ORDINANCE NO. 16-31

BY: State Hoyd Cost

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AN ORDINANCE ESTABLISHING A BACKFLOW PREVENTION PROGRAM WITHIN THE CITY OF NEWARK AND ESTABLISHES UNIFORM REGULATIONS FOR THE PROTECTION OF PUBLIC HEALTH IN CONFORMITY WITH ALL APPLICABLE LAWS.

WHEREAS, it is the desire of the Division of Water and Wastewater for the City of Newark to set forth rules and regulation for the control of backflow and cross-connections within its service area.

WHEREAS, it is the responsibility of the City of Newark to assure that the public is protected from the hazards and danger which can be caused by backflow and cross-connections in the public water supply; and,

WHEREAS, this work is now being performed by the County Health Department and we will work cooperatively to transition this work back to the City.

WHEREAS, the Service Committee considered this matter on July 25, 2016 and recommended that it be considered by full council.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF NEWARK, COUNTY OF LICKING AND STATE OF OHIO, BY VIRTUE OF THE AUTHORITY OF SECTION 3745-95-02-(C) OF THE OHIO REVISED CODE THAT A BACKFLOW PREVENTION PROGRAM SHALL BE ESTABLISHED:

Section 1: Chapter 1048.15 is hereby established within the Codified Ordinances of the City of Newark and all legislation inconsistent with this ordinance shall be rescinded.

# CROSS-CONNECTION CONTROL AND WATER QUALITY PROTECTION PROGRAM

- If, in the judgment of the Director of Public Service (Service Director or designee), or his authorized designee the integrity of the public water system is, or can be, endangered by backflow from an actual or a potential cross-connection within the plumbing system of a water consumer, the Director or his designee may order the installation of an approved backflow prevention method or device consisting of either an air-gap, double sanitary check valve assembly, vacuum breaker, reduced pressure principle backflow preventer or any combination thereof at the water service connection to the premise.

The water consumer shall install the designated device or method at the consumer's own expense, and failure, refusal or inability to install the device or method immediately shall constitute a ground for discontinuing water service to the premise until such device or method has been installed and approved by the superintendent.

The use of the approved backflow preventer at the water service connection does not in any way affect or eliminate the need for individual fixture devices or air-gaps as required by the Ohio Building Code.

All necessary permits shall be obtained from the political subdivision having jurisdiction.

I. Definitions: As used in Backflow Protection Section:

- 1. "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.
- 2. "Approved" means that a backflow prevention assembly, device, or method has been accepted by the City of Newark, Division of Water and Wastewater (City) and the Director as suitable for the proposed use.
- 3. "Auxiliary water system" means any water system on or available to the premises other than the City public water system. These auxiliary water systems shall include used water or water from a source other than the City public water system, such as wells, cisterns or open reservoirs that are equipped with pumps or other prime movers, including gravity.

В.

- 1. "Backflow" means the flow of water or other liquids, mixtures, or substances into the distributing pipes of a potable water supply from any source other than the intended source of the potable City water supply.
- 2. "Backflow preventer" means any assembly, device, method or type of construction intended to prevent backflow into the City's potable water system. This definition applies wherever "backflow prevention device" is used.
- **3.** "Booster pump" means any device which is intended to increase the in-line water pressure.

C.

- 1. "Consumer" means the owner or person in control of any premises supplied by or in any manner connected to the City's public water system.
- 2. "Consumer's water system" means any water system, located on the consumer's premises, supplied by or in any manner connected to City's's public water system. A household plumbing system is considered to be a consumer's water system.
- 3. "Containment principle backflow preventer" is a backflow preventer, installed in a consumer's water system, which is intended to contain the water within the premises in order to prevent any polluted or contaminated water from backflowing into the City's water system. Typically, the containment principle backflow preventer is placed at the service connection unless placement is otherwise specified by rule herein.
- 4. "Cross-connection" means any arrangement whereby backflow can occur.

- 1. "Degree of hazard" is a term derived from an evaluation of the potential risk to health and welfare.
- 2. "Director" means the director of environmental protection or the director's duly authorized representative.
- 3. "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 watertightness of each check valve.
- 4. "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.
- **E.** [Reserved.]
- F. [Reserved.]
- G. [Reserved.]

Н.

- 1. "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.
- 2. "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.

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- 1. "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 City's water system side of the connection.
- J. [Reserved.]
- **K.** [Reserved.]
- **L.** [Reserved.]
- M. [Reserved.]
- N. [Reserved.]

