

LOCAL LAW NO. ____ OF 2017

CITY COUNCIL
CITY OF BEACON

PROPOSED LOCAL LAW AMENDING
CHAPTER 219 OF THE CODE OF THE CITY OF BEACON

A LOCAL LAW to
amend Chapter 219,
Article III, Section 12
concerning Cross-
Connections

A LOCAL LAW to amend Chapter 223, Article III, Section 12 concerning Cross-connections.

BE IT ENACTED by the City Council of the City of Beacon as follows:

Section 1. Chapter 223, Article III, Section 12, of the Code of the City of Beacon entitled “Cross-connections with other sources” is hereby amended as follows:

§ 223-12. Water Cross-Connections with other sources Control.

~~No pipe or fixtures connected with the mains of the City shall also be connected with pipes or fixtures supplied with water from any other sources, unless specifically approved by the Department of Health of the State of New York.~~

A. The intent of this article is:

- (1) To protect the public water supply served by the City of Beacon Water and Sewer Department from the possibility of contamination or pollution which could backflow or back-siphon into the public water system.
- (2) To promote the elimination or control of existing cross-connections, actual or potential, between its customer’s potable water system and nonpotable systems.
- (3) To provide for the maintenance of a continuing program of cross-connection control which will effectively prevent the contamination or pollution of all potable water systems by cross-connection.

B. Authority

Pursuant to the Federal Safe Drinking Water Act of 1974 and statutes promulgated in Article 2 of the Public Health Law and in Part 5, Section 5-1.31, of the State Sanitary Code (10 NYCRR Part 5), the New York State Department of Health (NYSDOH) has undertaken a program for preventing water from unapproved sources from entering the public potable water system. Subpart 5-1 of the State Sanitary Code, Section 5-1.32, requires that the supplier of all public water shall protect the public water system by containing potential contamination within the premises of each individual water user.

C. Definitions. As used in this section, the following terms shall have the meanings indicated:

AIR GAP

A physical separation sufficient to prevent backflow between the free flowing discharge end of the potable water system and any other system; physically defined as a distance equal to twice the diameter of the supply side pipe diameter but never less than one (1) inch.

APPROVED

Accepted by the New York State Department of Health, Dutchess County Department of Health and City of Beacon Water and Sewer Department meeting applicable specifications stated or cited in this regulation, or as suitable for the proposed use.

ATMOSPHERIC VACUUM BREAKER

A device which prevents backsiphonage by creating an atmospheric vent when there is either a negative pressure or sub-atmospheric pressure in a water system.

AUXILIARY WATER SUPPLY

Any water supply on or available to the premises other than the surveyor's approved public potable water supply.

BACKFLOW

The flow of water or other liquids, mixtures or substances and/or positive or reduced pressure in the distribution pipes of a potable water supply from any source other than its intended source.

BACKFLOW PREVENTION DEVICE

A device or means designed to prevent backflow or backsiphonage. Most commonly categorized as air gap, reduced pressure principle device, double check valve assembly, pressure vacuum breaker, atmospheric vacuum breaker, hose bibb vacuum breaker, residential dual check, double check with intermediate atmospheric vent, and barometric loop.

BACK PRESSURE

A condition in which the owner's system pressure is greater than the supplier's system pressure.

BACK-SIPHON

The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply system from any source other than its intended source, caused by a sudden reduction of pressure in the potable water supply system.

BAROMETRIC LOOP

A fabricated piping arrangement rising at least thirty-five (35) feet at its topmost point above the highest fixture it supplies. It is utilized in water supply systems to protect against backsiphonage.

CONTAINMENT

A method of backflow prevention which requires a backflow prevention device at the water service entrance immediately after the water meter or, in the event of no meter, immediately after the point of entry.

CONTAMINANT

Any physical, chemical, microbiological or radiological substance or matter in water.

CROSS-CONNECTION

Any actual or potential connection between the public water supply and a source of contamination or pollution.

DEPARTMENT

The City of Beacon Water and Sewer Department.

DEPARTMENT OF HEALTH

The State of New York Health Department and its agent, the Dutchess County Department of Health.

