

Backflow Prevention Device Ordinance

Cross Connection and Backflow Protection.

- A. Purpose: To protect the public water supply from the possibility of contamination by isolating within its customer's internal distribution system or its customer's private water supply system such contaminations or pollutants which could backflow into the public water supply system ; and, to comply with the New York State Sanitary Code 5.1.31. The current New York State Department of Health Cross Connection Control manual or its latest edition will serve as a guide.

The customer has the primary responsibility of preventing contaminants from entering the potable water piping system and subsequently, the public water supply.

He shall, as required by the supplier of water, install, test, operate, maintain and keep adequate maintenance and repair records for every backflow prevention device installed to provide containment.

Additionally, the customer shall prevent cross-connections between the potable water piping system and any other system within his facility.

B. Definitions:

1. Cross Connections. The term "cross connection" as used in this Local Law means any unprotected connection between any part of a water system used or intended to be used as a supply of water for drinking purposes in a source or systems containing water or substance that is not or cannot be approved as equally safe, wholesome and potable for human consumption.
2. Approved Water Supply. The term "approved water supply" means any water supply approved by the New York State Department of Health.
3. Auxiliary Supply. The term "auxiliary supply" means any water supply on or available to the premises other than the approved public water supply.
4. Vacuum Breaker – Pressure Type and Non-Pressure Type. A vacuum breaker which can only be used for internal plumbing control and therefore, not acceptable as a containment device.
5. Approved Check Valve. The term "approved check valve" means a check valve that seals readily and completely. It must be carefully machined to have free moving parts and assured water tightness. The face of the closure element and valve seat must be bronze, composition, or other non-corrodible material, which will seal tightly under all prevailing conditions or field use. Pins and bushings shall be of bronze and other non-corrodible, non-sticking material, machined for easy dependable operation. The closure element shall be internally weighted or otherwise internally equipped to promote rapid and positive closure in all sizes where this feature is obtainable.

6. Approved Double Check Valve Assembly. The term “approved double check valve assembly” means two single independently acting check valves, including tightly closing shut off valves located at each end of the assembly and suitable test connections. This device must be approved as a complete assembly.
7. Approved Reduced Pressure Zone Device. The term “approved reduced pressure zone device” means a minimum of two independently acting check valves together with automatically operated pressure differential relief valve located between the two check valves. If 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 at less than the supply pressure. The unit must include tightly closing shut off valves located at each end of the device, and each device shall be fitted with properly located test cocks. This device must also be approved as a complete assembly.
8. Air Gap Separation. The term “air gap separation” means a physical break between a supply pipe and a receiving vessel. The air gap shall be at least double the diameter of the supply pipe, measured vertically above the top rim of the vessel, in no case less than one inch.
9. Water Superintendent. The term “water superintendent” means the consumer or a person on the premises charged with the responsibility of complete knowledge and understanding of the water supply piping within the premises and for maintaining the consumer’s water system free from cross connections and other sanitary defects, as required by this Local Law and all other required regulations and laws.
10. Certified Back Flow Prevention Device Tester. The term “certified back flow prevention device tester” is an individual who has successfully completed a New York State Department of Health approved course in the testing of back flow prevention devices and has been issued a certificate by the New York State Department of Health.
11. Department. Town of Peru Water Department
12. District by law developed by the Town of Peru to supply potable water to the customers of the district.
13. Customer means a water user served by a public water system.
14. Aesthetically Objectionable Facility is one in which substances are present, which if introduced into the public water supply system could be a nuisance to other water customers, but would not adversely affect human health.
15. Hazardous Facility is one in which substances may be present which if introduced into the public water system would or may endanger or have an adverse effect on the health of other water customers
16. Non-Hazardous Facility is one which does not require the installation of an acceptable backflow prevention device.

C. Authority: The Superintendent or his designated agent, acting for and on behalf of each water district, shall inspect the plumbing in every building or premises within any water district as frequently as in his judgment may be necessary to assure that such plumbing has been installed in such a manner as to prevent the possibility of contamination of the public water supply of the District by the plumbing. The Superintendent shall notify or cause to be notified in writing the owner or authorized agent of the owner of any such building or premises to correct within a reasonable time, set by the Superintendent, any

plumbing installed or existing contrary to or in violation of this local law, which, in his judgment, may therefore permit the contamination of the public water supply or otherwise adversely affect the public health.

