices within the consumer's premises.

(E) This section does not relieve the consumer of the responsibility for conducting, or causing to be conducted, periodic surveys of water use practices on his premises to determine whether there are actual or potential cross-connections in the consumer's water system through which contaminants or pollutants could backflow into the county's public water system or a potable consumer's water system.

Section 8 Right of Entry

The Superintendent or his/her duly authorized representative shall have the right to enter at any reasonable time any property served by a connection to the county's public water supply or distribution system of the county for the purpose of inspecting the piping system or systems thereof. On demand the owner, lessees or occupants of any property so served shall furnish to the Superintendent any information which he/she may request regarding the piping system or systems or water use on such property. The refusal of such information, when demanded,

shall, within the discretion of the Superintendent, be deemed evidence of the presence of improper connections as provided in this document.

Section 9 Where Protection Is Required

(A) An approved backflow prevention device shall be installed on each service line to a consumer's water system serving premises, where in the judgment of the Superintendent or the director, a polluttional, system, health or severe health hazard to the county's public water system exists.

(B) An approved backflow prevention device shall be installed on each service line to a consumer's water system serving premises where any of the following conditions exist:

- (1) Premises having an auxiliary water system on the premises, unless such auxiliary system is accepted as an additional source by the county and the source is approved by the director;
- (2) Premises on which any substance is handled in such a fashion as to create an actual or potential hazard to the county's public water system. This shall include premises having sources or systems containing process fluids;
- (3) Premises having internal cross-connections that, in the judgment of the Superintendent, are not correctable or intricate plumbing arrangements which make it impracticable to determine whether or not cross-connections exist;
- (4) Premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete cross-connection survey;
- (5) Premises having a repeated history of cross-connections being established or re-established; or
- (6) Others specified by the Superintendent or the director.

(C) The following requirements apply to premises that have an auxiliary water system on the real property that is owned or under control of the consumer and adjacent to the premises.

- (1) A physical separation shall be maintained between the county's public water system or a consumer's water system and the auxiliary water system as required by paragraph (B) of section 5; and
- (2) An approved backflow prevention device shall be installed on each service connection serving the consumer's water system, unless the Northeast Water System does all of the following:
 - (a) Determines, on a case-by-case basis, that the installation of an approved backflow prevention device on a service connection is not required in consideration of factors including, but not limited to, the past history of cross connections being established or re-established on the premises, the ease or difficulty of connecting the auxiliary water system with the county's public water system on the premises, the presence or absence of contaminants on the property or other risk factors;
 - (b) Requires the consumer to sign an agreement which specifies the penalties, including those set forth in section 13 of this document, for creating a connection between the county's public water system and the auxiliary water system;
 - (c) Conducts or causes to be conducted an inspection at least every twelve months to certify that no connection or means of connection has been created between the county's public water system and the auxiliary water system;
 - (d) Maintains an inventory of each consumer's premises where an auxiliary water system is on or available to the premises, or on the real property adjacent to the premises; and
 - (e) Develops and implements an education program to inform all consumers served by the county's public water system about the dangers of cross-connections and how to eliminate cross-connections.

(D) An approved backflow prevention device shall be installed on each service line to a consumer's water system serving, but not necessarily limited to, the following types of facilities unless the director determines that no severe health, health system or polluttional hazard to the county's public water system exists:

- (1) Hospitals, mortuaries, clinics, nursing homes;
- (2) Laboratories;
- (3) Piers, docks, waterfront facilities;

- (4) Sewage treatment plants, sewage pumping stations, or storm water pumping stations;
- (5) Food or beverage processing plants;
- (6) Chemical plants;
- (7) Metal plating industries;
- (8) Petroleum processing or storage plants;
- (9) Radioactive material processing plants or nuclear reactors;
- (10) Car washes; and
- (11) Others specified by the Superintendent or the director.

(E) An approved backflow prevention device shall be installed at any point of connection that is approved in accordance with paragraph (B) of section 5 between the county's public water system or a consumer's water system and an auxiliary water system, unless such auxiliary system is accepted as an additional source by the county and the source is approved by the director.

Section 10 Required Type of Protection

(A) The type of protection required under paragraphs (A), (B), (C) and (D) of section 9 shall depend on the degree of hazard, which exists as follows:

- (1) An approved air gap separation shall be installed where the county's public water system may be contaminated with substances that could cause a severe health hazard;
- (2) An approved air gap separation, an approved reduced pressure principle backflow prevention assembly or an approved reduced pressure detector check assembly shall be installed where the county's public water system may be contaminated with any substance that could cause a system or health hazard;
- (3) An approved air gap separation, an approved reduced pressure principle backflow prevention assembly, an approved reduced pressure principle detector check assembly, an approved double check valve assembly or an approved double check-detector check valve assembly shall be installed where the county's public water system may be contaminated with any substance that could cause a pollutional hazard.

(B) The type of protection required under paragraph (E) of section 9 shall be an approved air gap separation or an approved interchangeable connection.

(C) Where an auxiliary water system is used as a secondary source of water for a fire protection system, the provisions of paragraph (B) of this section for an approved air gap separation or an approved interchangeable connection may be waived by the director, provided:

- (1) At premises where the auxiliary water system may be contaminated with substances that could cause a system, health or severe health hazard, the county's public water system or a consumer's water system shall be protected against backflow by installation of an approved reduced pressure principle backflow prevention assembly or an approved reduced pressure principle-detector check assembly;
- (2) At all other premises, the county's public water system or a consumer's water system shall be protected against backflow by installation of an approved reduced pressure principle backflow prevention assembly, an approved reduced pressure principle-detector check assembly, an approved double check valve assembly or an approved double check-detector check valve assembly;
- (3) The county's public water system or a consumer's water system shall be the primary source of water for the fire protection system;
- (4) The fire protection system shall be normally filled with water from the county's public water system or a consumer's water system; and
- (5) The water in the fire protection system shall be used for fire protection only, with no other use of water from the fire protection system downstream from the approved backflow prevention device.