## O. [Reserved.]

P.

- 1. "Person" means the state, any political subdivision, public or Private Corporation, individual, partnership, or other legal entity.
- 2. "Pollutional hazard" means a condition through which an aesthetically objectionable or degrading material, which is not dangerous to the City's water system or health of users, may enter the public water system or portion of a consumer's water system.
- 3. "Potable water" means water intended for human consumption.
- 4. "Premises" means any building, structure, dwelling or area containing plumbing or piping supplied from City's's public water system.
- 5. "Pressure vacuum breaker" means an assembly composed of an independently acting spring loaded check valve located downstream of an independently acting spring loaded air inlet valve including, tightly closing shutoff valves located at each end of the assembly and suitable connections for testing the integrity of the air inlet and check valves.
- 6. "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 City's's public water system or portion of a consumer's water system. This includes, but is not limited to the following:
  - a) Polluted or contaminated waters.
  - b) Process waters.
  - Used waters originating from a public water system which may have deteriorated in sanitary quality.
  - d) Cooling waters.
  - e) Contaminated natural waters taken from wells, lakes, streams or irrigation systems.
  - f) Chemicals in solution or suspension.
  - g) Oils, gases, acids, alkalis, and other liquid and gaseous fluids used in industrial or other processes, or for firefighting purposes.
- 7. "Public water system" has the same meaning as in rule 3745-81-01 of the Ohio Administrative Code.

**Q.** [Reserved.]

R.

- 1. "Reduced pressure principle backflow prevention assembly" means an assembly 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 assembly, and each assembly shall be fitted with properly located test cocks.
- 2. "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.

S.

- 1. "Service connection," for the purposes of this chapter, means the terminal end of a service line from the 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.
- 2. "Service Director" means the City of Newark Public Service Director or the director's duly authorized representative.
- 3. "Severe health hazard" means a health hazard to users that could reasonably be expected to result in significant morbidity or death.
- 4. "Supplier of water" means the owner or operator of a public water system.
- 5. "System hazard" means a condition posing an actual or potential threat of damage to the physical properties of the public water system or a consumer's water system.
- T. [Reserved.]

U.

- 1. "Used water" means any water supplied by a supplier of water from a public water system to a consumer's water system after the water has passed through the service connection and is no longer under the control of the supplier.
- V. [Reserved.]

W.

- 1. "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.
- 2. "Weep holes" means a series of small diameter holes located in the wall of the supply pipe for a yard hydrant that allow for drainage of accumulated water from the delivery piping. These holes are usually part of a plunger and valve system that seals off the holes during water usage and opens the holes during shutdown. These openings are located below ground level and below the frost line in areas where the threat of freezing exists.
- X. [Reserved.]

Υ.

- "Yard hydrant" means a device that is located outside of a building, equipped with a valved mechanism that controls the delivery of potable water, and is not designed to supply a fire department pumper.
- **Z.** [Reserved.]

#### **Rule 1: Cross-Connections Prohibited**

- (A) No person shall install or maintain a water service connection to any premises where actual or potential cross-connections to a City'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 supplier of water.
- (B) No person shall install or maintain a connection between City's water system or consumer's water system and an auxiliary water system unless the auxiliary water system, the method of connection and the use of such system have been approved by the City of Newark, Division of Water and Wastewater, and by the director as required by section 6109.13 of the Revised Code.