- D. Inspection: The Superintendent or his designated agent shall have the right of entry into any building during 8 am to 3:30 pm, Monday through Friday for the purpose of making an inspection of the plumbing systems installed, with the proper notification to the owner or his agent prior to.
- E. Rating: Each customer rated will receive one of three ratings by determination, not only of existing hazards, but also, of potential hazards. The three listings would be:
1. Hazardous Facility
 2. Aesthetically Objectionable Facility
 3. Non-Hazardous Facility

The degree of hazard will determine what backflow prevention device if any will be required of each individual facility.

Three categories should be considered when determining the degree of hazard posed by a facility and making the subsequent determination of the type of protective device required. They are:

1. Use, Toxicity, and Availability of Contaminants
2. Availability of a Supplementary Supply of Water
3. Fire Fighting System Evaluation

Based on these considerations, it will be possible to rate a facility as hazardous, aesthetically objectionable or non-hazardous.

A hazardous facility must be contained through the use of a RPZ or an air gap.

An aesthetically objectionable facility must be contained through the use of a DCV.

Non-hazardous facilities should be protected through an internal plumbing control program to ensure that plumbing cross-connections are adequately protected or eliminated.

The New York State Education Law requires that the design of backflow prevention device installation be accomplished by a licensed professional engineer or a licensed architect in the State of New York. This requirement can be fulfilled in several ways. For installation the customer may choose:

- a. A design by the Town's Engineering staff and built accordingly; or,
- b. several customers may select one engineer and design each customer's backflow prevention device installation and submit for approval; or,
- c. each customer may select and pay an individual engineer and/or customers may utilize engineers on their own staff.

The following forms and procedures should be followed:

Forms:

GEN 236 - New York State Department of Health Application for Approval of Backflow Prevention Device (s).

GEN 237 - New York State Department of Health Certificate of Approval for Backflow Prevention Device(s).

GEN 215 - Report of Testing & Maintenance of Backflow Prevention Device.

Procedures:

- a. The District will notify the customer for an onsite inspection of facilities or a review of submittal plans for new facilities and determine the degree of hazard of each facility as set forth in other sections of this Local Law.
- b. The District will require the customer to submit plans, specifications, and applications for the proposed connection in quadruplicate.
- c. The submitted plans, specifications, and applications in quadruplicate will be forwarded to the Bureau of Public Water Supply Protection for their review and approval or disapproval after the Superintendent has reviewed and approved such plans. The Bureau of Public Water Supply Protection will evaluate the application, plans, specifications and recommendations and will approve or deny the application. If it is disapproved, it will be returned for modification and re-submittal. The approved application will be returned with a letter of approval and certificate of approval and a copy of the approved plans in quadruplicate to the Superintendent.
- d. The Superintendent will then add his approval and forward copies of each document to the Bureau of Public Water Supply and the water customer will have forty-five (45) days to install protector devices in accordance with the approved plans.
- e. Testing of the device will be according to the other sections of this Local Law.

- F. Testing: All testing of backflow prevention devices required under this local law shall be completed by a Certified Backflow Prevention Device Tester.

The Department shall test each new backflow prevention device at the time that the facility it services is initially connected to the Town's water supply. All subsequent testing may be performed by any Certified Backflow Prevention Device Tester.

An annual testing procedure will be required of all backflow prevention devices to verify that they are functioning properly. This testing will be at the customer's expense.

When the device is tested, the owner or owner's agent will receive a copy of the test results that were done and must forward a copy to the Department. The copy will be kept at the Department. A cross connection control device shall, either pass or fail. There is no in between. If the device is failed, the owner or owner's agent will receive written notice of this fact by certified mail return receipt requested. If the facility has been rated as Hazardous the customer or customer's agent shall have seven days from the receipt of the written notice that the device has failed to repair or replace the device and demonstrate that the device has been tested and has passed. If the facility has been rated as Aesthetically Objectionable and the device fails, the owner or owner's agent, shall have thirty days from the receipt of the written notice that the device has failed to repair or replace the device and demonstrate that the device has been tested and has passed.