DOUBLE CHECK VALVE ASSEMBLY (DCV)

An assembly of two (2) independently operating spring-loaded check valves with tightly closing shutoff valves on each side of the check valves, plus properly located test cocks for the testing of each check valve.

DOUBLE-CHECK VALVE WITH INTERMEDIATE ATMOSPHERIC VENT

A device having two (2) spring-loaded check valves separated by an atmospheric vent chamber.

DWELLING, ONE-FAMILY

A building containing not more than one dwelling unit occupied exclusively for residential purposes by one family.

DWELLING, TWO-FAMILY

A building containing not more than two dwelling units occupied exclusively for residential purposes by two families living independently of each other.

DWELLING UNIT

One or more rooms with provision for living, cooking, sanitary and sleeping facilities arranged for the use of one family.

FIXTURE ISOLATION

A method of backflow prevention in which a backflow prevention device is located to correct a cross-connection at an in-plant location rather than at a water service entrance.

HOSE BIBB VACUUM BREAKER

A device which is permanently attached to a hose bibb and which acts as an atmospheric vacuum breaker.

OWNER

Any person who has a legal title to or license to operate or habitat in a property upon which a cross-connection is present.

PERSON

Any individual, partnership, company, public or private corporation, political subdivision or agency of the State Department, agency or instrumentality of the United States or any other legal entity.

POLLUTANT

A foreign substance that, if permitted to get into the public water system, will degrade its quality so as to constitute a moderate hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such water for domestic use.

PRESSURE VACUUM BREAKER

A device containing one (1) or two (2) independently operated spring-loaded check valves and an independently operated spring-loaded air inlet valve located on the discharge side of the check or checks. Such device includes tightly closing shutoff valves on each side of the check valves and properly located test cocks for the testing of the check valves.

REDUCED-PRESSURE-PRINCIPLE BACKFLOW PREVENTER (RPZ)

An assembly consisting of two (2) independently operating approved check valves with an automatically operating differential relief valve located between two (2) check valves, tightly closing shutoff valves on each side of the check valves, plus properly located test cocks for the testing of the check valves and the relief valve.

WATER SERVICE ENTRANCE

The point in the owner's water system beyond the sanitary control of the City; generally considered on the outlet end of the water meter and always before any unprotected branch.

WATER, NONPOTABLE

Water that is not safe for human consumption or that is of questionable potability.

WATER, POTABLE

Water free from impurities in amounts sufficient to cause disease or harmful physiological effects.

D. Enforcement

The Water Superintendent and/or City Engineer or his or her designee shall enforce this article and the cross-connection and backflow protection requirements, specifications, guidelines and facilities classifications of the NYSDOH and the Dutchess County Department of Health (DCDOH). Specifications, guidelines, facilities, classifications and other administrative requirements and information which shall be used to implement the requirements shall be on file in the Department and available for review.

E. Administration

- (1) The Department will operate a cross-connection control program to include the keeping of necessary records, which fulfills the requirements of the NYSDOH's cross-connection regulations and testing of backflow prevention equipment.
- (2) The owners shall allow their property to be inspected for possible cross-connections and shall follow the provisions the Department's cross-connection control program as set forth by the City of Beacon.
- (3) If the Department requires that the public supply be protected by containment, the owners shall be responsible for water quality beyond the outlet end of the containment device and should utilize fixture outlet protection for that purpose.

F. Responsibilities.

(1) Department

- (a) The Department will not allow any cross-connection to remain unless it is protected by an approved backflow prevention device, which will be regularly tested to insure satisfactory operation. If, in the judgment of the City, an approved backflow prevention device is required for existing installations, the City shall give notice in writing to said owner to install an approved backflow prevention device at each service connection to said premises. Hazardous conditions shall be addressed immediately. On new installations, the Department will provide on-site evaluation and/or review of plans in order to determine the type of backflow prevention device, if any, that will be required. Plans shall be signed and sealed by a currently licensed New York State professional engineer.