#### Rule 2: Surveys and Investigations

- (A) The City of Newark, Division of Water and Wastewater, shall conduct or cause to be conducted an initial assessment and periodic surveys or 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 City's water system or determine where in the judgment of the supplier of water, a pollutional system, health or severe health hazard to the City's water system exists. To meet this requirement, the City of Newark, Division of Water and Wastewater, shall conduct or cause to be conducted an on-site investigation of all premises at least every five years to identify changes in water use practices at the consumer's property so that new or increased hazards to the water supply are identified and mitigated.
  - (1) In lieu of conducting an on-site investigation of all premises every five years the City of Newark, Division of Water and Wastewater, can document, in writing, an alternate, on-going, methodology to identify changes in water use practices that may represent a new or increased hazard to the public water supply. An on-site investigation is required when a potential new or increased hazard is suspected to confirm the degree of risk and how it will be addressed. Information obtained through a water use survey questionnaire or in coordination with the local building, zoning, health, fire protection and other licensing agencies may be used as an indicator of when an on-site investigation should be conducted. Other triggers, such as a request to the City of Newark, Division of Water and Wastewater for a new or additional service line, or an additional or larger meter should warrant an on-site investigation.
  - (2) In lieu of conducting an on-site investigation of each residential premise, the City of Newark, Division of Water and Wastewater may institute an on-going educational campaign to inform consumers of common backflow hazards created during residential water use and provide a reporting mechanism for suspected cross-connections. An education campaign may use local media and advertising resources, but must also include information delivered, either electronically or hard copy, to each residential service connection at least annually.
- (B) The City of Newark, Division of Water and Wastewater, or the authorized representative, shall have the right to enter premises served by the City's public water system at all reasonable times for the purpose of making surveys and investigations of water use practices within the premises.
- (C) On request by the City of Newark, Division of Water and Wastewater, or the City's authorized representative, the consumer shall furnish the City of Newark, Division of Water and Wastewater, or the City's authorized representative, information on water use practices within the consumer's premises.
- (D) Paragraph (A) of this rule does not relieve the consumer of the responsibility for conducting, or causing to be conducted, periodic surveys of water use practices on said premises to determine whether there are actual or potential cross-connections

## Rule 3: 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 City of Newark, Division of Water and Wastewater or the director, a pollutional, system, health or severe health hazard to the 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 City of Newark, Division of Water and Wastewater 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 a City'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 City of Newark, Division of Water and Wastewater, 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 City of Newark, Division of Water and Wastewater 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 City's public water system or a consumer's water system and the auxiliary water system as required by paragraph (B) of rule 3745-95-02 of the Ohio Administrative Code; and
  - (2) An approved backflow prevention device shall be installed on each service connection serving the consumer's water system, unless the City of Newark, Division of Water and Wastewater 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 City'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 rule 3745-95-08 of the Ohio Administrative Code, for creating a connection between the City'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 City'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 City'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 City of Newark, Division of Water and Wastewater and/or the director determines that no severe health, health, system or pollutional hazard to the City'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 director.
- (E) An approved backflow prevention device shall be installed at any point of connection that is approved in accordance with paragraph (B) of rule 3745-95-02 of the Ohio Administrative Code between City's'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 City of Newark, Division of Water and Wastewater and the source is approved by the director.

## Rule 4: Type of protection required.

- (A) The type of protection required under paragraphs (A), (B), (C) and (D) of rule 3745-95-04 of the Ohio Administrative Code shall depend on the degree of hazard which exists as follows:
  - (1) An approved air gap separation shall be installed where Newark'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 City'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 City'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 rule 3745-95-04 of the Ohio Administrative Code shall be an approved air gap separation or an approved interchangeable connection. A removable spool piece connection is not an acceptable method.
- (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 rule for an approved air gap separation or an approved interchangeable connection may be waived by the director, provided the following conditions exist:
  - (1) At premises where the auxiliary water system may be contaminated with substances that could cause a system, health or severe health hazard, City'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, City'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) City'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 City's public water system or a consumer's water system.

- (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.
- (D) An exception to the requirement in paragraph (A)(2) of this rule may be applied when mitigating the health hazard associated with a water-only, residential-type irrigation system that is not subjected to backpressure and is not equipped with pumps or other prime movers which can create backpressure to the public or the consumer's water system. In this instance, an approved pressure vacuum breaker can be used to isolate the service line to the irrigation system in lieu of installing a containment assembly at the service connection. The same maintenance and testing requirements as outlined in rule for containment assemblies apply. This exception does not apply if an additive is used within the irrigation system. The City of Newark, Division of Water and Wastewater may determine other hazards exist that warrant additional containment protection at the service connection.

#### Abbreviations used are as follows:

- A.G. Air Gap Separation
- R.P. Reduced Pressure Principle Backflow Preventer
- D.C. Double Check Valve Backflow Preventer

Type of Facility Minimum		Type of Protection
1.	Breweries, Distilleries, Bottling Plants	D.C.
2.	Car Wash with Recycling System and/or Wax Eductor	R.P.
3.	Chemical Plants	R.P.
4.	Dairies	D.C.
5.	Dentist Office	R.P.
6.	Fertilizer Plants	R.P.
7.	Film Laboratory or Processing Plant	R.P.
8.	Food or Beverage Plant	D.C.
9.	Hospitals, Clinics, Medical Buildings	R.P.
10.	Laboratories	R.P.
11.	Laundries & Dry Cleaning Plants	D.C.
12.	Machine Tool Plants (Health or System Hazard)	R.P.
13.	Machine Tool Plants (Pollutional Hazard)	D.C.
14.	Metal Processing Plant (Health or System Hazard)	R.P.
15.	Metal Processing Plant (Pollutional Hazard)	D.C.
16.	Metal Plating Plant	R.P.
17.	Morgues or Mortuaries	R.P.
18.	Nursing Homes	R.P.
19.	Packing Houses or Rendering Plants	R.P.