Section 11 Backflow Prevention Devices

(A) Any backflow prevention device required by this document or the applicable Ohio Administrative Code rules shall be of a model or construction approved by the county and conforms to at least one of the following standards:

- (1) For air gap separations: American National Standards Institute standard A112.1.2 - 1991;
- (2) For reduced pressure principle backflow prevention assemblies: American National Standards Institute/American Water Works Association standard C511-97 (1997), or American Society of Sanitary Engineering standard 1013-99 (1999), or Canadian Standards Association standard B64.4-01 (2001), or Foundation for Cross Connection Control and Hydraulic Research, University of Southern California Specifications of Backflow Assemblies for Reduced Pressure Principle Assemblies - ninth edition (1993);
- (3) For double check valve assemblies: American National Standards Institute/American Water Works Association standard C510-97 (1997), or American Society of Sanitary Engineering standard 1015-99, or Canadian Standards Association standard B64.5-01 (2001), or Foundation for Cross Connection Control and Hydraulic Research, University of Southern California Specifications of Backflow Assemblies for Double Check Valve Assemblies - ninth edition (1993);
- (4) For reduced pressure principle-detector assemblies: American National Standards Institute/American Society of Sanitary Engineering standard 1047-99 (1999), or Canadian Standards Association standard B64.4.1-01 (2001), or Foundation for Cross Connection Control and Hydraulic Research, University of Southern California Specifications of Backflow Assemblies for Reduced Pressure Principle-Detector Assemblies - ninth edition (1993); or
- (5) For double check-detector check valve assemblies: American National Standards Institute/American Society of Sanitary Engineering standard 1048-99 (1999), or Canadian Standards Association standard B64.5.1-01(2001), or Foundation for Cross Connection Control and Hydraulic Research, University of Southern California Specifications of Backflow Assemblies for Double Check-Detector Assemblies - ninth edition (1993).

(B) Any backflow prevention device required by this document or the director shall be installed at a location and in a manner approved by the superintendent or the director, accordingly, and shall be installed at the expense of the water consumer.

(C) It shall be the duty of the water consumer to maintain any backflow prevention device required by this document in proper working order and in continuous operation.

- (1) The county shall retain authority over any backflow prevention device required by this document.
- (2) It shall be the duty of the county to see that the tests and inspections required under this paragraph are made.
- (3) The consumer shall, on any premises on which backflow prevention devices required by this document are installed, have thorough inspections and operational tests made of the devices at the time of installation or repair, and as may be reasonably required by the county or the director, but in all cases at least once every twelve months. These inspections and tests shall be at the expense of the water consumer and shall be performed by the county or a person approved by the county as qualified to inspect and test backflow prevention device.
- (4) These devices shall be repaired, overhauled or replaced at the expense of the consumer whenever they are found to be defective.
- (5) Records of such inspections, tests, repairs and overhaul shall be kept by the consumer and made available to the county.

(D) The county shall inspect or cause to be inspected all installations where an approved connection exists between an auxiliary water system and the county's public water system or a consumer's water system at least once every twelve months and shall maintain an inventory of all such installations and inspection records. Such

inventories and inspection records shall be made available during sanitary surveys and at other reasonable times.

(E) Backflow prevention devices approved by the county and conforming to prior or subsequent editions of the standards cited in paragraph (A) of this section, and which are properly maintained in accordance with paragraph (C) of this section shall be excluded from the requirements of paragraphs (A) and (B) of this section if the county and the director are assured that the devices will satisfactorily protect the county's public water system.

Section 12 Booster Pumps

(A) No person shall install or maintain a water service connection to any one or multi family dwelling where a booster pump has been installed, unless an air gap separation is provided.

(B) No person shall install or maintain a water service connection to any premises not included in paragraph (A) of this section where a booster pump has been installed on the service line to or within such premises, unless such booster pump is equipped with a low pressure cut-off designed to shut-off the booster pump when the pressure in the service line on the suction side of the pump drops to twenty (20) pounds per square inch gauge or less.

(C) It shall be the duty of the water consumer to maintain the low-pressure cut-off device in proper working order and to certify to the county, at least once every twelve months that the device is operable and maintained in continuous operation.

Section 13 Violations; Discontinuance of Water Service; Restoration

(A) The Superintendent is authorized and directed to deny or discontinue, after reasonable notice to the occupant thereof, the water service to any premises wherein any backflow prevention device required by this document is not installed, tested and maintained in a manner acceptable to the county, or if it is found that the backflow prevention device has been removed or by-passed, or if an unprotected cross-connection exists on the premises or if a low pressure cut-off required by section 12 is not installed and maintained in working order, or if the county or the director, or the authorized representative of either, is denied entry to determine compliance with this document and the Ohio Administrative Code.

(B) Water service to such premises shall not be restored until the consumer has corrected or eliminated such conditions or defects in conformance with this document and the Ohio Administrative Code, and to the satisfaction of the county.

Section 14 Rules and Regulations Effect

The cross-connection control rules and regulations shall take effect and be in full force on the date of adoption of a resolution by the Board of Fulton County Commissioners and may be amended from time to time.

Adopted By Board of Fulton County Commissioners
Effective: 05/14/2012 – Resolution: 2012-441

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