The City of Wood Dale

Backflow Device
Regulation and Maintenance
Informational Pamphlet

Attention:
Residential, Commercial and Industrial with Backflow Devices.

This information discusses some of the rules and regulations for Backflow devices as per the City Code of the City of Wood Dale. In this pamphlet you will also find suggested technologies to prevent backflow contamination to the water supply system.

Backflow Regulations and Information:

City Code, Section 7.501 – General Policy

A. Purpose: The purpose of these rules and regulations is:

1. To protect the public water supply system from contamination or pollution by isolating within the customer's water system contaminants or pollutants which could backflow through the service connection into the public water supply system.

2. To promote the elimination or control of existing cross connections, actual or potential, between the public or consumer's potable water system and nonpotable water systems, plumbing fixtures and sources or systems containing substances of unknown or questionable safety.

3. To provide for the maintenance of a continuing program of cross connection control which will prevent the contamination or pollution of the public and consumer's potable water systems.

B. Application: These rules and regulations shall apply to all premises served by the public potable water supply system of the city of Wood Dale.

C. Policy: The director shall be responsible for protection of the public water supply system from contamination due to backflow or back siphonage of contaminants through the customer's water service connection. All plumbing installed within the city of Wood Dale, shall be installed in accordance with the Illinois plumbing code, 77 Illinois administrative code 890. If, in accordance with the Illinois plumbing code or in the judgment of the director or his authorized representative, an approved backflow prevention device is necessary for the safety of the public water supply system, the director shall give notice to the consumer to install such approved backflow prevention device at each service connection to the premises. The consumer shall immediately install such approved device or devices at his own expense at a location and in a manner in accordance with the Illinois plumbing code and all applicable local regulations; 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. The consumer shall retain records of installation, maintenance; testing and repair as required in subsection 7.505D4 of this article for a period of at least five (5) years. The director may require the consumer to submit a cross connection inspection report to the city of Wood Dale to assist in determining whether or not service line protection will be required. All cross connection inspections shall be conducted by a cross connection control device inspector certified by the Illinois environmental protection agency. (Ord. O-03-019, 7-24-2003)

City Code Section 7.505 - Survey And Investigations.

It shall be the duty of the director of city services to cause surveys and investigations to be made of industrial and other properties served by the public water supply to determine whether actual or potential hazards to the public water supply may exist. Such surveys and investigations shall be made a matter of public record and shall be repeated at least every two (2) years, or as often as the director shall deem necessary. Records of such surveys shall be maintained and available for review for a period of at least five (5) years.

A. The consumer's premises shall be open at all reasonable times to the approved cross connection control device inspector for the inspection of the presence or absence of cross connections within the consumer's premises, and testing, repair and maintenance of cross connection control devices within the consumer's premises.

B. On request by the director, or his authorized representative, the consumer shall furnish information regarding the piping system or systems or water use within the customer's premises. The consumer's premises shall be open at all reasonable times to the superintendent of water for the verification of information submitted by the inspection consumer to the public water supply custodian regarding cross connection inspection results. The refusal of such information, when demanded, shall, within the discretion of the director, be deemed evidence of the presence of improper connections as provided in this article.

C. It shall be the responsibility of the water consumer to arrange periodic surveys of water use practices on his premises to determine whether there are actual or potential cross connections to his water system through which contaminants or pollutants could backflow into his or the public potable water system. All cross connection control or other plumbing inspections must be conducted in accordance with 225 Illinois Compiled Statutes 320/3(1).

D. It is the responsibility of the water consumer to prevent backflow into the public water system by ensuring that:

1. All cross connections are removed; or approved cross connection control devices are installed for control of backflow and back siphoning.

2. Cross connection control devices shall be installed in accordance with the manufacturer's instructions.

3. Cross connection control devices shall be inspected at the time of installation and at least annually by a person approved by the agency as a cross connection control device inspector (CCCDI). The inspection of mechanical devices shall include physical testing in accordance with the manufacturer's instructions.

4. Testing and records:

a. Each device shall be tested at the time of installation and at least annually or more frequently if recommended by the manufacturer.

b. Records submitted to the community public water supply shall be available for inspection by agency personnel in accordance with 415 Illinois Compiled Statutes 5/4.

c. Each device shall have a tag attached listing the date of most recent test, name of CCCDI, and type and date of repairs.

d. A maintenance log shall be maintained and include:

(1) Date of each test;

(2) Name and approval number of person performing the test;

(3) Test results;

(4) Repairs or servicing required;

(5) Repairs and date completed; and

(6) Servicing performed and date completed. (Ord. O-03-019, 7-24-2003)

City Code Section 7.509 - Inspection and Maintenance.