Type of Facility Minimum	Type of Protection
20. Paper Products Plant	R.P.
21. Petroleum Processing Plant	R.P.
22. Petroleum Storage Yard (Health or System Hazard)	R.P.
23. Petroleum Storage Yard (Pollutional Hazard)	D.C.
24. Pharmaceutical or Cosmetic Plant	R.P.
25. Piers, Docks or Waterfront Facilities	R.P.
26. Power Plants	R.P.
27. Radioactive Material Plants	R.P.
28. Restaurants, with Soap Eductors and/or Industrial	R.P.
29. Type Disposal Sand and Gravel Plants	D.C.
30. Schools with Laboratories Having Acid Wastes	R.P.
31. Sprinkling or Irrigation Systems	R.P.
32. Swimming Pools with Piped Fill Line at pool	A.G.
33. Sewage Treatment Plants	R.P.
34. Sewage Pumping Stations (Health or System Hazard)	R.P.
35. Veterinary Establishments	R.P.
36. Others specified by the Director	

In addition to and including those types of facilities listed above, an approved backflow prevention device of the type designated shall be installed on each domestic water service connection to any premises containing the following real or potential hazards.

Premises having an auxiliary water system not connected to Newark's public water system	Minimum Type of Protection R.P.
Premises having a water storage tank, reservoir, pond, or similar appurtenance	R.P.
Premises having a steam boiler, cooling system, or hot water heating system where chemical water conditions are used	R.P.
Premises having submerged inlets to equipment	R.P.
Premises having self-draining yard hydrants, fountains, hose boxes or similar devices presenting a health or system hazard (i.e., chemical storage plants, tank farms, bulk storage yards)	R.P.
Premises having self-draining yard hydrants, fountains, hose boxes or similar devices presenting a pollutional hazard (i.e., parks, play fields, cemeteries)	D.C.

Others specified by the Director

(E) Type of Backflow Protection Required-Fire Protection Services - An approved backflow prevention device of the type designated shall be installed on each fire protection service to any premises where the fire protection system contains any of the following components unless the Director determines that no real or potential health, pollutional, or system hazard to the Newark public water system exists.

Fire System Component	Minimum Type of Protection
(1) Auxiliary Water System	See Sections B & C of Rule 4
(2) Anti-Freeze Legs	R.P.
(3) Self-Draining Fire Hydrants on premises presenting a health or system hazard (i.e., Chemical Plants, Petroleum Storage Plants, Bulk Storage Yards, Stock Yards, Sewer Plants, or similar facilities where ground seepage of toxic materials ma	R.P. y occur
(4) Self-Draining Fire Hydrants on premises presenting a pollutional hazard (i.e., Apartment House, Office Complex, Fabricating Plants, or similar facilities where ground seepage of pollutional but not toxic materials may occur	D.C.
(5) Covered Gravity or Pressure Storage Tanks filled with water from City's Public Water System	D.C.
(6) Uncovered Storage Tanks or Reservoirs	R.P.
(7) Others specified by the Director	

## **Rule 5: Backflow Prevention Devices**

- (A) Any containment principle backflow preventer required by rules 3745-95-04 and 3745-95-05 of the Ohio Administrative Code shall be of a model or construction approved by the City of Newark, Division of Water and Wastewater and conform to at least one of the following standards:
  - (1) For air gap separations: the specific edition of the American National Standards Institute (ANSI) and the American Society of Mechanical Engineers (ASME) standard as referenced in rule 4101:3-13-01 of the Ohio Administrative Code.
  - (2) For reduced pressure principle backflow prevention assemblies: the specific edition of the ANSI and the American Water Works Association (AWWA) standard, or the American society of sanitary engineering (ASSE) standard, or the Canadian Standards Association (CSA) standard as

