

§ 269-12 Cross-connection control.

[Added 2-7-1989; amended 6-23-1989]

A.

Purpose. The purpose of this section is to:

(1)

Protect the public potable water supply served by the Chicopee Water Department from the possibility of contamination or pollution by isolating such contaminants or pollutants which could backflow or backsiphon into the public water system.

(2)

Promote the elimination or control of existing cross-connections, actual or potential, between its customers in-plant potable water system and nonpotable systems.

(3)

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. The authority for this section is:

(1)

As provided in the Federal Safe Drinking Water Act of 1974, (Public Law 93-523), and the Commonwealth of Massachusetts Drinking Water Regulations, 310 CMR 22.22, the water purveyor has the primary responsibility for preventing water from unapproved sources or any other substances from entering the public potable water system.

(2)

The City of Chicopee, Board of Water Commissioners, Rules and Regulations, adopted _____ .

C.

Responsibility. The Water Commission shall be responsible for the protection of the public potable water supply distribution system from contamination or pollution due to the backflow or backsiphonage of contaminants or pollutants. If, as a result of a survey of the premises, the Commission determines that an approved backflow prevention device is required at the city's water service connection or as in-plant protection on any customer's premises, the Commission or its delegated agent shall issue a cross-connection violation form to said customer to install approved backflow prevention devices. The customer shall, within a time frame determined by the Commission, install such approved device or devices at his own expense, and failure or refusal or inability on the part of the customer to install said device or devices within the specified time frame shall constitute a ground for discontinuing water service to the premises until such device or devices have been properly installed.

D.

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

AIR GAP SEPARATION

The method of preventing backflow through the use of an 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 rim of the receptacle.

APPROVED

Accepted by the reviewing authority as meeting an applicable specification stated or cited in this regulation or as suitable for the proposed use.

APPROVED BACKFLOW PREVENTION DEVICE OR DEVICES

A method to prevent backflow approved by the Department for use in Massachusetts.

ATMOSPHERIC VACUUM BREAKER

An approved backflow device used to prevent backsiphonage which is not designed for use under static line pressure.

AUXILIARY WATER SUPPLY

Any water supply of unknown or questionable quality on or available to the premises other than the supplier's approved public potable water supply.

BACKFLOW

The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply from any source other than the intended source.

BACKFLOW PREVENTER WITH INTERMEDIATE ATMOSPHERIC VENT

A device having two independently operating check valves separated by an intermediate chamber with a means for automatically venting it to the atmosphere, in which the check valves are force loaded to a normally closed position and the venting means is force loaded to a normally open position.

BACK PRESSURE

Pressure created by mechanical means or other means which causes water or other liquids or substances to flow or move in a direction opposite to that which is intended.

BACKSIPHONAGE

A form of backflow due to reduced or subatmospheric pressure within a water system.

BAROMETRIC LOOP

A loop of pipe rising at least 35 feet, at its topmost point, above the highest fixture it supplies.

COMMISSION

The City of Chicopee Board of Water Commissioners or owner or operator of a public water supply system.

CONTAMINANT

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

CROSS-CONNECTION

Any actual or potential connection between a distribution pipe of potable water from a public system and any waste pipe, soil pipe, sewer, drain or other unapproved source.

CROSS-CONNECTION VIOLATION FORM

A violation form designated by the Department, which is sent to the owner by the water supplier with copies sent to the Department, plumbing inspectors and Board of Health delineating cross-connection violations found on the owner's premises and a procedure for corrective action.

DEPARTMENT

The Massachusetts Department of Environmental Quality Engineering.

DOUBLE CHECK VALVE ASSEMBLY

A backflow prevention device which incorporates an assembly of check valves, with shut-off valves at each end and appurtenances for testing.

IN-PLANT PROTECTION

The location of approved backflow prevention devices in a manner which provides simultaneous protection of the public water system and the potable water system within the premises.

OWNER

Any person maintaining a cross-connection installation or owning or occupying premises on which cross-connections can or do exist.

PERMIT

A document issued by the Department which allows a cross-connection installation.

PERSON

Any individual, corporation, company, association, trust, partnership, the commonwealth, a municipality, district or other subdivision or instrumentality of the United States, except that nothing herein shall be construed to refer to or include any American Indian tribe or the United States Secretary of the Interior in his capacity as trustee of Indian lands.

PRESSURE VACUUM BREAKER

An approved backflow prevention device designed to prevent only backsiphonage and which is designed for use under static line pressure and which has necessary appurtenances for testing.

REDUCED PRESSURE BACKFLOW PREVENTER

An approved backflow prevention device incorporating two or more check valves, an automatically operating differential relief valve located between the two checks, two shut-off valves and necessary appurtenances for testing.

RESIDENTIAL DUAL CHECK

An assembly of two spring-loaded, independently operating check valves without tightly closing shut-off valves and test cocks. Generally employed immediately downstream of the water meter to act as a containment device.

REVIEWING AUTHORITY

The Department, its designee or the local plumbing inspector, authorized by MGL C. 142 and licensed by the Board of State Examiners of Plumbers and Gas Fitters, whichever is responsible for the review and approval of the installation of an approved backflow prevention device.

E.

Administration.

(1)

The Commission will operate an active cross-connection control program, to include the keeping of necessary records, which fulfills the requirements of the State Department of Environmental Quality Engineering's cross-connection regulations and is approved by the Department.

