

RESOLUTION NO. 1, 1996

A RESOLUTION ESTABLISHING RULES AND REGULATIONS GOVERNING CROSS-
CONNECTION CONTROL FOR THE CITY OF LAWRENCE WATER UTILITY.

WHEREAS, there exists the potential for harm to the health, safety and welfare of the citizens of the City of Lawrence, Indiana due to cross-connections with the Lawrence water supply system; and

WHEREAS, it is in the best interest of the citizens of the City of Lawrence, Indiana, that certain rules and regulations be adopted regarding cross-connections with the Lawrence water supply system in accordance with Indiana Register Volume 8 Number 10, effective July 19, 1985;

NOW, THEREFORE, BE IT RESOLVED by the Board of Public Works and Safety of the City of Lawrence, Indiana, that the following rules and regulations governing cross-connections are hereby adopted for the City of Lawrence Water Utility:

SECTION 1: Cross-Connection Control:

a. Definitions.

- (1) Air Gap: an unobstructed vertical distance through an atmosphere between the discharge end of a pipeline supplied from a public water supply, and the overflow rim of the receiving portion of the customer's water supply.
- (2) Backflow: the flow of contaminants into the public water supply distribution system from a source other than the public water supply.
- (3) Booster Pump: a pump installed on a pipeline to increase water pressure and flow.
- (4) Cross-Connection: any physical arrangement, including cross-connection control devices not in working order or not installed properly, whereby a public water supply distribution system is directly connected, either continuously or intermittently with any secondary source of supply, sewer, drain, conduit, pool, piping, storage reservoir, plumbing fixture or other device which contains, or may contain, and is capable of imparting to the public water supply, contaminants, contaminated water, sewage or other waste or liquid of unknown or unsafe quality.
- (5) Cross-Connection Control Device: any device or assembly, approved by the City of Lawrence Water Utility for construction on or installation in water supply piping which is capable of preventing contaminants from entering the public water supply distribution system.
- (6) Cross-Connection Control Device Tester: a person who has successfully completed training in testing and inspection of cross-connection control

devices at an agency or school acceptable to the Commissioner of the Indiana Department of Management (IDEM), who has registered with IDEM and who has not been notified by IDEM or the City of Lawrence that his work is unacceptable under this Chapter.

- (7) Cross-Connection Hazard: any customer's facility which, because of the nature and extent of activities on the premises or the materials used in connection with the activities or stored on the premises, would present an immediate or potential danger or health hazard to customers of the public water supply should backflow occur.
- (8) Customer: any person who receives water from a public water supply of the City of Lawrence, Indiana.
- (9) Customer Service Line: the pipeline from the public water supply to the water meter or, if none, the pipeline from the public water supply to the cross-connection control device.
- (10) Customer Water System: all piping, fixtures and appurtenances including secondary sources of supply used by a customer to convey water on his premises.
- (11) Double Check Valve Assembly: a device or assembly composed of two (2) tightly closing shut-off valves surrounding two (2) independently acting spring loaded check valves, with four (4) test cocks, one (1) upstream of the four (4) valves and one (1) between each of the four (4) check and shut-off valves.
- (12) Double Check Detector Valve Assembly: a double check valve assembly with a 3/4-inch copper line bypassing the assembly but containing a 3/4-inch meter reading in gallons and 3/4-inch double check valve assembly.
- (13) Downstream: the direction of flow when only the public water supply is supplying water through the customer water system and backflow is not occurring.
- (14) Pressure-Type Vacuum Breaker: a chamber fitted with a spring-loaded air inlet for relieving a vacuum or partial vacuum in a pipeline.
- (15) Public Water Supply: any wells, reservoirs, lakes, rivers, source of supply, pumps, mains, pipes, facilities and structures through which water is obtained, treated as may be required, and supplied through a water distribution system to at least one hundred (100) persons per day for drinking, domestic or other purposes, including state owned facilities.
- (16) Reduced Pressure Principle Backflow Preventer: a device composed of two (2) tightly closing shut-off valves surrounding two (2) independently acting spring loaded pressure reducing check valves which in turn surround an automatic pressure differential relief valve and four (4) test cocks, one (1) upstream of the five (5) valves and one (1) between each of the four (4) check

and shut-off valves. The check valves effectively divide the structure into three (3) chambers; pressure is reduced in each downstream chamber allowing the pressure differential relief valve to vent the center chamber to atmosphere should either or both check valves malfunction.

- (17) Secondary Source of Supply: any well, spring, cistern, lake, stream, intake structure or other water source and appurtenances, used either continuously or intermittently, to supply water other than that from the Lawrence public water supply to the customer, including storage tanks and lines used to store water to be used only for firefighting, even though the water contained therein is supplied from the public water supply.
- (18) Supplier of Water: any person who owns and/or operates a public water supply.
- (19) Upstream: the direction of flow opposite to downstream.

(b) No customers shall cause or allow the construction or maintenance of a cross-connection. Piping installed to by-pass a cross-connection control device constitutes a cross-connection unless the by-pass piping is also fitted with a similar cross-connection control device.

(c) No customer shall cause or allow the installation or maintenance of a booster pump in a customer water system unless a control device is installed to prevent operation of the booster pump when pressure to pump suction drops below twenty (20) pounds per square inch gauge pressure.