- referenced in rule 4101:3-13-01 of the Ohio Administrative Code; or the Foundation for Cross-connection Control and Hydraulic Research, University of Southern California Specifications of Backflow Assemblies for Reduced Pressure Principle Assemblies Tenth Edition (2009).
- (3) For double check valve assemblies: the specific edition of the ANSI and the AWWA standard, or the ASSE standard, or the CSA standard as referenced in rule 4101:3-13-01 of the Ohio Administrative Code; or Foundation for Cross-connection Control and Hydraulic Research, University of Southern California Specifications of Backflow Assemblies for Reduced Pressure Principle Assemblies Tenth Edition (2009).
- (4) For reduced pressure principle-detector assemblies: the specific edition of the ANSI and the ASSE standard, or the CSA standard as referenced in rule 4101:3-13-01 of the Ohio Administrative Code; or the Foundation for Cross-connection Control and Hydraulic Research, University of Southern California Specifications of Backflow Assemblies for Reduced Pressure Principle Assemblies Tenth Edition (2009).
- (5) For double check-detector check valve assemblies: the ANSI and the ASSE standard, or the CSA standard as referenced in rule 4101:3-13-01 of the Ohio Administrative Code, or the Foundation for Cross-connection Control and Hydraulic Research, University of Southern California Specifications of Backflow Assemblies for Reduced Pressure Principle Assemblies Tenth Edition (2009).
- (6) For pressure vacuum breakers: the ANSI and the ASSE standard, or the CSA standard as referenced in rule 4101:3-13-01 of the Ohio Administrative Code.
- (B) Any containment principle backflow preventer required by rules 3745-95-04 and 3745-95-05 of the Ohio Administrative Code shall be installed at a location and in a manner approved by the City of Newark, Division of Water and Wastewater and shall be installed at the expense of the water consumer. In addition, any backflow prevention device required by paragraphs (B) and (C) of rule 3745-95-05 of the Ohio Administrative Code shall be installed at a location and in a manner approved by the City of Newark, Division of Water and Wastewater and/or director as required by section 6109.13 of the Ohio Revised Code.
- (C) It shall be the duty of the water consumer to maintain any containment principle backflow preventer required by rules 3745-95-04 and 3745-95-05 of the Ohio Administrative Code in proper working order and in continuous operation.

- (1) The City of Newark, Division of Water and Wastewater shall retain authority over any containment principle backflow preventer required by rules 3745-95-04 and 3745-95-05 of the Ohio Administrative Code.
- (2) It shall be the duty of the City of Newark, Division of Water and Wastewater to see that the tests and inspections required under this paragraph are made.
- (3) The consumer shall, on any premises on which any containment principle backflow preventer required by rules 3745-95-04 and 3745-95-05 of the Ohio Administrative Code are installed, have thorough inspections and operational tests made of the backflow preventers at the time of installation or repair, and as may be reasonably required by the City of Newark, Division of Water and Wastewater 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 City of Newark, Division of Water and Wastewater or a person approved by the City of Newark, Division of Water and Wastewater as qualified to inspect and test backflow preventers.
- (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 submitted on the proper form within 10 days to the City of Newark, Division of Water and Wastewater.
- (6) Backflow prevention devices shall be tested within 30 days of the mailing of the annual backflow preventer test notice issued by the City of Newark, Division of Water and Wastewater. Repairs and re-tests must be completed within 14 days of the date of the failure. Failure to complete the annual test within 30 days of the original mailing or to repair or replace a defective device with the same or a higher level of protection device may result in the immediate termination of water service and a fine. Manifold or dual settings of the devices should be considered for premises requiring uninterrupted water service. Backflow prevention devices set in manifold shall meet the minimum flow requirements of a single device of the proper size.

- (6) The City of Newark, Division of Water and Wastewater shall maintain a paper or electronic record of inventory of survey, investigation and containment principle backflow preventer installation reports. Records of inspections, tests, repairs and overhauls related to the containment principle backflow preventer required by rules 3745-95-04 and 3745-95-05 of the Ohio Administrative Code shall be maintained by the City of Newark, Division of Water and Wastewater for a minimum of five years.
- (D) The City of Newark, Division of Water and Wastewater shall inspect or cause to be inspected all installations where an approved connection exists between an auxiliary water system and the Newark 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. Paper or electronic inspection records shall be maintained by the City of Newark, Division of Water and Wastewater for a minimum of five years.
- (E) Containment principle backflow preventers approved by the City of Newark, Division of Water and Wastewater and conforming to prior or subsequent editions of the standards cited in paragraph (A) of this rule, and which are properly maintained in accordance with paragraph (C) of this rule shall be excluded from the requirements of paragraphs (A) and (B) of this rule if the City of Newark, Division of Water and Wastewater and the director are assured that the backflow preventer will satisfactorily protect the City's public water system.