- (b) For premises existing prior to the start of this program, the Department will perform evaluations and review of plans and/or inspection of premises and inform the owner by letter of any corrective action deemed necessary, the method of achieving the correction and the time allowed for the correction to be made. Ordinarily, ninety (90) days will be allowed; however, this time period may be shortened by the Department depending upon the degree of hazard involved and the history of the device(s) in question.
- (c) The Department shall inform the owners, by letter, of any failure to comply by the time of the first reinspection. The Department will allow an additional fifteen (15) days for the correction. In the event that the owners fail to comply with the necessary correction by the time of the second reinspection, the Department will inform the owners, by letter, that the water service to the owners' premises will be terminated within a period not to exceed five (5) days. In the event that the owners inform the Department of extenuating circumstances as to why the correction has not been made, a time extension may be granted by the Department but in no case will exceed an additional thirty (30) days.
- (d) If the Department determines at any time that a serious threat to the public health exists, the water service will be terminated immediately. If the Department determines that terminating water service is not feasible, the owner will be subject to fines listed in another section of this chapter.
- (e) The Department shall have on file a list of private contractors who are certified backflow device testers. The owner is responsible for all costs associated with the installation and testing of any backflow prevention device.
- (f) The Department will begin initial premises inspections to determine the nature of existing or potential hazards following the approval of this program by the City Council of the City of Beacon. Initial focus will be on high-hazard industries and commercial premises.

(2) Owners

- (a) The owners shall be responsible for the elimination or protection of all cross-connections on their premises.
- (b) The owners, after having been informed by a letter from the Department, shall at their expense install, maintain, and test, or have tested, any and all backflow prevention devices on their premises. The owners shall be responsible for all costs associated with the installation and testing of backflow prevention devices.
- (c) After the Department determines the type of backflow prevention device, if any, required and approves the backflow prevention device, the owner shall submit an application to NYSDOH to obtain a permit to construct the approved backflow prevention device. The work shall be completed within ninety (90) days from receipt of the permit. Failure or refusal or inability on the part of the owner to install said device within ninety (90) days shall constitute grounds for discontinuing water service until such device has been properly installed.

- (d) After completion of installation of the backflow prevention device, the owner shall apply for a completed works permit by submitting to the NYSDOH a certification from an engineer which states that the installation of the work is in compliance with the approved plans and certification from an approved tester of backflow prevention devices that the installation was tested and is working as designed and approved and in accordance with the intent of these regulations.
- (e) The owner shall submit to the City of Beacon Water and Sewer Department and Building Department all certifications submitted to the NYSDOH including the certification that the installation of the approved backflow prevention device is in compliance with the approved plans and the certification that the installation was tested and is working as designed.
- (f) The owners shall correct any malfunction of the backflow prevention device which is revealed by periodic testing.
- (g) The owners shall inform the Department of any proposed or modified cross-connections of which the owners are aware but have not been found by the Department.
- (h) The owners shall not install a bypass around any backflow prevention device unless there is a backflow prevention device of the same type on the bypass. Owners who cannot shut down operation for testing of the device(s) must supply additional devices necessary to allow testing to take place.
- (i) The owners shall install only backflow prevention devices which are shown on a NYSDOH list of approved backflow prevention devices.
- (j) Any owners having a private well or other private water source must obtain approval from the Department if the well or source is cross-connected to the Department's system. Permission to cross-connect may be denied by the Department. The owner may be required to install a backflow prevention device at the service entrance if a private water source is maintained, even if it is not cross-connected to the Department's system.
- (k) In the event that the owners install plumbing to provide potable water for domestic purposes which is on the Department's side of the backflow prevention device, such plumbing must have its own backflow prevention device installed.
- (l) The owners shall be responsible for the payment of all permit fees, penalties, annual or semiannual device testing, retesting in the case that the device fails to operate correctly, and second reinspections for noncompliance with Department and/or Department of Health requirements.

G. Determination of type of backflow protection device.

- (1) Categories; rating system; regulation.