A. It shall be the duty of the consumer at any premises on which backflow prevention devices required by these regulations are installed to have inspection, tests, maintenance and repair made in accordance with the following schedule or more often where inspections indicate a need or are specified in manufacturer's instructions:

1. Fixed proper air gap separations shall be inspected to document that a proper vertical distance is maintained between the discharge point of the service line and the flood level rim of the receptacle at the time of installation and at least annually thereafter. Corrections to improper or bypassed air gaps shall be made within twenty four (24) hours.

2. Double check valve assemblies shall be inspected and tested at time of installation and at least annually thereafter, and required service performed within fifteen (15) days.

3. Reduced pressure principle backflow prevention devices shall be tested at the time of installation and at least annually or more frequently if recommended by the manufacturer, and required service performed within five (5) days.

B. Testing shall be performed by a person who has been approved by the agency as competent to service the device. Proof of approval shall be in writing.

C. Each device shall have a tag attached listing the date of most recent test or visual inspection, name of tester, and type and date of repairs.

D. A maintenance log shall be maintained and include:

1. Date of each test or visual inspection;

2. Name and approval number of person performing the test or visual inspection;

3. Test results;

4. Repairs or servicing required;

5. Repairs and date completed; and

6. Servicing performed and date completed.

E. Whenever backflow prevention devices required by these regulations are found to be defective, they shall be repaired or replaced at the expense of the consumer without delay as required by subsection A of this section.

F. Backflow prevention devices shall not be bypassed, made inoperative, removed or otherwise made ineffective without specific authorization by the director. (Ord. O-03-019, 7-24-2003)

Backflow/Cross-Connection Control – Suggested Best Practices:

Attention: Residential, Commercial and Industrial with Backflow Devices

This information discusses the importance of controlling cross-connections and preventing backflow occurrences from unprotected cross-connections in the water system. This guide is intended for owners and operators of all public water systems serving fewer than 10,000 Persons.

Definitions:

Cross-Connection: An actual connection between the public water supply and the source of contamination.

Backflow: The flow of water other liquids mixtures of substances into the distributing pipes of a potables supply

Backpressure: Backflow that occurs when the pressure in an unprotected downstream piping system exceeds the pressure of the supply piping.

Backsiphonage: Resulting from negative pressures in the distributing pipes of potable water supply.

Where can a Cross-Connection Occur?

Cross-Connections can occur at many points throughout a distribution system and a community's plumbing infrastructure. Here are some specific examples of where this can occur.

- Lawn Chemicals backflowing (backsiphoning) through a garden hose into indoor plumbing and potentially into the distribution system.
- Backsiphonage of "blue water" from a toilet into a buildings water supply.
- Carbonated water from a restaurant's soda dispenser entering the water system due to backpressure.
- Backsiphonage of chemicals from industrial buildings into distribution system mains.
- Backflow of boiler corrosion control chemicals into an office building's water supply.

Why is it important to have a Cross-Connection Control & and a Backflow Prevention Program?

Having this program in place will help avoid the costs of rezoning to a contamination incident.

What technologies are available to control Cross-Connections and prevent Backflow?

The following are technologies available to prevent backsiphonage and backpressure and eliminate contamination to your water supply system.

Atmospheric Vacuum Breaker:

- Consists of float check, check seat, air inlet port, and possibly a shutoff valve immediately upstream.
- Allows air to enter the downstream water connection to prevent backsiphonage.
- Used for backsiphonage conditions only.

Pressure Vacuum Breaker Devices:

- Consists of vacuum breakers with loaded check valve and a loaded air inlet.
- Used for backsiphonage conditions only.

Double Check Valve Devices:

- Consists of two independently acting, tightly closing, resilient seated check valves in series with test ports.
- Have tightly closing, resilient seated shutoff valves attached to each end of the assembly.
- Prevent backflow under backsiphonage and backpressure conditions.
- Typically approved for only low to medium hazards.

Air Gaps:

- Physical separation between a potable water system and a receiving vessel or source of contamination.
- Air gap between the outlet of the potable system and the flood level rim of the receiving vessel or any source of contamination must be at least twice as large as the diameter of the potable water outlet and never smaller than 1 inch.
- May require additional pumping downstream of air gap.
- Safest and simplest means under backsiphonage and backpressure conditions.
- Useful for all hazard levels.

Reduced Pressure Zone Backflow Devices:

- Similar to the double check valve devices, but also contain an independently acting pressure relief valve between the two check valves (which sits lower than the first check valve).
- Protect against high water pollution hazards.
- Protect against backsiphonage and backpressure.

More information is available on line at our website www.wooddale.com under the City Code, or call the City of Wood Dale Water Utilities Department if you have any additional questions at 630-350-3542.

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