(d) Customers constructing a new facility which is designated a cross-connection hazard as defined in Indiana Administrative Code, §320 IAC 3-9.1-4 (c), making modifications to the customer service line, installing a higher capacity meter at an existing facility which is designated a cross-connection hazard or making any change of use that would be designated a cross-connection hazard by §320 IAC 3-9.1-4 (c), shall construct an air gap or install a reduced pressure backflow preventer in accordance with §320 IAC 3-9.1-7 on the customer service line to the facility so designated.

- (1) Existing Buildings - all existing buildings which house a business activity and are operated as such will be required to comply with this chapter upon the occurrence of any one of the following events:
- a. New ownership of building;
 - b. Remodeling;
 - c. Change of occupancy;
 - d. Installation of a new service line or upgrade of service;
 - e. Addition of machinery or chemicals;
 - f. If backflow occurs.
- (2) All fire sprinkler systems must have an approved double check detector valve assembly installed before the fire systems apparatus. Any fire suppression system that uses chemicals must install a reduced pressure backflow

preventer, pursuant to Lawrence Water Utility Specifications on file in the office of the City Engineer.

(e) No secondary source of water supply can be connected to customer's water distribution system unless a backflow device is installed on the service line.

(f) Customers shall construct an air gap or install a reduced pressure principle backflow preventer or pressure-type vacuum breaker in accordance with this chapter on the water line connecting the public water supply to any land irrigation facility buried below ground which has a sprinkling outlet located less than six (6) inches above grade. All installations must comply with Lawrence Water Utility Specifications.

SECTION 2. Construction and Installation Requirements for Air Gaps or Other Devices.

(a) The discharge pipe of an air gap shall terminate a minimum of two (2) pipe diameters of the discharge pipe or six (6) inches, whichever is the lesser, above the maximum record flood level or above the flood level rim of the receiving vessel, whichever is higher.

(b) Only those models of double check detector valve assemblies, reduced pressure principle backflow preventers or pressure-type vacuum breakers approved by the Lawrence Water Utility are acceptable.

(c) Reduced pressure principle backflow preventers shall be installed horizontally, with no plug or additions; piping affixed to the pressure differential relief valve port, and with the pressure differential relief valve port a minimum of twelve (12) inches above floor level. Additionally, the device must be installed at a location where any leakage from the pressure differential relief port will be noticed and such leakage collected in a scupper drain or floor drain that allows access to the device for maintenance and testing from floor level, and that will not subject the device to flooding, excessive heat or freezing.

(d) All double check detector valve assemblies shall be installed horizontally at a location that allows access to the device for maintenance and testing from floor level and that will not subject the device to flooding, excessive heat or freezing.

(e) Pressure-type vacuum breakers shall be installed as near as possible to the irrigation facility, at a location that allows access to the device for maintenance and testing from floor or ground level and that will not subject the device to flooding, excessive heat or freezing. Additionally, the device must be installed with its centerline or datum point a minimum of twelve (12) inches above floor level; the highest downstream shut-off valve; and the highest downstream overflow rim or discharge point.

SECTION 3. Inspection of Devices: Time Limits.

(a) The customer shall install and maintain in working order at all times any cross-connection control device or booster pump control device required hereunder. All cross-connection control devices must be tested in accordance with this chapter.

(b) To ensure that each cross-connection control device required is in working order, the customer shall have each device inspected or tested by a cross-connection control device tester at the time of construction or installation and at the following intervals in the following manner:

- (1) Air gaps shall be inspected at intervals not exceeding one year to ensure that they continue to meet the requirements.
- (2) Reduced pressure principle backflow preventers shall be tested at intervals not exceeding six (6) months to ensure that both check valves are drip tight under all pressure differentials and that the pressure differential relief valve will maintain pressure in the center chamber of at least two (2) pounds per square inch below that of the inlet chamber.
- (3) Double check detector valve assemblies shall be tested at intervals not exceeding one (1) year to ensure that both check valves are drip tight under all pressure differentials.
- (4) Pressure-type vacuum breakers shall be tested at intervals not to exceed six (6) months to ensure that the air inlet opens fully when water pressure is at or below atmospheric pressure.
- (5) The customer shall permit access to his premises by the inspector and the supplier of water at reasonable times and upon presentation of identification, for inspection of the customer's water system or testing of cross-connection control devices installed in accordance with this chapter.

(c) All cross-connection control device testers shall be registered with the Board of the IDEM.

(d) The testers shall report to the Lawrence Water Utility on a form provided by the Lawrence Water Utility the results of inspections or tests conducted pursuant to air gaps, reduced pressure principle, backflow preventers, double check detector valve assemblies and pressure-type vacuum breakers. Reports shall be submitted to the Lawrence Water Utility, the customer (and IDEM if requested) within thirty (30) days of the inspection or test.

(e) Before the installation of all land irrigation devices or in-ground automatic sprinkling systems, a permit must be obtained from the Lawrence Water Utility. The permit fee shall be Ten Dollars (\$10.00).

SECTION 4. Enforcement.

The City of Lawrence Water Utility may terminate both fire and domestic water service to any customer who upon ten (10) days written notice fails to comply with the above rules and regulations pertaining to cross-connection control.

ADOPTED this 11 day of January, 1996.

[Signature]

Attest:

Raymond D. [Signature]

Annetta R. Sweat

Paul Rogers
Board of Public Works and Safety

Annetta R. Sweat,
Clerk - Treasurer