- (a) An acceptable backflow prevention device must be installed in every service connection to a facility. Three categories shall be considered when determining the degree of hazard posed by a facility and making the subsequent determination of the type of protection device required. The City of Beacon recognizes the threat to the public water system arising from cross-connections. All threats will be classified by degree of hazard and will require the installation of approved reduced pressure principle backflow prevention devices, "reduce pressure zone assembly," (RPZA) or "double-check valve assembly" (DCVA). The considerations are:
 - [1] Use, toxicity and availability of contaminants.
 - [2] Availability of a supplementary supply of water.
 - [3] Fire-fighting system evaluation
- (b) Based on these considerations the water supply operator and/or the City Engineer shall rate a facility as "hazardous," "aesthetically objectionable" or "nonhazardous."
 - [1] A hazardous facility must be contained through the use of an RPZA or properly designed air gap.
 - [2] An aesthetically objectionable facility must be contained through the use of a DCV, RPZA, or air gap.
 - [3] Nonhazardous facilities should be protected through an internal plumbing control program to ensure that plumbing cross-connections are adequately protected or eliminated; or through the use of a DCVA, RPZA or air gap.
- (2) The Water Superintendent and/or the City Engineer as designated by the City Council shall determine the type of device required for each property and facility. In making this determination, the water supply operator may utilize the Sample List of Facilities Requiring Backflow Prevention, prepared by the NYSDOH and, if necessary, shall consult with the DCDOH.
- (3) Cross-connection control by facility type
 - (a) Hazardous types of facilities which shall require installation of an approved reduce pressure zone assembly (RPZA) or air gap in the service connection to the public water distribution system include but are not limited to:
 - [1] Sewage and industrial wastewater treatment plants and pumping stations and sewer flushers.
 - [2] Paper manufacturing or processing, dye plants, petroleum processing, printing plant, chemical manufacturing or processing, industrial fluid systems, steam generation, rubber processing and tanneries.
 - [3] Canneries, breweries, food processing, milk processing, ice manufacturing, meat packers, poultry processing and rendering companies.

- [4] Hospitals, clinics, laboratories, veterinary hospitals, mortuaries and embalmers.
 - [5] Metal plating, photo processing, laundries, commercial car washes, commercial refrigeration systems and dry-cleaning establishments.
 - [6] Commercial greenhouses, spraying and irrigation systems using weedicides, herbicides and exterminators.
 - [7] Boiler systems, cooling towers or internal firefighter systems using conditioners, inhibitors and corrosion control chemicals.
 - [8] Residential units with lawn and irrigation systems with chemical injection.
 - [9] Residential units or facilities with service provided by both the village water distribution system and private well or water supply.
- (b) Aesthetically objectionable types of facilities which shall require installation of an approved double-check valve, RPZA or air gap in the service connection of the public water distribution system are those which include but are not limited to:
- [1] Customer fire-protection loops and fire-storage tanks with no chemical additives.
 - [2] High-temperature potable water.
 - [3] Utilization for food-grade dyes.
 - [4] Complex plumbing systems in commercial buildings, such as but not limited to beauty salons, churches, apartment buildings, gas stations, supermarkets, nursing homes, construction sites and carnivals.
 - [5] Residential units with lawn and irrigation systems.
- (c) It is not possible to list every circumstance and facility type that may be encountered by the Department while evaluating all users. The Department, while evaluating a facility, will rely on experience, assistance from local Health Department officials and the Cross Connection Control Program Manual.

H. Existing in-use backflow prevention devices

Any existing backflow prevention device shall be allowed by the Department to continue in service unless the degree of hazard is such as to supersede the effectiveness of the present backflow prevention device, or result in an unreasonable risk to the public health. Where the degree of hazard has increased, as in the case of a residential installation converting to a business establishment, any existing backflow prevention device must be upgraded to a reduced-pressure-principle device, or a reduced-pressure-principle device must be installed in the event that no backflow prevention device was present.