(2)

The owner shall allow his property to be inspected for possible cross-connections and shall follow the provisions of the Commission's program and the Department regulations.

F.

Duties of Commission and owner.

(1)

Commission.

(a)

On new installations, the Commission will provide on-site evaluation and/or inspection of plans in order to determine the type of backflow preventer, if any, that will be required, and notify the owner of plan approval requirements by the appropriate reviewing authority.

(b)

For premises existing prior to the start of this program, the Commission will perform surveys of the premises and reviews of as-built plans and issue a cross-connection violation form to the owner detailing any corrective action required, the method of achieving the correction and the time allowed for the correction to be made. The time period allowed shall depend on the degree of hazard involved.

(c)

The Commission will not allow any cross-connection to remain unless it is protected by an approved backflow preventer for which a permit has been issued and which will be regularly tested to ensure satisfactory operation.

(d)

If the Commission determines at any time that a serious threat to the public health exists, the water service will be terminated immediately.

(e)

The Commission shall have on its staff, or shall have a delegated representative, who is a backflow prevention device tester certified by the Commonwealth of Massachusetts.

(f)

The Commission will begin initial premises inspections to determine the nature of existing or potential hazards, following the approval of this program by the Department, during the calendar year 1989. Initial focus will be on high hazard industries and commercial premises.

(2)

Owner.

(a)

The owner shall be responsible for the elimination or protection of all cross-connections on his premises.

(b)

The owner shall be responsible for applying for and obtaining all necessary approvals and permits for the maintenance of cross-connections and installation of backflow prevention devices, and applying annually for the renewal of each permit.

(c)

The owner shall have any device that fails an inspection or test repaired by a licensed plumber.

(d)

The owner shall inform the Commission of any proposed or modified cross-connection and also any existing cross-connections of which the owner is aware but has not been found by the Commission.

(e)

The owner shall not install a bypass around any backflow preventer unless there is a backflow preventer of the same type on the bypass. Owners who cannot shut down operation for testing of the device(s) must apply additional devices necessary to allow testing to take place.

(f)

The owner shall install backflow preventers in a manner approved by the Department and the Commission.

(g)

The owner shall install only reduced pressure backflow preventers and double check valve assemblies approved by the State Department of Environmental Quality Engineering.

(h)

Any owner of industrial, commercial or institutional premises having a private well or other private water source must have a permit if the well or source is cross-connected to the Commission's system. Permission to cross-connect may be denied by the Commission. The owner may be required to install a backflow preventer at the service entrance if a private water source is maintained even if it is not cross-connected to the Commission's system.

(i)

The owner of any residential premises having a private well or other private water source will not be allowed a physical connection with the public water system.

(i)

The owner shall be responsible for the payment of all fees for permits, device testings, retestings in the case that the device fails to operate correctly and second reinspections for noncompliance with Commission or Department requirements.

G.

Degree of hazard. The Commission recognizes the threat to the public waste system arising from cross-connections. As such, the Commission, whereas it is responsible for the quality of the public water supply, may require a containment device on the water service entrance to any customer who, as a result of unprotected cross-connections, could contaminate the public water supply system.

H.

Enforcement. The Commission shall not allow a cross-connection to exist with the public water supply system unless it is considered necessary and all appropriate approvals and permits have been issued.

I.

Existing in-use backflow prevention devices. Any existing backflow preventer shall be allowed by the Commission to continue in service unless the degree of hazard is such as to supersede the effectiveness of the present backflow preventer 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 preventer must be upgraded to a reduced pressure backflow preventer, or a reduced pressure backflow preventer must be installed in the event that no backflow device was present.

J.

Periodic testing.

(1)

Reduced pressure backflow preventers and double check valve assemblies shall be tested and inspected at least semiannually by the Commission.

(2)

Periodic testing shall be performed by the Commission's certified tester or his delegated representative, who shall be a certified tester.

(3)

The testing shall be conducted during the Commission's regular business hours. Exceptions to this, when at the request of the owner, may require additional charges to cover the increased costs to the Commission.

(4)

Reduced pressure backflow preventers and double check valve assemblies must be tested annually by the owner, independent of the semiannual test by the water supplier, and said test must be conducted by a certified tester.

(5)

Any backflow preventer which fails during a periodic test must be repaired or replaced by a licensed plumber. When repairs are necessary, upon completion of the repair, the device will be retested at the owner's expense to ensure proper operation. High hazard situations will not be allowed to continue unprotected if the backflow preventer fails the test and cannot be repaired immediately. In other situations, a compliance date of not more than 14 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 remains during testing or repair of devices and is strongly recommended when the owner desires such continuity.

(6)

Backflow prevention devices will be tested more frequently than specified above in Subsection J(1) in cases where there is a history of test failures and the Commission feels that due to the degree of hazard involved, additional testing is warranted. Cost of the additional tests will be borne by the owner.

K.

Records and reports.

(1)

Records. The Commission will initiate and maintain the following:

(a)

Master files on customer cross-connection tests and/or inspections.

(b)

Master files on approved cross-connection installations.

(c)

Copies of lists and summaries supplied to the Massachusetts Department of Environmental Quality Engineering.

(2)

Reports. The Commission will submit the following to the Department of Environmental Quality Engineering:

(a)

Initial listing of high hazard cross-connections.

(b)

Initial listing low hazard cross-connections.

(c)

Annual update lists of items in Subsection K(2)(a) and (b) above.

(d)

Annual summary of cross-connection inspections and surveys.