[Comment: This rule incorporates portions of the following manual by reference: The Manual of Cross-Connection Control, Tenth Edition, published by the Foundation for Cross-connection Control and Hydraulic Research, University of Southern California Specifications of Backflow Assemblies for Reduced Pressure Principle Assemblies - Tenth Edition (2009). At the effective date of this rule, a copy of this document may be obtained from the Foundation for Cross-connection Control and Hydraulic Research, University of Southern California, Research Annex 219, 3716 Hope Street, Los Angeles, CA 90089-7700, phone: 866-545-6340, world-wide web address: http://www.usc.edu/dept/fccchr/. This document is available for review at Ohio EPA, Lazarus Government Center, 50 West Town Street, Suite 700, Columbus, OH 43215.]

## Rule 6: Booster pumps

- (A) No person shall install or maintain a water service connection where a booster pump has been installed, unless an approved method is in place and is operational to maintain a minimum suction pressure as prescribed as presented in the following:
  - (1) For booster pumps not intended to be used for fire suppression, no person shall install or maintain a water service connection to any premises 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 ten pounds per square inch gauge or less.
  - (2) For booster pumps used for fire suppression, also referred to as fire pumps, installed after August 8, 2008, no person shall install or maintain a water service connection to any premises where a fire pump has been installed on the service line to or within such premises, unless the pump is equipped with one of the following:
    - (a) A low suction throttling valve which is a pilot-operated valve installed in the discharge piping that maintains positive pressure in the suction piping, while monitoring pressure in the suction piping through a sensing line. The valve must throttle the discharge of the pump when necessary so that suction pressure will not be reduced below ten pounds per square inch gauge while the pump is operating.
    - (b) A variable speed suction limiting control which is a speed control system used to maintain a minimum positive suction pressure at the pump inlet by reducing the pump driver speed while monitoring pressure in the suction piping through a sensing line. It will be set so that the suction pressure will not be reduced below ten pounds per square inch gauge while the pump is operating.
  - (3) For booster pumps used for fire suppression, also referred to as fire pumps, installed prior to August 8, 2008, which are equipped with a low pressure cut-off as defined in paragraph (A)(1) of this rule, are not required to modify the installation solely for the purpose of meeting the new methods accepted after this date, under paragraph (B)(1) of this rule.????
- (B) It shall be the duty of the water consumer to maintain the low pressure cut-off device, the low suction throttling valve, or the variable speed suction limiting control in proper working order and to certify to the supplier of water, at least once every twelve months that the minimum suction pressure sustaining method is operable and maintained in continuous operation.
- (C) The City of Newark, Division of Water and Wastewater must maintain electronic or paper records of inventory of booster pump installations. Electronic or paper records certifying operation must be retained for a period of five years.

(D) The provisions of this rule shall be followed notwithstanding inconsistent provisions in the Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers or "Recommended Standards for Water Works" (2012).

# Rule 7: Requirements for yard hydrants.

- (A) Yard hydrants with weep holes.
  - (1) Yard hydrants with weep holes used for human consumption installed on a public water system are prohibited unless the weep holes are sealed.
  - (2) Yard hydrants with weep holes not used for human consumption installed on a public water system, and those installed on a consumer's water system, shall have an appropriate backflow prevention assembly on the service line to protect the public water system. Yard hydrants with weep holes installed on public water systems shall be clearly labeled as "non-potable" or "not for human consumption."
- (B) Sanitary yard hydrants that do not have weep holes, such as those that meet the requirements of the "American Society of Sanitary Engineers (ASSE) standard 1057, Performance Requirements for Freeze Resistant Yard Hydrants with Backflow Protection" (2001), are not prohibited provided:
  - (1) The device is acceptable to the public water system to which it will be connected; and
  - (2) Any other applicable backflow prevention and cross-connection control requirements of this chapter are met.