I. Periodic testing.

- (1) All testers of backflow prevention devices shall be approved by the NYSDOH pursuant to Section 1.13 of Part 5 of the NYS Sanitary Code, 10 NYCRR Section 5-1.31.
- (2) The testing of backflow prevention devices shall be performed on an annual basis by the owner of any system requiring the same, and the cost of such testing shall be borne by the owner of the system. The testing procedures shall conform to the requirements of the NYSDOH and the DCDOH. Test results shall be submitted to the Department within 30 days of the completion of such testing. Late submissions of annual test results shall be subject to an administrative processing fee in the amount of \$25.
- (3) Any backflow prevention device which fails during a periodic test will be repaired or replaced. When repairs are necessary, upon completion of the repair the device will be retested at the owner's expense to ensure correct operation. High-hazard situations will not be allowed to continue unprotected if the backflow prevention device fails the test and cannot be repaired immediately. In other situations, a compliance date of not more than 30 days after the test date will be established. The owner is responsible for spare parts, repair tools or a replacement device. Parallel installation of two devices is an effective means of the owner ensuring that uninterrupted water service during testing or repair of devices and is strongly recommended when the owner desires such continuity.
- (4) Backflow prevention devices will be tested more frequently than specified above in cases where there is a history of test failures and the water supply operator feels that due to the degree of hazard involved, additional testing is warranted. Cost of the additional testing will be borne by the owner.
- (5) Testing is not required when fixture isolation is achieved with the utilization of a nontestable backflow prevention device.

J. Residential dual check assembly.

1. Effective the date of the acceptance of this cross-connection control program for the City of Beacon, all new residential buildings, which includes one-family and two-family dwellings, will be required to install a residential dual check assembly immediately downstream of the water meter. Installation of this residential dual check assembly on the retrofit basis on existing service lines will be instituted at a time and at a potential cost to the homeowner as deemed necessary by the Department.
2. The owners must be aware that installation of a residential dual check assembly results in a potential closed plumbing system within the residence. As such, provisions may have to be made by the owners to provide for thermal expansion within the closed loop system, i.e., the installation of thermal expansion devices and/or pressure relief valves.

K. Strainers

The Department strongly recommends that all new retrofit installations of reduced-pressure-principle devices and double check valve backflow prevention devices include the installation of strainers located immediately upstream of the backflow prevention device. The installation of strainers will preclude the fouling of the backflow prevention devices due to both foreseen and unforeseen circumstances occurring to the water supply system, such as water main repairs, water

main breaks, fires, periodic cleaning and flushing of mains, etc. These occurrences may "stir up" debris within the water main that will cause fouling of backflow prevention devices installed without the benefit of strainers.

L. Penalties for offenses; corrective action.

- (1) Any person violating any provision of this chapter shall be subject to a penalty as prescribed in §1-3.
- (2) Notwithstanding the penalties hereinabove provided, the City of Beacon may maintain an action or proceeding in a court of competent jurisdiction to compel compliance with or to restrain by injunction the violation of any provision of this chapter.

Section 2. Ratification, Readoption and Confirmation

Except as specifically modified by the amendments contained herein, Chapter 219 of the City of Beacon is otherwise to remain in full force and effect and is otherwise ratified, readopted and confirmed.

Section 3. Numbering for Codification

It is the intention of the City of Beacon and it is hereby enacted that the provisions of this

Local Law shall be included in the Code of the City of Beacon; that the sections and subsections of this Local Law may be re-numbered or re-lettered by the Codifier to accomplish such intention; that the Codifier shall make no substantive changes to this

Local Law; that the word "Local Law" shall be changed to "Chapter," "Section" or other appropriate word as required for codification; and that any such rearranging of the numbering and editing shall not affect the validity of this Local Law or the provisions of the Code affected thereby.

Section 4. Severability

The provisions of this Local Law are separable and if any provision, clause, sentence, subsection, word or part thereof is held illegal, invalid or unconstitutional, or inapplicable to any person or circumstance, such illegality, invalidity or unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, clauses, sentences, subsections, words or parts of this Local Law or their petition to other persons or circumstances. It is hereby declared to be the legislative intent that this Local law would have been adopted if such illegal, invalid or unconstitutional provision, clause, sentence, subsection, word or part had not been included therein, and if such person or circumstance to which the Local Law or part hereof is held inapplicable had been specifically exempt there from.

Section 5. Effective Date

This local law shall take effect immediately upon filing with the Office of the Secretary of State.