- G. Acceptable Devices: Three devices are currently applicable to the containment concept of cross connection control. These are the DCV or double check valve assembly, the RPZ, or reduced pressure zone device, and the air gap. A listing of the current acceptable devices by the New York State Department of Health is on hand at the Town of Peru Water & Sewer Department. Future devices acceptable by the New York State Department of Health will be acceptable by the Town.

- H. Installation:

1. Principles: In general, backflow prevention devices must be protected against freezing and must be accessible for testing and maintenance. Installation shall be in accordance with plans approved by the New York State Department of Health.

Pit installations are acceptable. However, in the case of RPZ, a pit installation is usually not feasible since a gravity drain must be provided which cannot be connected directly to a sewer.

An acceptable alternate is the use of a funnel raised to just below the discharge port of the device ensuring, of course, that an air gap be maintained. No direct connection to the device for the purpose of drainage

is permitted which negates the inherent protection afforded by an air gap at the relief valve discharge port. It is good practice to have the discharge end of the gravity drain visible so that it can be checked as a matter of daily routine by a facilities maintenance staff.

It must be kept in mind that a large RPZ can discharge at a rate of several hundred gallons per minute when subjected to high differential pressures. The gravity drain must be designed for the greatest discharge possible.

All devices must be installed so that they are not subject to flooding.

In certain instances, backflow prevention devices installed in parallel on a service line may be needed to meet the needs of a facility. Such instances are:

- a. Where the water service line to be protected is greater than ten inches(10), branching the line and installing parallel devices
may be utilized.
- b. Where the facility requires continuous water service, a parallel
service installation will allow for removing one device at a time from for testing and maintenance.
- c. Where dual service for fire flow requirements are necessary.

In no case may the installation of a backflow prevention device include unprotected bypass piping. Closed gate valves on the bypass do not constitute protection.

2. Timetable for Installation of Devices: The customer shall comply with Submission of Plans within thirty (30) days after official written notice to do so. The customer will then have forty-five (45) days after the date of approval of such plans by both the District and the New York State Department of Health to implement the installation of the proper device.
3. DCV: This device does not require any special installation precautions except to protect the unit from freezing and insure that the test cocks are accessible. Adequate access to the test cocks is necessary to facilitate required testing. Normal maintenance considerations should be satisfied.
4. RPZ: These devices must also be protected against freezing and the test cocks should be positioned to facilitate testing.

Normal maintenance considerations must also be satisfied. Experience to date shows that an above grade installation is usually required in order to satisfy adequate drainage and access.

The improper installation of these devices can negate the desired protection. Most critical is the need to provide a gravity drain large enough to receive the maximum potential discharge of the relief valve. This drain cannot be subject to flooding and must be screened.

5. Air Gap: This method of cross connection prevention is profusely illustrated in plumbing control publications. The same basic requirement is also appropriate for containment control; namely, that the opening of the inlet pipe be at least two (2) diameters (of the inlet pipe) above the flood or overflow level of the tank or vessel. In no case shall the gap be less than one inch (1”).

Refusal or discontinuance of service:

- A. No water service connection to any customer shall be allowed by the water district, unless the water supply is protected as required by state regulations and this local law.
- B. Service of water to any customer shall be discontinued by the Superintendent if an acceptable backflow prevention device required by this local law is not installed, tested, and maintained; if any defect is found in an installed device, and not corrected within the time as set forth; if it is found that backflow prevention device has been removed or bypassed, in unprotected cross connections exist on the premises; then service will not be restored until such conditions or defects are corrected.

Penalties:

A) The following penalties shall be applicable for a violation of this Local Law:

1. Failure to install the appropriate back flow prevention device within a prescribed time frame after first notice:

\$100.00

2. Failure to install the appropriate back flow prevention device within prescribed time frames after second notice:

Termination of Service

3. Failure to at least annually test the back flow prevention device:

\$100.00 and/or termination of water service.

4. Failure to replace or repair a back flow prevention device as required:

\$500.00 and/or termination of water service

Partial Invalidity:

If any section or article of this local law shall be held unconstitutional, invalid or ineffective, in whole or in part, such determination shall not be deemed to affect, impair or invalidate the remainder thereof.

Conflict:

All other local laws and parts of other local laws inconsistent or conflicting with any part of this local law are hereby repealed to the extent of such inconsistency or conflict.

Effective Date:

This local law shall take effect upon its being duly filed in the office of the Secretary of State or in the office of the State Comptroller.