# **Rule 8: Violations**

- (A) The supplier of water shall deny or discontinue, after reasonable notice to the occupant thereof, the water service to any premises wherein any backflow prevention device required by this chapter is not installed, tested and maintained in a manner acceptable to the City of Newark, Division of Water and Wastewater, 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 rule 3745-95-07 of the Ohio Administrative Code is not installed and maintained in working order, or if the City of Newark, Division of Water and Wastewater or the director, or the authorized representative of either, is denied entry to determine compliance with this chapter of 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 chapter of the Ohio Administrative Code, and to the satisfaction of the City of Newark, Division of Water and Wastewater.

# Rule 9: Notification, Payment of Fees for Containment and Isolation Backflow Preventers; Consequences of Failure.

The City of Newark, Division of Water and Wastewater shall issue notices to the customer or the owner, the agent or the person in charge of the premises wherein a containment or isolation backflow device is located of the need to perform an annual containment and/or isolation device backflow test. The City of Newark, Division of Water and Wastewater shall charge a fee for said notice. Failure to have the containment or isolation backflow test done or failure to provide results to the City of Newark will result in the immediate termination of water service and/or an additional fee. The failure to pay the required fees or charge may result in the City of Newark Division, of Water and Wastewater terminating water service.

The termination of water service for failure to pay require fees or charges shall comport with those sections of this chapter and City of Newark, Division of Water and Wastewater Rules and Regulations regarding termination of service for non-payment of a billing statement.

The annual notification for the testing of containment and isolation backflow preventers shall be set by the City of Newark, Division of Water and Wastewater. The City of Newark, Division of Water and Wastewater shall issue all necessary notices.

Administrative charges and fees involved in notification of backflow preventer tests shall be determined by the Service Director.

The water consumer or agent, owner or person in charge of the premises is responsible for ensuring fees are paid, backflow tests are completed and that the test results are immediately provided to the appropriate department.

Proper test results for isolation backflow preventers shall be determined by the City of Newark, Division of Water and Wastewater.

Isolation backflow preventers may be tested only by those persons meeting the qualifications established by the Director.

- a) The City of Newark, Division of Water and Wastewater shall not discontinue water service for failure to provide test results or for failure to pay the fees or charges for administrative processing without giving the customer in default, whether or not the customer is a landlord, owners, or other, at least fifteen (15) calendar days prior written notice thereof. Any notice required by this section shall include paragraphs (d) and (e) of this section.
- b) At least fifteen days prior to disconnection of water service to any user(s) not responsible for providing proper containment or isolation backflow preventer test results or the payment of fees or charges, a notice of the intent to disconnect water service shall be posted or affixed upon the premises

in a conspicuous location or personally served upon the user(s), owner or agent. Such notice shall include the rights and obligations as set forth in paragraph (d) and (e) of this section.

- c) When the failure to provide completed backflow test results, or the failure to pay the appropriate fees or charges for administrative processing, requires the posting of a disconnection notice at the premises or personally serving the notice upon the owner, user(s) or agent at the premises, there shall be a charge, determined by the director, to the customer responsible for the testing of the backflow prevention device. The charge shall be based on the cost to the Division of Water and Wastewater of posting or personally serving a notice at the premises. The director shall periodically review the cost and adjust the charge if necessary. This charge is in addition to any other fees or charges. The Division of Water and Wastewater shall not be responsible for failure of any customer or occupant to observe, read or understand a disconnection notice, nor for the removal or destruction of any notice posted or personally served or for any marks or damage caused by affixing or removing a disconnection notice.
- d) Any such customer responsible for payment of fees or charges, or the testing of the containment or isolation backflow preventer, who causes the disconnection of water service by failure or refusal to pay the charge or by not completing the annual containment or isolation backflow preventer test, except while repairs are in progress or during emergency repairs, may be liable for compensatory damage to any tenant who is denied the benefit of water service so disconnected.
- e) If a tenant pays in full the fees or charges herein required in order to avoid disconnection of water service, and the backflow device tests have been accomplished and the results forwarded to the City of Newark, Division of Water and Wastewater, the tenant shall have the right to deduct the amount of such payment from any future payment of rent.

Section 2: This ordinance shall become effective at the earliest time permitted by Article 4.07 of the Charter of the City of Newark, Ohio.

Passed this

day of

PRESIDENT OF COUNC

1/ SPU MAYOR

Clerk of Council

DATE FILED WITH MAYOR

DATE APPROVED BY MAYOR

APPROVED AS TO FORM

Director of Law

The Division of Water and Wastewater